Honeywell

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May 22, 2019

Mr. Timothy Larson
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7013

RE: **LCP Erie Canal and West Flume Area– Interim Remedial Measure Work Plan**
Order on Consent: Index No. R7-20180601-23 Site No. 734049A

Dear Mr. Larson:

The enclosed *LCP Erie Canal and West Flume Area – Interim Remedial Measure Work Plan* was prepared by OBG, Part of Ramboll, on behalf of Honeywell for your review.

Please contact Reagan Cuddy of OBG (315-956-6457 and Reagan.Cuddy@obg.com), Shane Blauvelt or me at 315-552-9700 or at our respective emails (Shane.Blauvelt@parsons.com or Stephen.Miller@honeywell.com) if you have any questions regarding this work plan.

Sincerely,

Stephen J. Miller, P.E.
Syracuse Remediation Program Manager

(/2 copies, 2 CDs)

cc: Maureen Schuck – NYSDOH (1 copy, 1 CD)
Mark Sergott – NYSDOH (1 copy, 1 CD)
Margaret Sheen, Esq. – NYSDEC (ec)
Kerry Dziubek, Esq. – Arnold & Porter Kay Scholer (ec)
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Shane Blauvelt – Honeywell (ec)
Brad Kubiak – OBG (ec)
Chris Calkins – OBG (ec)
Tom Conklin – OBG (ec)

FINAL

Interim Remedial Measure Work Plan
LCP Former Erie Canal and West Flume Area
Town of Geddes, Onondaga County, NY
Index No. R7-2018-06-01

Honeywell

May 2019

OBG
Part of Ramboll

I, **Douglas M. Crawford**, certify that I am currently a NYS-registered Professional Engineer and that this Interim Remedial Measure Work Plan was prepared in accordance with applicable statues and regulations and in substantial conformance with the DER *Technical Guidance for Site Investigation and Remediation* (DER-10).

This Work Plan was developed pursuant to the Order on Consent (Index R7-20180601-23) between Honeywell and the New York State Department of Environmental Conservation (NYSDEC).

_____	_____	_____
NYS Professional Engineer #	Date	Signature

TABLE OF CONTENTS

LIST OF TABLES (IN TEXT)

LIST OF FIGURES

LIST OF APPENDICES

LIST OF EXHIBITS

1. INTRODUCTION

This Interim Remedial Measure Work Plan (IRM WP) presents the scope of work associated with Linden Chemicals and Plastic (LCP): Former Erie Canal/West Flume property (Site) presented on **Figure 1**. This work is being performed pursuant to Order on Consent and Administrative Settlement Index No. R7-20180601 (Consent Order) between the New York State Department of Environmental Conservation (NYSDEC) and Honeywell International, Inc. (Honeywell). The Consent Order classified this as a non-registry "P" Site (Potential Site); the Site Number is 734049A.

This Work Plan was developed to address the site remedy recommended in the LCP Former Erie Canal and West Flume Property Site Characterization (OBG, 2019). The recommended remedy consists of a soil cover over surface soils that exceed the Commercial Soil Cleanup Objectives identified in Table 375-6.8(b): Restricted Use Soil Cleanup Objectives of 6 NYCRR Part 375. The purpose of the soil cover is as follows:

- Prevent ingestion/direct contact with surface and subsurface soil/fill material with concentrations greater than Commercial Soil Cleanup Objectives (SCOs).
- Prevent or minimize inhalation of or exposure to contaminants volatilizing from contaminated soil/fill material that would result in unacceptable human exposure
- Prevent or minimize adverse ecological impacts to biota from ingestion/direct contact with soil/fill material causing toxicity or impacts from bioaccumulation through the terrestrial food chain.
- Prevent or minimize the migration of contaminants that would result in groundwater, sediment or surface water contamination.

Details of the cover are described in **Section 4.1.2**.

This Work Plan is organized in six sections. Background information is presented in **Section 1**. **Section 2** describes the project management and staffing. **Section 3** describes how Health and Safety will be implemented during the remedial action. **Section 4** describes the remedial design and implementation of the Interim Remedial Measure (IRM). **Section 5** describes the Construction Quality Assurance and Construction Quality Control to be implemented for the IRM. **Section 6** describes the post-construction documentation requirements.

1.1 BACKGROUND

This section summarizes the Site background information relevant to the development of the IRM WP including Site description, Site Background, and the reasonably anticipated future Site use *(i.e.* Erie Canalway Trail). The information provided below is summarized from the following documents:

- LCP Site: Former Erie Canal/West Flume Property Records Search Report (OBG, 2018)
- LCP Erie Canal and West Flume Area Site Characterization Report (OBG, 2019)
- Order on Consent and Administrative Settlement Index No. R7-20180601 (NYSDEC, 2018)

1.1.1 Site Description

The Site comprises approximately 8 acres in the Town of Geddes, Onondaga County, New York. The Site is located in an industrial area east of Belle Isle Road, west of Bridge Street, and south of the New York State Fairgrounds. The project location is presented on **Figure 1**. A scrap yard and former NAKOH Chemical Company property are located north of the Site, and a cogeneration facility is located west of the Site. The West Flume is a man-made drainage channel that runs east to west though the Site and collects runoff from the Site and storm water from the Village of Solvay.

1.1.2 Site Background

A portion of the Former Erie Canal/West Flume Site, near the western edge of the property, was excavated during the course of installing a forcemain from the LCP water treatment system to a sanitary sewer connection on Mathews Avenue. During the forcemain installation, assorted fill materials and debris were unearthed,

chemical odors were noted by the excavation crew, and volatile organic compounds (VOCs) were detected using a photoionization detector (PID). The area original excavated to install the forcemain was expanded to address impacted materials. The approximate area of the expanded excavation is presented on **Figure 2**. Analytical samples were collected from the spoils generated during the expanded excavation. The analytical results included detections of 1,2-dichlorobenzene, 1,4-dichlorobenzene, and mercury at concentrations of 220,000 µg/kg, 8,600 µg/kg, and 100 mg/kg, respectively. The spoils generated during this expanded excavation were transported off-Site to an appropriate facility for disposal.

Subsequent to the forcemain installation, three additional investigations were completed on the property focused on the former canal and extended to the north to the West Flume. Based on visual observations and the variable analytical results from samples collected during the investigations, it appears that the fill material in the canal footprint is heterogeneous in nature. SVOCs (1,4-dichlorobenzene and benzo(a)pyrene), mercury, and arsenic exceed NYSDEC Part 375.6 Commercial Soil Cleanup Objectives (SCOs) in the fill material within the canal footprint. Samples collected from subsurface soils outside or below the canal footprint appear to be relatively unimpacted compared to fill material within the canal.

Figure 3 and **Figure 4** show previous sampling locations and concentrations of sample locations exceeding Commercial SCOs.

1.1.3 Erie Canalway Trail

The Site has been identified as a property that will be used for the construction of the Erie Canalway Trail (Trail). The Trail is scheduled to be substantially constructed and opened for use by the end of 2019. As a portion of the site will be used for passive recreation (*i.e.* recreational trail), the chosen remedy must meet the requirements of NYSDEC Part 375.6 Commercial SCOs for surface soils (within 1-ft of the surface).

2. PROJECT MANAGMENT

2.1 PROJECT MANAGEMENT STAFFING

NYSDEC Project Manager – Tim Larson

As the lead regulatory agency, the NYSDEC Project Manager's functions shall include the following;

- Review and approve designs
- Review project submittals for compliance with regulations
- Issue approval to construction the project once design has been approved
- Review and approve major design modifications or requests for variances from the regulatory conditions during construction.

Honeywell Project Manager – Shane Blauvelt, P.E.

The Honeywell Project Manager will provide technical input, represent Honeywell, and attend meetings with project staff and NYSDEC.

Project Officer – Doug Crawford, P.E.

The Project Officer (PO) will oversee project quality, safety, schedule, and overall project performance; will periodically attend construction review meetings; and will be available on an as-needed basis to the project team. The PO will also be responsible for certifying documents in accordance with DER-10.

Construction Manager – Ed Prossner

The Construction Manager will manage the procurement and construction phases of the project on a day-to-day basis, monitor and evaluate project controls throughout the project, and see that the technical and quality objectives are achieved.

Engineering Project Manager – Brad Kubiak, P.E.

The Engineering Project Manager (PM) will support the PO in overseeing project quality, safety, schedule, and overall project performance, and will manage engineering activities during the construction phase of this project. The PM may periodically attend weekly construction progress update meetings and be available to as needed to support the project team, and provide input to value engineering alternatives identified during the construction phase of the project.

Engineering Assistant Project Manager – Reagan Cuddy, P.E.

The Engineering Assistant Project Manager (APM) will lead engineering activities during the construction phase of this project. The APM will attend weekly construction progress update meetings at the request of the Construction Manager, and provide shop drawing reviews, respond to requests for information, and provide input to value engineering alternatives identified during the construction phase of the project.

Health and Safety Manager – Steven Thompson, CHST

The Health and Safety Manger will support implementation and enforcement of the Site-Specific Health and Safety Plan For the project.

3. HEALTH AND SAFETY AND AIR QUALITY MONITORING

3.1 HEALTH AND SAFETY

3.1.1 Project Health and Safety Plan

The project-specific Health and Safety Plan (HASP) is included as **Appendix A**. The HASP details practices that will be implemented for the safe execution of the project and the safety of the workers involved with the project.

Training and planning tools, which will be utilized by the project team will include the following:

- Job Safety Analysis
  - A job safety analysis (JSA) will be developed for the scope of work associated with this project. The JSA will be reviewed as part of the Site orientation training and all employees and direct hire personnel/subcontractors will be required to follow the requirements of the JSA.
- Site Orientation Training:
  - Personnel working on this project will be required to attend a site orientation training session prior to engaging in any work activities and/or entering the work zone.
- Daily Pre-Task Planners and Weekly Toolbox Safety Meetings:
  - Pre-Task Planners are prepared daily and will be reviewed with the work crew focusing on any changes in equipment, tools, work methods, or site conditions as well as key hazards and safety controls.
  - Project personnel must attend a project Weekly Toolbox Safety Meeting. These meetings are an opportunity to conduct field safety training, distribute key safety information, reinforce safety as a priority and review recent inspection results with all project personnel.

3.1.2 Community Health and Safety Plan

The Community Health and Safety Plan (CHASP) has been developed to address health and safety procedures that will be implemented to address the protection of the community and environment during the implementation of the Site remedy. The CHASP includes a Community Air Monitoring Plan (CAMP) that addresses potential project air emissions into the off-site community. Community air monitoring will be performed throughout the project in accordance with the requirements of the CAMP. The CHASP and CAMP are provided as **Appendix B**.

3.2 WORK ZONE AIR QUALITY MONITORING

OBG part of Ramboll (OBG), will implement a work zone air quality monitoring program during intrusive activities. The requirements of this program are described in Section 5 of the HASP (**Appendix A**).

4. INTERIM REMEDIAL MEASURE DESIGN AND CONSTRUCTION

The cover system design, as described below, incorporates green remediation concepts in general accordance with DER-31 (NYSDEC, 2011). Specifically, the cover system has been designed to require minimum maintenance and be integrated with the long-term use of the site. In addition, the following green techniques will be implemented during construction:

- Local sourcing of cover materials
- Use of local labor resources
- Use of B-20 biodiesel in heavy equipment
- Minimization of equipment idling, consistent with 6 NYCRR Part 217-3 – Idling Prohibition for Heavy Duty Vehicles.

4.1 INTERIM REMEDIAL MEASURE DESIGN

4.1.1 Site Grading

The construction of the subgrade of the Trail has been integrated into the construction of this IRM WP. Construction of the subgrade for the Trail is being included as part of this IRM WP construction as it would be necessary to manage impacted soils to construct the subgrade of the Trail. Parsons is responsible for the design of the Trail, and provided a grading plan, typical trail cross sections, and profile for the portion of the trail that crosses the site. These design details are provided as **Exhibit 1**.

The site will be graded so that a minimum of 1-ft of imported soil will be installed over existing Site soils as part of the trail. Grading considerations included in Parsons' design include Americans with Disabilities Act access requirements, storm water, existing site grade, and the presence of existing utilities on site. As part of grading, excess material will be generated that will need to be managed. This material will be used on site to fill areas of localized low elevations below the constructed soil cover.

To improve the consistency of soil cover placement, existing tree stumps will be ground in place and covered by the soil cover.

4.1.2 Soil Cover

A soil cover with a minimum thickness of 1-ft will be placed over existing site materials that exhibit concentrations that exceed Commercial SCOs. Based on results of previous sampling, approximately 4.6 acres of the site will receive a soil cover as shown on the Design Drawings (**Appendix D**).

Typical cross sections of the soil cover outside the horizontal limits of the Trail, for the Trail, and transition zones are provided on Sheet C-502 of the Design Drawings (**Appendix D**).

Sampling and analysis of select fill and topsoil will be conducted prior to placement in accordance with requirements of **Section 5** (Construction Quality Assurance/Construction Quality Control).

4.2 INTERIM REMEDIAL MEASURE CONSTRUCTION

Interim Remedial Measure construction activities for the site will generally be completed in four phases - mobilization and site preparation, site grading, cover installation, and demobilization. Each of the four phases are described in the subsections below.

4.2.1 Mobilization and Site Preparation

Tasks associated with mobilization and site preparation include marking of subsurface utilities, establishment of support areas and access roads (as needed), management of vegetative material, establishing temporary erosion and sedimentation controls, establishing traffic controls, CAMP activities, and decommissioning of monitoring wells. These are described below.

Marking of Subsurface Utilities

Dig Safely New York will be contacted prior to the initiation of intrusive work at the site. A date and time will be established for the various utility companies to meet an OBG representative and mark the locations of subsurface utilities in the proposed work areas. A private utility locator will be contracted to locate and mark underground utilities at locations that Dig Safety New York will not mark due to being on private property.

Establish Support Areas

Support areas will be constructed and established including:

- Portable on-site sanitary services (porta-johns and hand wash stations or equivalent) and temporary portable water supply for use by on-site personnel.
- Decontamination of equipment will be conducted for equipment used in intrusive work. A lined decontamination pad with a collection sump will be constructed on-site for equipment decontamination. The decontaminating pad will be constructed per the Decontamination Pad Detail on Sheet C-501 of the Design Drawings. Collected decontamination water will be pumped to a storage vessel for solids settling prior to discharging it to the Willis Ave Groundwater Treatment Plant.

Install Stabilized Construction Access

Construction entrance/exit pad(s) will be constructed per the Stabilized Construction Access Detail on Sheet C-501 of the Design Drawings (**Appendix D**). A construction entrance/exit pad at all access points to public roads to facilitate removal of loose dirt and stone from transportation vehicles. Mud and dirt will be removed from trucks and heavy equipment prior to leaving the site to mitigate the potential for tracking of mud and dirt onto roadways. Mud or dirt tracked onto roadways will be removed using a combination of a water truck and skid steer with a sweeper attachment or other method reviewed by the Engineer.

Site Security

Access to the site will be restricted by a combination of temporary construction fencing that will be installed around the property and existing fencing. Additional measures may be taken to further limit site access and augment security during remedial activities. The level of security will be dependent on activities being performed and the location of the activities. Minimum security measures to be implemented include: temporary fencing and/or barriers; warning tape and signs; maintenance of sign-in/sign-out sheets; and implementation of safe work practices. Descriptions of the security measures are provided below:

- Perimeter Fencing – the work areas shall be enclosed with a perimeter security fence to control access for unauthorized personnel. The existing fence for the LCP site will be used to the extent practicable, supplemented by temporary fence where necessary.
- Temporary fencing and/or barriers will be used to delineate and secure areas of ongoing remedial activities including open excavations and other potentially dangerous areas.
- A sign-in/sign-out sheet shall be maintained at the site for the duration of the remediation activities. Site construction workers, other site personnel, and visitors shall be required to sign in upon entering the site and sign out upon leaving.
- Implementation of safe work practices will provide for additional site security during remediation. Safe work practices that contribute to overall site security include: parking heavy equipment in designated areas and removing keys; maintaining organized work areas; participating in daily security and health and safety meetings. Additional details on safe work practices can be found in the HASP (**Appendix A**)

Erosion and Sedimentation Controls

The project will be completed in substantive compliance with NYSDEC SPDES General Permit No. GP-0-15-002 per the Stormwater Pollution Prevention Plan (SWPPP) prepared for this project and included as **Appendix C**. The SWPPP provides details of the erosion and sediment control measures that will be implemented and maintained throughout this project.

Community Air Monitoring Plan

Community air monitoring will be implemented in accordance with the New York State Department of Health Generic Community Air Monitoring Plan, Fugitive Dust and Particulate Monitoring Plan, and Section 2 of the CHASP (**Appendix B**). The CAMP provided in Section 2 of the CHASP provides details of the community air monitoring plan that will be implemented and maintained throughout this project.

Vegetative Material Management

The trees located within the limits of the site were felled in March 2019 to minimize potential impacts to protected bat species (Indiana bat [*Myotis sodalist*, state and federally listed as endangered] and northern long-eared bat [*Mytosis septentrionalis*, state and federally listed as threatened]). Felled trees located on-site will be consolidated to a central location and chipped. Chipped vegetation may be re-used on-site as temporary storm water controls, as temporary construction access pathways, or placed in lifts less than 3-inches in thickness under the soil cover outside the footprint of the proposed Trail.

Decommissioning Monitoring Wells

Monitoring wells FEC-MW-01 through FEC-MW-07 will be decommissioned in accordance with NYSDEC CP-43: Groundwater Monitoring Well Decommissioning Policy (NYSDEC, 2009), utilizing the "Grout-in-place" method. Monitoring wells may be decommissioned prior to site mobilization with approval from NYSDEC. As summarized in the Site Characterization Report (OBG. 2019) results of the groundwater monitoring indicate that no analytes were detected above NYS Class GA Standards and Guidance Values for constituents related to historic Honeywell operations. As analytes related to historic Honeywell operations were not detected above Class GA Standards groundwater monitoring will not be necessary for the future Site Management Program and the monitoring wells are not required.

4.2.2 Site Grading

Tasks associated with site grading include grinding of remnant tree stumps, grading to 1-ft below final grade, placement and compaction of spoils to 1-ft below final grade, survey, and installation of permanent storm water controls.

Grinding of Tree Stumps

Tree stumps remaining after felling of trees in March 2019 will be ground in place using stump grinders. Grinding the stumps in place will limit the disturbance of impacted soil across the site. After the stumps have been ground in place compaction equipment will be used to compact limits of the grinding to reduce future settling potential under the soil cover.

Grading

Where the existing elevation of the Site is higher than what is required to facilitate the installation of the subgrade for the Trail or permanent storm water controls, the existing surface will be graded to a minimum of 1-ft below the finished grade to allow for the installation of the prescribed 1-ft soil cover.

Transport, Placement and Compaction of Spoils

Spoils generated from grading will be reused as general fill on-site below the soil cover. Spoils not used to establish required grade for the Trail will be used to fill localized low spots across the site to facilitate the installation of the 1-ft cover. Low spots to be filled are identified on the Design Drawings (**Appendix D**). In addition to the low spots identified in the Design Drawings it is anticipated that low spots will be created during the grinding of tree stumps that will require some fill to return the locations to level with the surrounding grade prior to installation of the soil cover.

Compaction control for spoils placed on site will be demonstrated with a performance requirement as described in **Section 5.2**.

Survey

After grading and placement of spoils has been completed to the required design subgrades the site will be surveyed. The survey will be conducted by a surveyor licensed in the State of New York with a maximum fifty-foot grid to at least the limits of the cover installation. This survey will be used to establish the base conditions for the installation of the soil cover. After the survey has been completed grade stakes will be installed to facilitate installation of materials to the final design elevation.

Installation of Permanent Storm Water Controls

Permanent storm water controls for the site include a culvert adjacent to Belle Isle Road, a light stone fill lined ditch at the terminus of the culvert, and a diversion ditch adjacent to the Trail. Details of the permanent erosion and sediment controls to be installed are included in **Exhibit 1**.

An 18-inch culvert will be installed under the Trail adjacent to Belle Isle Road to transmit storm water from the site and the road under the Trail. At the northern terminus of the culvert a light stone fill lined ditch will be installed. The ditch will have 2H:1V side slopes and be a minimum of 2-ft wide at its flat base.

The storm water diversion ditch that runs adjacent to the south side of the Trail will have similar construction to the rest of the soil cover. The ditch will have a 3H:1V side slope adjacent to the Trail and a 2H:1V side slope away from the Trail. The flat base of the ditch will be a minimum of 2-ft wide and 1.5-ft below the finished grade of the Trail. To meet the requirements of 1-ft of cover on the Site the ditch will consist of, from top down, 4-inches of seeded topsoil and 8-inches of compacted Type E select fill or approved equivalent.

4.2.3 Cover Installation

Tasks associated with cover installation include import of cover material, placement and compaction of select fill, placement of topsoil, and seeding.

Import of Cover Materials

Cover materials will be imported from off-site sources. Imported fill materials will be sampled and meet the requirements of material management QA/QC described in **Section 6.1** and requirements of the Technical Specifications (**Appendix E**). After approval by NYSDEC, material will be transported to and stockpiled on-site. The type, quantity and description of material anticipated to be imported to the site follows:

- Topsoil – 1,900 CY - For use as final cover surface and promote vegetative growth.
- Select Fill – 5,500 CY - For use as fill to create a physical barrier over subgrade soil and meet grade requirements for the Trail.
- Light Stone Fill – 20 CY - For use as permanent storm water control channels where flows will be concentrated.

Cover Installation

The 1-ft soil cover will consist of 8-inches of compacted select fill and 4-inches of topsoil. The cover will be graded as to minimize surface water ponding. A typical cross section, the limits, and final grade of the soil cover are presented in the Design Drawings (**Appendix D**)

As described in the Technical Specifications (**Appendix E**) select fill will be placed in loose lifts not thicker than 6-inches then thoroughly compacted by compaction equipment appropriate for the material prior to placement of succeeding lifts. Select fill will be placed and compacted to within 4-inches of the final grade. Compaction of cover will be in accordance with technical specifications, and acceptance will be based upon the results of on-site demonstrations.

Once the select fill is placed and compacted, a minimum of 4-inches of topsoil will be placed and graded.

Trail Subgrade Installation

The subgrade of the Trail will be installed as part of this IRM. As shown in the design details in **Exhibit 1**, the subbase for the trail will consist of 12-inches of compacted select fill. As the trail will receive a top coat of stone

dust, or be paved, for the final surface (to be performed by others) the subbase of the Trail will not receive topsoil. The top of the Trail subbase will be installed with a crown at the center of the Trail with a minimum of 1.5% slope to the sides. To comply with the Americans with Disabilities Act the maximum allowable slope along the length of the Trail will be 3%. The subbase of the Trail will be compacted as described in **Section 5.2.2**.

Seed and Mulching

After the topsoil has been placed and the requirements of the cover have been verified, areas outside the limits of the Trail will be seeded and mulched. Requirements for seeding and mulching are provided in the Design Drawings (**Appendix D**) and Technical Specifications (**Appendix E**). QA/QC requirements for seeding and mulching are discussed in **Section 5.3**.

4.2.4 Demobilization

Tasks associated with demobilization include removal of security fencing and removal of temporary erosion and sedimentation controls.

Removal of Security Fencing

Once construction is completed temporary perimeter fencing and temporary barriers will be removed from the site. Permanent fencing at the Site, which may have been damaged during construction, will be repaired or replaced as necessary with equivalent permanent fencing.

Removal of Temporary Erosion and Sedimentation Controls

In accordance with the SWPPP, temporary erosion and sedimentation controls will be removed and disposed off-site in accordance with local and state regulations once the qualified inspector indicates that the site has achieved final stabilization as defined in Permit No. GP-0-15-002. Honeywell will file a SPDES Notice of Termination (NOT) with the NYSDEC once the final inspection is completed.

5. CONSTRUCTION QUALITY ASSURANCE/CONSTRUCITON QUALITY CONTROL

5.1 MATERIAL IMPORTATION

5.1.1 Select Fill

Prior to the installation of select fill materials, the supplier will be required to provide the following:

- Name and location of the material source
- Affidavit from the owner of the source for each type of borrow material to be imported to the site
- Laboratory analytic data for each material

The Affidavit from the owner of the source of each type of borrow material shall state that, to the best of the owner's knowledge, the site of the source material was never used as a dump site for chemical, toxic, hazardous or radioactive materials and it is not now, or ever has been, listed as a suspected depository for chemical, toxic, hazardous, or radioactive materials by any federal, state, or other governmental agency, department, or bureau.

Laboratory analytic data (or documentation of such data no older than one year from submittal) will be provided for these soils for the compounds in Table 375-6.8(B) "Restricted Use Soil Cleanup Objectives (SCO)" Protection of Public Health Commercial in NYSDEC Subpart 375 (NYSDEC. 2006). Failure of a single constituent test result, compared to Restricted Use Commercial SCOs will mean that the entire material batch will be rejected unless specifically accepted on a test-by-test basis by OBG and approved by NYSDEC.

In addition, the supplier will be required to collect samples of the proposed topsoil and other select fill. Supplier will provide the following geotechnical testing results to OBG for review:

Table 5-1 Topsoil Analysis

Parameter	Standard	Criteria
Grain Size	ASTM D422	Monitor consistency of borrow source
pH	ASTM D4972	pH in the range of 5.5 to 7.6
Organic Content	ASTM D2974	Organic concentration of 0.5 to 6%
Liquid Limit, Plastic Limit and Plasticity Index	ASTM D4318	Silty Loam, Loam, Sandy Loam, Clay Loam

Notes:

1. **ASTM D422 – Method for Particle-Size Analysis of Soil**
2. **ASTM D2974 – Method for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils**
3. **ASTM D4972 – Method for pH of Soils**
4. **ASTM D4318 – Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils**

Table 5-2 Other Select Fill

Parameter	Standard	Criteria
Gradation	ASTM D422	Monitor consistency of source
Compaction Curves	ASTM D698	Moisture-density relationship of backfill

Notes:

1. **ASTM D422 – Method for Particle-Size Analysis of Soil**
2. **ASTM D698 – Method for Laboratory Compaction Characteristics of Soil**

5.2 MATERIAL PLACMENT

This section provides the basis for the CQA/CQC activities associated with placement of materials as part of the IRM.

5.2.1 Soil Cover

As discussed in **Section 4.2.2**, prior to placement of the soil cover the prepared subgrade shall be surveyed; then grade stakes identifying the required depth of material placement will be installed**.** The grade stakes will be used to track depth of material installed and verify that the required depth of soil cover has been placed to the extents required by the design.

5.2.2 Trail Compaction Testing

Select fill placed as subbase within the limits of the Trail will be compacted to a minimum of 95% of Standard Proctor Maximum Density. In-place density shall be established by ASTM D1556 sand cone method or ASTM D2922 nuclear density method at a frequency of 1 test per 200 liner feet of Trail.

5.3 RESTORATION

The area to be vegetated will be seeded with native plant species. The area will be inspected weekly in accordance with the SWPPP until it has achieved final stabilization (i.e., a minimum of 80% vegetative ground coverage) in substantive compliance with NYSDEC SPDES Permit No. GP-0-15-002. Areas where vegetative ground coverage is less than 80% will be re-seeded as needed to achieve final stabilization. After the SPDES NOT is submitted, vegetated areas will be inspected annually and re-seeded as needed, as detailed in a Site Management Plan. Alternative native seed mixes may be substituted as necessary if field conditions (e.g., surface soil saturation) unsuitable to successional old field species are encountered.

6. POST CONSTRUCTION

This section describes activities to be implemented following completion of construction which will include development of the Site Management Plan (SMP), preparation of a Construction Completion Report, and issuance of a certificate of completion, no further action, or satisfactory completion letter by NYSDEC as described in Section V of the Consent Order.

6.1 SITE MANAGEMENT PLAN

At the conclusion of construction, a SMP will be prepared in general conformance with NYSDEC Generic Site Management Plan Template that will describe the engineering and institutional controls for the Site (See **Section 6.1.1**) and detail the post-construction activities to be conducted at the Site. The SMP will generally include:

- An introduction and description of the remedial program
- An Engineering and Institutional Control Plan
- A Monitoring Plan.

Appendices will include:

- Excavation Plan
- Environmental Easements and/or environmental notice
- Sample Health and Safety Plan
- Generic Community Air Monitoring Plan
- Site-wide inspection Form.

The SMP will be submitted to NYSDEC for review and approval following completion of the IRM.

6.1.1 Institutional Controls

Institutional controls will be established for the site in the form of an environmental easement or environmental notice for the Site in support of the following:

- Requiring the property owner to complete and submit periodic certifications to NYSDEC that the institutional and engineering controls are still in place and remain effective in accordance with Part 375-1.8(h)(3)
- Requiring management of the site in accordance with the provisions of the NYSDEC-approved SMP
- Restricting disturbance or excavation of the soil cover and the soil below the installed soil cover
- Restrict the use and development of the Site for commercial or industrial use as defined by Part 375-1.89(g).
- The potential for vapor intrusion must be evaluated for any buildings developed on-site, and any potential impacts that are identified must be monitored and mitigated.

6.2 CONSTRUCTION COMPLETION REPORT

At the completion of construction, a Construction Completion Report (CCR) will be prepared documenting the remedial measure. The CCR will include:

- A description of the IRM as constructed pursuant to the approved IRM WP, including variations, if any, from the approved IRM WP
- A description of the required institutional controls
- The SMP by reference
- Record Drawings stamped and signed by a New York State licensed Professional Engineer
- Certification of the IRM signed by a New York State Licensed Professional Engineer.

6.3 CERTIFICATE OF COMPLETION/NO FURTHER ACTION/SATISFACTORY COMPLETION

At the end of the remediation and when the SMP and CCR have been approved, per Section V of the Consent Order NYSDEC will issue a certificate of completion (COC) indicating the site is remediated to the satisfaction of NYSDEC for the contamination known at the time of issuance. However, if, after the completion of any required investigations and/or interim remedial measure, the NYSDEC determines that the Site will not be listed in the *Registry of Inactive Hazardous Waste Disposal Sites in New York State,* the NYSDEC will not issue a COC but will issue a No Further Action/Satisfactory Completion Letter to Respondent reflecting the NYSDEC determination that, other than implementation of a SMP if required , no further remedial action at the Site is presently necessary. The letter's form and substance shall be materially similar to Exhibit D included in the Consent Order.

6.4 POST CONSTRUCTION OPERATION AND MAINTENANCE REQUIREMENTS

Site maintenance requirements will be detailed in the SMP. The plan will describe post-construction monitoring requirements to assess the effectiveness of the remedy and corrective measures taken to maintain the soil cover. The SMP will include provisions for an annual inspection of the soil cover. The proposed remedy does not include any active systems that would require operation.

REFERENCES

NYSDEC. 2006. *6 NYCRR Subpart 375-6.8: Restricted Use Soil Cleanup Objectives*. December 2006. www.dec.ny.gov/docs/remediation_hudson_pdf/part375.pdf.

NYSDEC. 2009 *CP-43: Groundwater Monitoring Well Decommissioning Policy*. November 2009.

NYSDEC, 2016. *New York Standards and Specifications for Erosion and Sediment Control*. November 2016.

OBG. 2009. *LCP Site: Former Erie Canal/West Flume Fill Delineation and Soils Sampling Work Plan.* O'Brien & Gere Engineers, Inc., Syracuse, New York. October 2009.

OBG. 2010a. *LCP Site: Former Erie Canal/West Flume Fill Delineation and Soils Sampling Investigation.* O'Brien & Gere Engineers, Inc., Syracuse, New York. September 2010.

OBG. 2010b. *LCP Site: Former Erie Canal/West Flume Fill Delineation and Soils Sampling Phase 2 Work Plan.* O'Brien & Gere Engineers, Inc., Syracuse, New York. November 2010.

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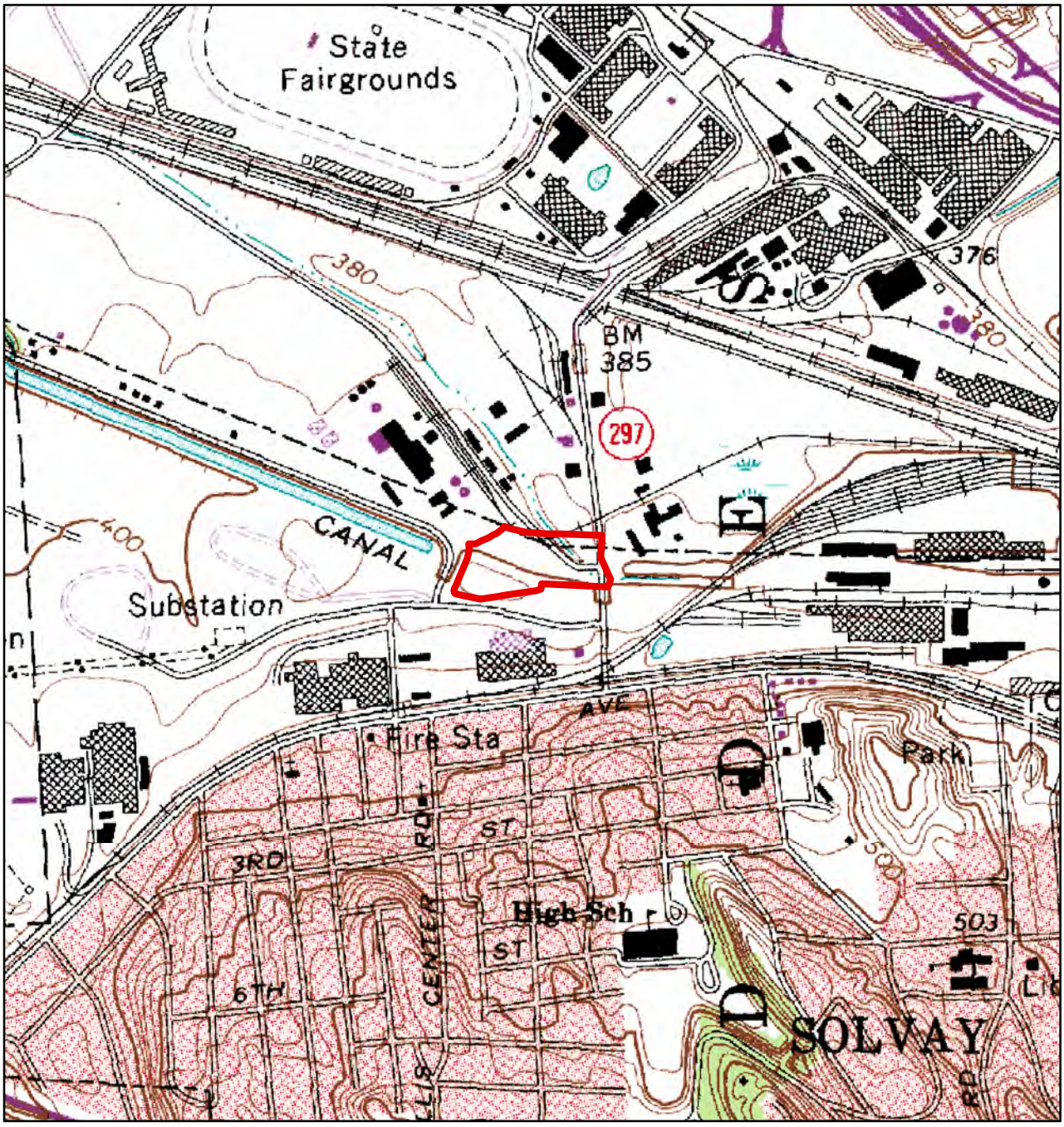
OBG. 2018. *LCP Site: Former Erie Canal/West Flume Property Records Search Report*. O'Brien & Gere Engineers, Inc., Syracuse, New York. September 2018.

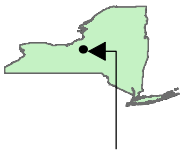
OBG. 2019. *Draft LCP Former Erie Canal and West Flume Property Site Characterization Report*. O'Brien & Gere Engineers Inc., Syracuse, New York. January 2019.

Parsons. 2013. *2010 Annual Operation, Maintenance and Monitoring Report, LCP Bridge Street Site (OU-1), Solvay, New York*. Parsons, Syracuse, New York.

Figures



ADAPTED FROM: SYRACUSE WEST USGS QUADRANGLE



MAP LOCATION

HONEYWELL
LCP SITE: FORMER ERIE CANAL/WEST FLUME
IRM WORK PLAN
GEDDES, NEW YORK

SITE LOCATION

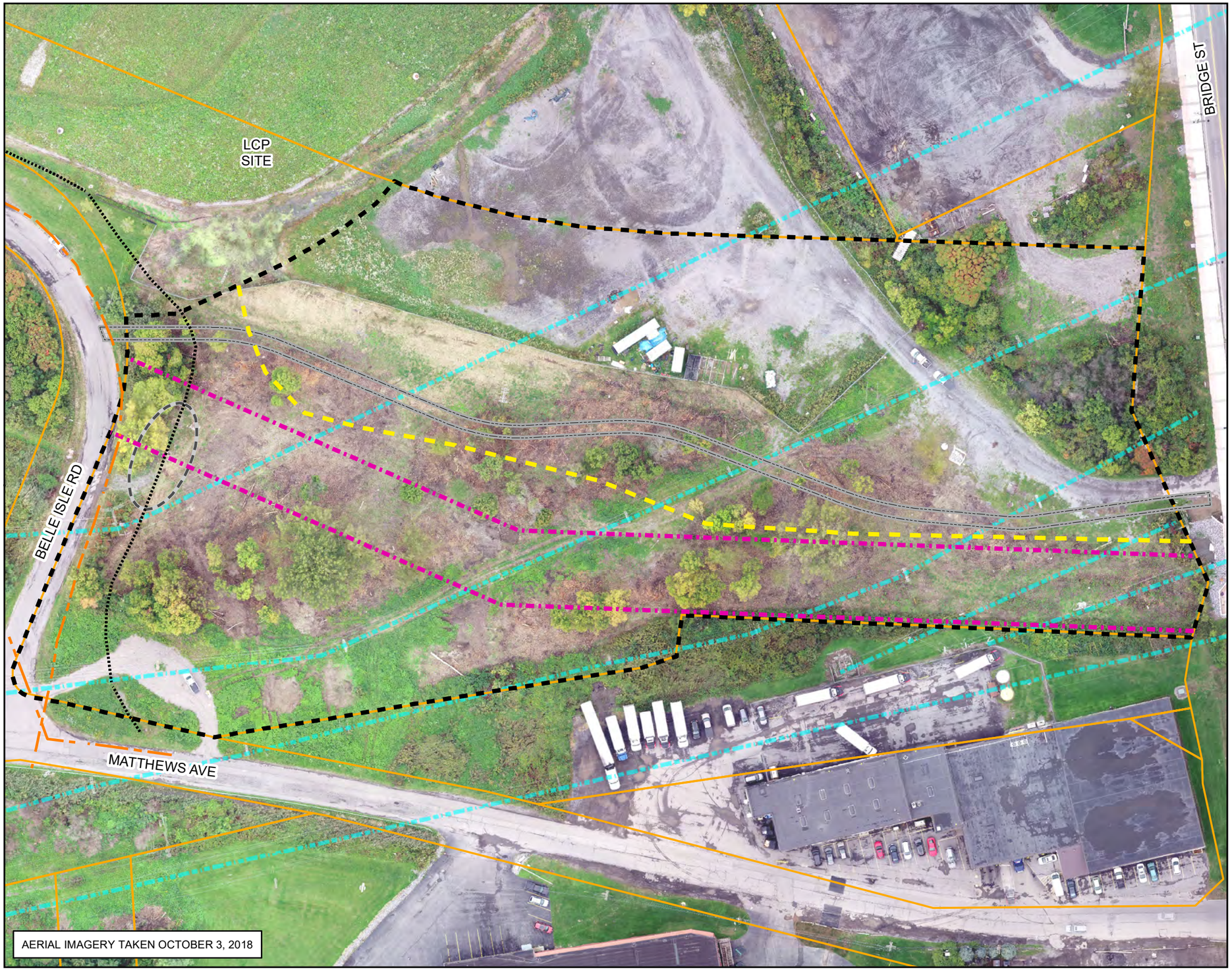
N

0 500 1,000 2,000
Feet

1:16,000

1163.70388
MAY 2019

O'BRIEN & GERE ENGINEERS, INC.



N

LEGEND

- FORCEMAIN
- GAS MAIN
- APPROX. FORMER ERIE CANAL (AS SHOWN ON 1898 USGS SYRACUSE WEST, NY TOPOGRAPHIC QUAD)
- APPROX. FORMER WEST FLUME (AS SHOWN ON 1939 SYRACUSE, NY USGS TOPOGRAPHIC QUAD)
- FORCE MAIN EXCAVATION LIMITS
- PROPOSED ERIE CANALWAY TRAIL
- SITE BOUNDARY
- TOWN OF GEDDES TAX PARCEL
- APPROXIMATE POWERLINE LOCATION (BASED ON AERIAL)

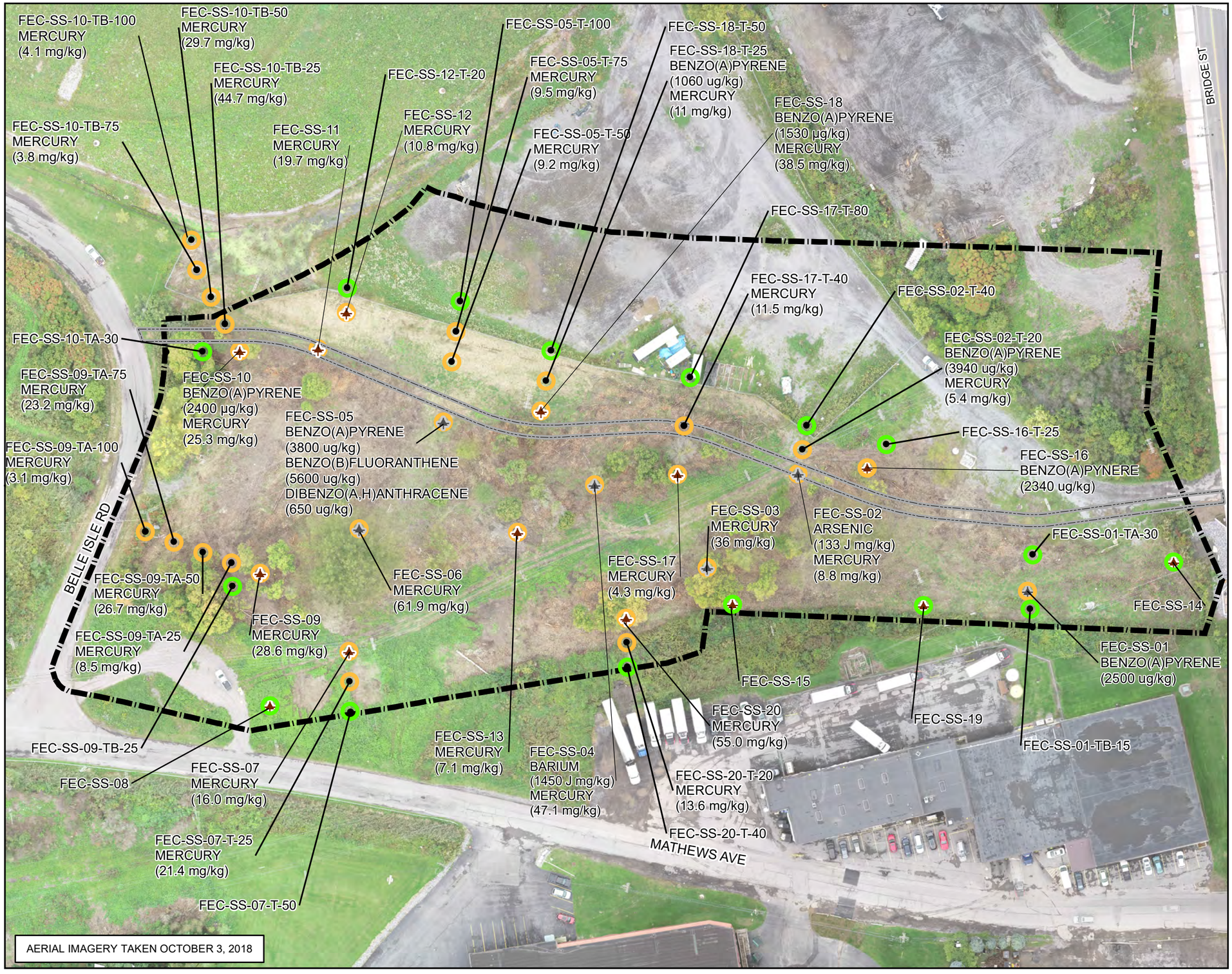
HONEYWELL
LCP: FORMER ERIE CANAL/WEST FLUME
IRM WORK PLAN
GEDDES, NEW YORK

SITE PLAN

0 40 80 160
Feet

MAY 2019
1163.45225

O'BRIEN & GERE ENGINEERS, INC.



N

LEGEND

- HISTORIC SURFACE SOIL LOCATION
- 2018 SURFACE SOIL LOCATION
- 2019 ADDITIONAL SURFACE SOIL SAMPLES
- SITE BOUNDARY
- NO EXCEEDANCE NYS PART 375 COMMERCIAL IN SURFACE SOIL SAMPLE
- NYS PART 375 COMMERCIAL EXCEEDANCE IN SURFACE SOIL SAMPLE
- PROPOSED ERIE CANALWAY TRAIL

NOTE:
HISTORIC AND 2018 SURFACE SOIL SAMPLES COLLECTED FROM 0-18"
2019 SURFACE SOIL SAMPLES COLLECTED FROM 0-12".
EXCEEDANCES, IF NOTED, ARE FROM UPPER MOST SAMPLE INTERVAL, IF MORE THAN ONE INTERVAL WAS SAMPLED

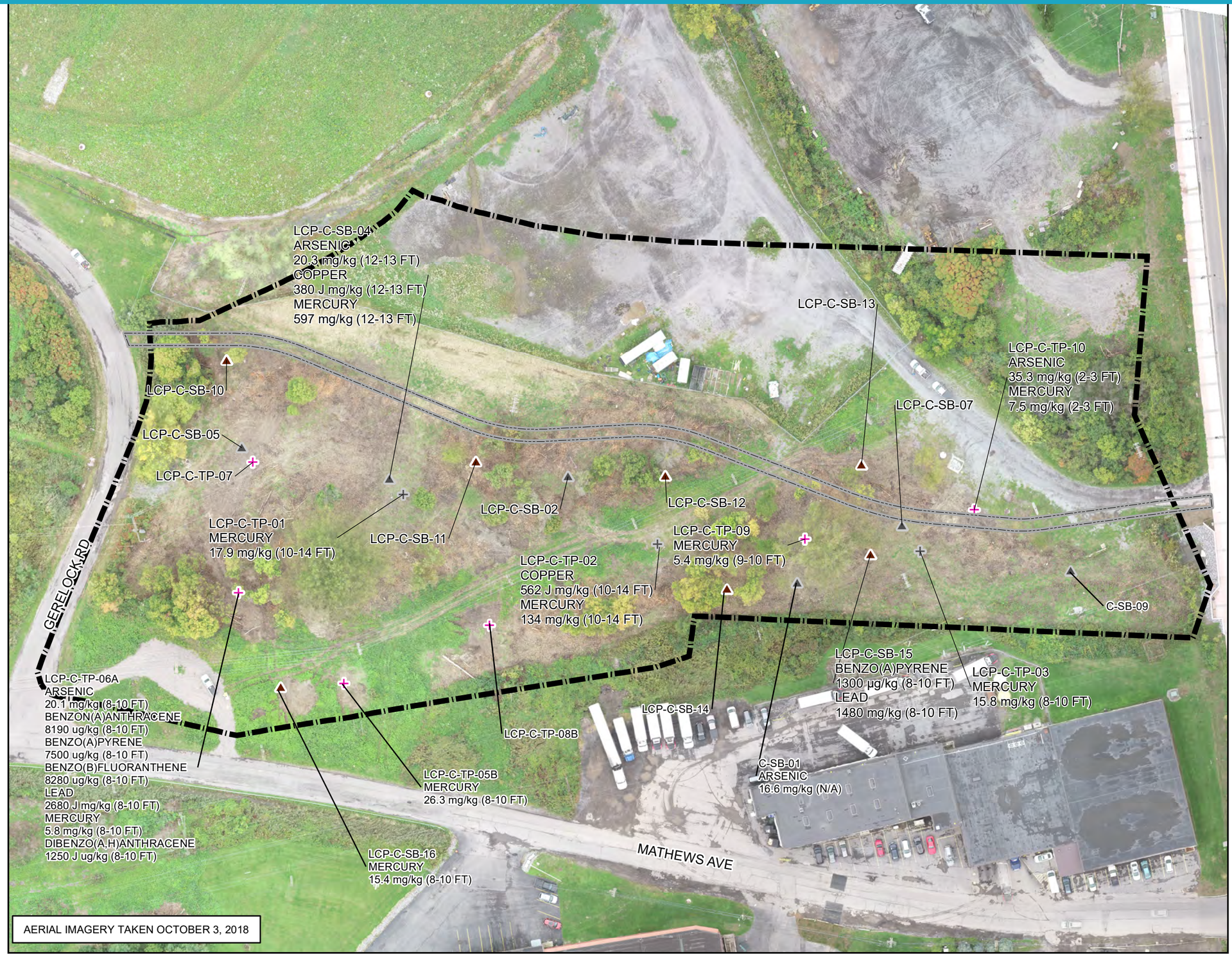
HONEYWELL
LCP: FORMER ERIE CANAL/WEST FLUME IRM WORK PLAN
GEDDES, NEW YORK

SURFACE SOIL SAMPLE EXCEEDANCES OF COMMERCIAL SCOs

0 40 80 160
Feet

1163.70388
MAY 2019

O'BRIEN & GERE ENGINEERS, INC.



N

LEGEND

- 2018 SOIL BORING LOCATION
- 2018 TEST PIT SAMPLE LOCATION
- HISTORIC SOIL BORING LOCATION
- HISTORIC TEST PIT SAMPLE LOCATION
- SITE BOUNDARY
- PROPOSED ERIE CANALWAY TRAIL

HONEYWELL
LCP: FORMER ERIE CANAL/WEST FLUME IRM WORK PLAN INVESTIGATION
GEDDES, NEW YORK

SUBSURFACE SOIL SAMPLE EXCEEDANCES OF COMMERCIAL SCOs

0 45 90 180
Feet

1163.70388
MAY 2019

O'BRIEN & GERE ENGINEERS, INC.

N

LEGEND

- 2019 ADDITIONAL SURFACE SOIL SAMPLES
- 2018 SURFACE SOIL LOCATION
- HISTORIC SURFACE SOIL LOCATION
- NO EXCEEDANCE NYS PART 375 COMMERCIAL IN SURFACE SOIL SAMPLE
- NYS PART 375 COMMERCIAL EXCEEDANCE IN SURFACE SOIL SAMPLE
- SITE BOUNDARY
- TOWN OF GEDDES TAX PARCEL
- PROPOSED 1 FT SOIL COVER
- PROPOSED ERIE CANALWAY TRAIL

HONEYWELL
LCP: FORMER ERIE CANAL/WEST FLUME IRM WORK PLAN GEDDES, NEW YORK

PROPOSED SOIL COVER EXTENTS

0 40 80 160
Feet

1163.70388
MAY 2019

O'BRIEN & GERE ENGINEERS, INC.

Health and Safety Plan (HASP)

Health & Safety Plan
LCP Former Erie Canal and West Flume Property
Town of Geddes, Onondaga County, NY
Index No. R7-2018-06-01

Honeywell

May 2019

OBG
Part of Ramboll

REVISION SUMMARY

Revision Date	Description of Changes	Reason for Change
	(Section title or number – description)	(individual name or title, company / agency name, document reference and date)

PREFACE

This document describes the minimum anticipated protective measures necessary for worker health and safety during the activities associated with this project. OBG employees and direct OBG subcontractors must read and understand the contents of this document. We do not intend the contents of this document to cover all situations that may arise nor to waive any provisions specified in Federal, State, and local regulations or site owner / contractor health and safety requirements. During this project, if any task occurs that is not covered in this Environmental, Health & Safety Plan, the individual responsible for that task will inform OBG's Corporate Health & Safety Department. Site personnel affected by the new activity and its associated hazards must ensure that they follow necessary safety procedures and use appropriate protective equipment.

Subcontractors are accountable for the health and safety of their own employees. No requirements or provisions within this plan shall be construed by subcontractors as an assumption by OBG, or Honeywell of the subcontractor's legal responsibilities as an employer.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ATTACHMENTS

LIST OF APPENDICES

1. INTRODUCTION

This Health & Safety Plan (HASP) has been developed to outline the requirements to be met by OBG employees, direct subcontractors of OBG (if any), and OBG visitors while performing activities outlined herein for the Interim Remedial Measure activities at the LCP Former Erie Canal and West Flume Property. This HASP describes the responsibilities, training requirements, protective equipment and safety procedures necessary to minimize the risk of injury, fires, explosion, chemical spills and material damage incidents related to construction activities. This HASP incorporates by reference the Occupational Safety and Health Administration (OSHA) regulations contained in 29CFR1910 and 29CFR1926, Also, incorporated by reference are the EPA Standard Operating Safety Guides, Publication 9285.1-03.

The requirements and guidelines in this HASP are based on a review of available information and data, and an evaluation of identified on-Site hazards. This HASP will be reviewed with Site personnel and will be available on-Site. OBG employees, direct subcontractors, and visitors will report to the on-Site OBG Site Safety Leader (SSL) in matters of health and safety. While the SSL is responsible for overseeing compliance with this HASP and stopping work when necessary, the Project Manager is responsible for implementation of this HASP into daily Site activities.

OBG employees and subcontractors must review this safety plan prior to beginning work and sign the Pre-Work Briefing Form (*Attachment 1*) or equivalent.

All project personnel have the right to stop work if they believe safety controls are not adequate for job Site hazards or if new job Site hazards are identified for which safety controls have not been clearly established.

1.1 COVERED PERSONNEL

This HASP is specifically intended for OBG employees, direct subcontractors, and visitors who will be conducting activities within the defined scope of work in specified areas of the Site. OBG will inform Site personnel of identified safety and health hazards as outlined in this HASP. OBG employees, subcontractors, and visitors are responsible for complying with government regulations, Site owner policies and this HASP as it relates to their scope of work. This HASP may be provided to interested third parties for informational purposes. Subcontractors and other contractors that are working directly for the client shall have their own HASP or JSA for the specific work they will be performing.

1.2 HASP REVIEW AND MODIFICATION

Future actions that may be conducted at this Site and unexpected conditions that may be encountered may require the modification of this HASP. The SSL will recommend modifications to this HASP and the assigned OBG Corporate Health and Safety Project Manager will have the responsibility of approving them. Modifications to this HASP shall be outlined on the **Revision Summary** page.

This HASP may be modified for new or additional scopes of work by directly revising this HASP and saving a revised copy OR by developing supplemental Job Safety Analyses (JSAs) or equivalent safety planning documents as outlined in "**Pre-Work Safety Planning**" section of this HASP. JSAs may modify air sampling, personal protective equipment and other safety precautions in this HASP as necessary to safely perform new work activities. Direct Subcontractors will be required to do the same for their project HASP's and JSA activity.

1.3 SITE DESCRIPTION

The Site comprises approximately 8 acres in the Town of Geddes, Onondaga County, New York. The Site is located in an industrial area east of Belle Isle Road, west of Bridge Street, and south of the New York State Fairgrounds. A scrap yard and former NAKOH Chemical Company are located northeast of the Site, and a cogeneration facility is located west of the Site. The West Flume is a man-made drainage channel that runs east to west though the Site, collected runoff from the site and storm water from the Village of Solvay.

1.4 SCOPE OF WORK

OBG is managing the construction of the interim remedial measures at the site. This will require the regrading of a portion of the Site and clearing of existing surface overgrowth. Clearing is anticipated to be performed with the use of mechanical means (wood chipper) and some limited hand clearing. Intrusive work is anticipated as the clearing will include grinding of stumps and grading to facilitate future installation of a bike trail. Heavy equipment will be used to place a vegetated soil cover. OBG's scope of work is outlined below and includes activities:

- Mobilization Site Preparation
- Site Grading
- Installation of a vegetative soil cover
- Demobilization

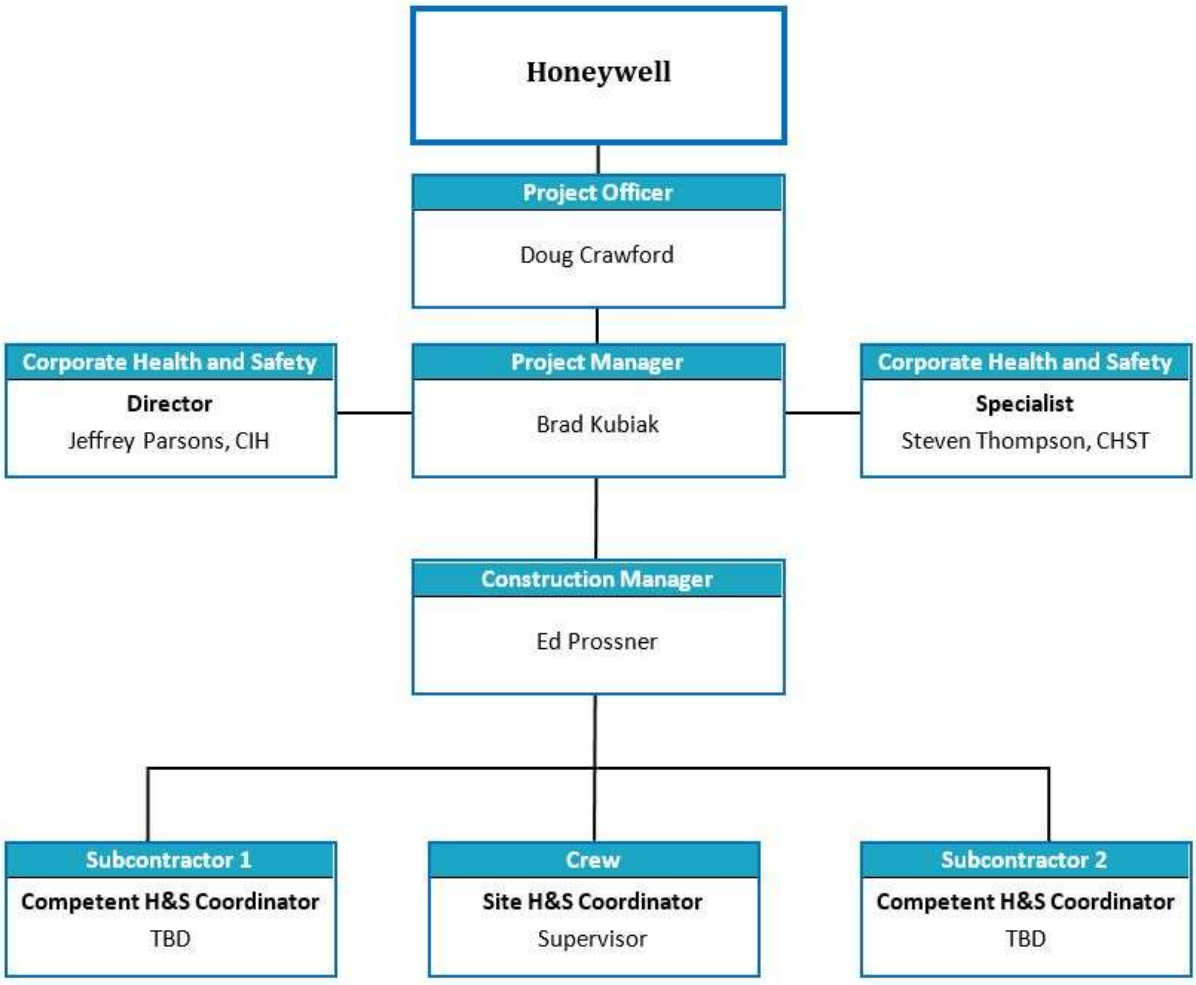
1.5 PROJECT PERSONNEL AND ORGANIZATION

The following are key project personnel with respect to OBG's Scope of work.

Key Project Personnel	
NYSDEC	
Tim Larson	Project Manager
OBG	
Doug Crawford	Project Officer
Brad Kubiak	Project Manager
Ed Prossner	Construction Manager
Steven Thompson	Corporate Health and Safety Project Manager
Jeffrey Parsons	OBG Manager of Corporate Health & Safety
Honeywell	
Shane Blauvelt	Project Manager

1.6 PROJECT ORGANIZATION

The following organization chart outlines reporting and accountability relationships with respect to health and safety.



1.7 RESPONSIBILITIES

As directed in this HASP, general compliance and HASP implementation will generally be addressed first by the OBG SSL with support from Project Management. Direct Subcontractors must identify qualified Safety Competent Persons who must be on Site for all field activities. **All project personnel have the authority to stop work if a life-threatening condition or behavior is observed.**

1.7.1 OBG Project Officer

The Project Officer is responsible for providing upper level management support for health and safety. He or she will provide sufficient authority and resources to the Construction Supervisor and SSL to fully implement health and safety requirements as outlined in this HASP, contract documents, and regulatory requirements. The Project Officer will provide this support to the entire project while the Construction Project Officer will provide additional attention and support to site remediation activities.

1.7.2 OBG Project Manager

The Project Manager is responsible for providing management support for health and safety. He or she will provide sufficient authority and resources to the field crew and the SSL to fully implement health and safety

requirements as outlined in this HASP, contract documents, and regulatory requirements. The Project Manager will provide this support to entire project activities.

1.7.3 OBG Construction Manager

The Construction Manager is responsible for coordinating project requirements in the field. The Construction Manager oversees daily activities and is, therefore, responsible for implementing health and safety requirements daily in the field. The Construction Manager is also responsible for conducting daily safety inspections and coordinating timely correction of observed deficiencies with any contractor or subcontractor. The Site Coordinator shall be qualified to also serve as the OBG SSL with respect to OBG's scope of work.

1.7.4 OBG Project Engineer

The OBG Project Engineer is responsible to help resolve project design issues as well as provide general site information that may be required for health and safety purposes. The Project Engineer is the main point of contact related to sampling an analytical protocol and design support during construction activities. In particular, the Project Engineer oversees and coordinates the development of the design documents including updates to design documents. The Project Engineer also reviews and comments on the site HASP.

1.7.5 OBG SSL

The SSL provides Site-level leadership and oversight for project safety. The SSL has the authority to stop work if any operation threatens Site workers, the public, or environment. The SSL is accountable to the Health and Safety Project Manager and the Project Manager regarding issues of safety. In general, responsibilities of the SSL include, but are not limited to, the following:

- Conducting and documenting safety inspections on a weekly basis and conducting daily safety walkthroughs
- Conducting daily safety pre-work safety meetings and documenting meetings on a daily Pre-Task Planner (or equivalent)
- Selection and inspection of personal protective equipment (PPE)
- Conducting periodic surveillance to evaluate effectiveness of the HASP
- Monitoring on-Site hazards and conditions and recommending modifications to the HASP when new hazards are observed
- Informing the Project Manager of observed safety deficiencies requiring corrective action
- Having knowledge of emergency procedures, evacuation routes, and telephone numbers for emergency services
- Posting directions to the hospital and telephone numbers for emergency services
- Coordinating emergency medical care as necessary
- Immediately notify (via phone call) of an incident followed by submittal of written accident/incident reports to a Honeywell Project Representative and the OBG Corporate Health and Safety Project Manager within 24 hours.
- Review JSAs for all high-risk construction activities
- Reviewing and maintaining safety documentation and reports

1.7.6 OBG Corporate Health and Safety Project Manager

The Corporate Health and Safety Project Manager advises project personnel on matters of health and safety on the Site. The OBG Corporate Health and Safety Project Manager will assist the OBG Manager of Corporate Health & Safety in the implementation of the Corporate Health & Safety program. General support tasks related to the implementation of the OBG Corporate Health & Safety Program include safety audits, training, accident investigations, etc. The Health and Safety Project Manager makes regular Site visits to assess compliance with

requirements in this HASP and evaluate overall safety performance. Inspections will periodically be conducted to monitor worker health and safety and will address issues such as subcontractor pre-qualification, Site safety orientation programs and documentation, implementation of permit programs (confined space, hot work, etc.) safety planning, accident investigations, adequacy of personal protective equipment (PPE), air monitoring needs, and general construction safety issues.

1.7.7 Subcontractor Safety Competent Person

All direct subcontractors under contract to OBG are covered by this HASP and will be required to designate a Subcontractor Safety Competent Person. The Safety Competent Person must be the Superintendent/Foreman unless the project is sufficiently large to require a full-time Safety Competent Person. A Safety Competent Person must be on Site always when the subcontractor has employees performing work for OBG and will have the same responsibilities as the OBG SSL within the subcontractor's scope of work. This individual must possess a sound working knowledge of pertinent OSHA regulations, this HASP, and other applicable safety requirements related to their scope of work. The Safety Competent Person will ensure timely correction of safety deficiencies identified by OBG. Subcontractors may request assistance from the OBG Corporate Health & Safety Department. An Alternate Safety Competent Person may also be designated as a backup.

> ***NOTE: A Direct Subcontractor must provide a full-time Safety Competent Person when 15 or more field workers are on-Site. Subcontractor's Safety Competent Person must be acceptable to OBG.***

Regulatory agencies, facility owner, and OBG may also require specialized competent persons to provide oversight of specific activities. These persons are designated in **Section 2.1.5-Safety Training & Competent Persons** of this HASP. General Safety Competent Persons as described above may also be designated as the competent person any number of these specific activities if qualified.

2. SITE SAFETY AND CONTROL PROCEDURES

This HASP incorporates by reference the OSHA requirements in 29 CFR Part 1910, 29 CFR Part 1926, and the OBG Health, Safety, and Environment (HSE Manual). A copy of the OBG HSE Manual will be available on Site (electronic or hard copy are acceptable) for reference. Direct Subcontractors must review the OBG Site HASP to ensure they meet or exceed OBG corporate requirements as well as all regulations applicable to their scope of work. Key Site safety procedures applicable to OBG employees and OBG Direct Subcontractors are described in more detail in this section.

2.1 SITE SECURITY AND CONTROL

The elements of Site control include restricting access to the Site to persons until they have the proper safety training and have received a Site safety orientation from OBG, and have reviewed the information in this HASP at a minimum. All direct contractors and subcontractors to OBG shall have an approved HASP or JSA for the work they will be doing prior to commencing the actual work. OBG will oversee site security and control with specific site-entry requirements as follows:

2.1.1 Subcontractor Prequalification

Subcontractors must be prequalified annually using OBG's Pre-Qualification Process (or Client Equivalent). Subcontractors must achieve a Pass (A, B, or C) rating or a "Conditional" rating. Subcontractors with a conditional rating must implement additional safety requirements outlined by the conditions specified by OBG Corporate Health & Safety Department and the Project Manager.

2.1.2 Citizenship

All project personnel must be U.S. citizens or legally be authorized to work in the U.S. with the proper work visas.

2.1.3 Language

All project personnel must understand and speak English at a "conversational" level. Subcontractors are responsible for all costs or delays incurred if non-English speaking employees are banned from the Site. OBG will make the final determination if a person is sufficiently fluent in English. Interpreters may be used if authorized by OBG. When authorized, a minimum of one interpreter will be required for every 10 non-English speaking personnel always while work is on Site.

2.1.4 Drug and Alcohol Testing

> ***The primary document outlining drug and alcohol testing requirements for union labor is described in Appendix C of the "Onondaga Lake and Subsites Environmental Remediation Labor Harmony Agreement," May 2010. OBG non-union employees are specifically subject to OBG policies referenced below. Refusal to take a drug or alcohol test when directed in accordance with the LHA or OBG policies will be treated as a "positive" test and will result in immediate removal from the site. All subcontractors must have submitted a signed copy of the Certificate of Compliance (RES-HS-09).***

All project personnel are required to work in accordance with OBG's policy for a Drug Free Workplace, as appropriate. Testing allowed under both policies is summarized below:

- **Pre-Access** – Project personnel subject to the LHA must have testing performed per the LHA. Other project personnel must otherwise have pre-access testing performed within six months of site work and kept current with subsequent testing performed at least annually.
- **Reasonable Cause** – Two supervisors must concur that the person exhibits symptoms and behavior that "more probably than not" be the result of a controlled substance.

- **Post Accident** – Similar to Reasonable Cause, testing may be performed following an accident if the accident may have been avoided by a "reasonable alert" action and substance abuse cannot be discounted as a contributing factor.
- **Random Testing** – OBG may start and stop random testing at any time. Such testing will be non-discriminatory and be conducted at a rate up to 50% of employees on an annualized basis. OBG will coordinate random testing through Industrial Medial Associates (IMA) as a third party administrator.
- **Return to Work** – This is additional "periodic" testing that is required for up to one year following return to work.

2.1.5 Safety Training and Competent Persons

Project personnel must be properly trained for the type of work being performed and in accordance with OSHA 29CFR1926 and 1910.

Specialized safety training is required for working with asbestos, lead, and hazardous waste. Other training is required for tasks that include, but not limited to, confined space entry, fire prevention and control, lockout/tagout, hazard communication, fall protection, forklift/lull license, NFPA 70E (energized electrical), crane operator license or Certified Crane Operator (CCO). Subcontractors will designate in writing to OBG their employees who are trained and authorized to operate heavy equipment including manlifts, excavators, front loaders, dozers, demolition hammers, shears, grapples, dump trucks, pulverizes, and skid steer. A company letter is sufficient or copies of current licenses/certificates.

As outlined in **Section 1.6.4 – Subcontractor Safety Competent Person**, subcontractors are also required to designate one person as a general Safety Competent Person who must be on Site during all Site activities. The Safety Competent Person must have a thorough understanding of OSHA regulations. An Alternate Safety Competent Person may also be designated. These individuals are designated in the **Key Project Personnel table**. The HASP will be updated as competent person designations change.

Other task-specific competent persons must be designated in subcontractor safety plans or JSAs for the following activities and be on Site as necessary to support activities performed under their oversight. The following table lists various types of Competent Persons that may be applicable. The list is not all-inclusive and will be revised as necessary by on changes to project requirements for support by Competent Persons. In addition to written designation, the subcontractor must submit evidence of competency when requested by OBG.

Competent Person Designations		
Type	**Comment**	**Designated Person***
Excavation Competent Persons	Required during all excavation activities. The Competent Person must have formal classroom training documented on a training certificate acceptable to OBG as well as excavation experience.	TBD prior to start of excavation activities
Demolition Competent Persons	Perform pre-demolition "engineering survey" in support of a demolition plan. During demolition, the competent person must perform regular inspections to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material.	NA
Scaffolding Competent Persons	Supervise the erection and dismantling of scaffolds and perform daily inspections while scaffolds are in use.	NA
Fall Protection Competent Persons	Oversee implementation of fall protection systems including anchoring personal arrest equipment.	NA

Competent Person Designations		
Type	**Comment**	**Designated Person***
Confined Space Competent Persons	Oversees implementation of confined space entry procedures. Determines if a confined space is permit or non-permit.	TBD prior to ANY confined space activities on-Site
Welding & Cutting Competent Persons	Must determine if coated surfaces are flammable and must also assess combustibility of underlying surfaces and residual dust	TBD prior to ANY hot work being performed on-Site
Crane & Hoist Competent Persons	Must inspect cranes and hoists prior to use. Will usually be the operator.	NA
Rigging Equipment Competent Persons	Inspect rigging equipment prior to use. Training must be current and meet the Nov. 2010 updated OSHA requirements for Rigging Persons.	TBD prior to the use of ANY rigging on-Site
Crane Signaling Competent Persons	Training must be current and meet the Nov. 2010 updated OSHA requirements for mobile crane Signaling Persons.	NA
Ladder Competent Persons	Periodically inspect ladders	TBD prior to the use of ANY ladders on-Site
Qualified Electrical Worker	Must have training required by NFPA 70E for "Qualified Persons" and is a person on Site who will prepare Energized Electrical Work Permits.	TBD Prior to any Energized Electrical Work
Powder Actuated Tool Operator	Training certification to safely use Hilti Guns, Ramset Guns, and similar powder actuated tools	NA
*** TBD = To Be Determined / NA = Not Applicable or Not Anticipated**		

2.1.6 Client-Required Site Orientation

The client's safety requirements will be reviewed by OBG, which will include client site requirements as part of the Project Safety orientation.

2.1.7 OBG Project Safety Orientation

All project personnel must complete a Project Safety Orientation to ensure understanding of OBG's and client safety requirements. Upon completing a Project Safety Orientation, project personnel will sign a Pre-Work Briefing Form (Attachment 1 or equivalent). The Project Safety Orientation will focus on hazards and the required hazard controls as outline in the HASP and/or Pre-Work JSA and will at a minimum include:

- Applicable Sections of the HASP
- Pre-Work JSAs
- Associated Exhibits, Permits, and Attachments identified on (and attached to) the Pre-Work JSA

2.1.8 Entry/Exit Log

OBG shall require all employees, direct subcontractors, and visitors to sign in and out on an Entry / Exit Log ***(Attachment 2 or equivalent)***.

2.1.9 Authorized Project Personnel

At a minimum, authorized personnel who will be granted unescorted access to the project include employees from OBG and appropriately pre-qualified subcontractors that have successfully completed the following:

- Submitted Safety Training and Competent Person documentation to the OBG SSL
- Negative 10-panel drug test
- Negative alcohol test

- Submitted medical surveillance documentation (for persons entering Exclusion and Decontamination Areas)
- Submitted respirator medical clearance (for persons who may use respirators)
- Attend an OBG Project Safety Orientation (applicable sections of this HASP)

2.1.10 Visitors

Visitors must be escorted by an Authorized Project Person.

2.1.11 Pre-Work Safety Planning (JSAs, Daily Pre-Task Planners, and Site Work Permits)

Subcontractors are required to complete the OBG Pre-Work JSA Template **(Appendix A)** prior to mobilization and may complete additional Pre-Work JSAs as required for high-hazard tasks. The Pre-Work JSA should be completed in a collaborative effort between OBG and subcontractors and will help identify appropriate permits and notifications based on the specific means, methods, tools, and equipment used by subcontractors.

OBG may also use the Pre-Work Template to identify hazards and controls associated with changes to OBG's scope of work. JSAs will supplement information in this HASP.

Below is a list of forms and procedures used by OBG to supplement information in this HASP:

Job Safety Analysis (JSA)

JSAs are prepared prior to starting work on major tasks and will use the OBG-required JSA template in ***Attachment 7 or approved equivalent***. Electronic copies of the JSA template are available from OBG. Although OBG may assist in preparing initial drafts of JSA templates, it is the responsibility of the subcontractor performing the work to complete the JSA and update the JSA at a frequency requested by the OBG Project Manager or SSL. Subcontractors should be prepared to discuss changes or updates to JSAs on a weekly basis based unless otherwise directed. Changes to the JSA should be based on any changes to equipment, tools, work methods, Site conditions, or other changes which could affect risk and require modifications to safety controls. The minimum JSAs anticipated for this project are listed in the ***"Hazard Evaluation"*** section of this HASP along with guidance on specific tasks and hazards which must be identified in JSAs.

Daily Pre-Task Planner (PTP)

Daily Pre-Task Planners are prepared (or reviewed) by subcontractor Safety Competent Persons using the OBG-required Daily Pre-Task Planner template in ***Attachment 3 or approved equivalent***. Daily Pre-Task Planners will focus on the hazards and controls for specific work tasks being conducted that day and the specific area in which personnel will work during that day. Most importantly, Daily Pre-Task Planners will describe "how" safety controls outlined in this HASP and applicable JSAs will be implemented for that day's tasks. For example, Daily Pre-Task Planners will specifically instruct the work crew where to tie-off if personal fall arrest equipment is required during the day.

Subcontractor Superintendents or Safety Competent Person will prepare and review Daily Pre-Task Planners with each work crew each day. Crew members will sign the Pre-Task Planner after attending the review. Daily Pre-Task Planners may not be placed on a table with the expectation that Site personnel will thoroughly read and sign them prior to work.

> ***NOTE – High Hazard Power Tools must only be used if safer alternatives are not feasible and must be clearly identified on JSAs/Pre-Task Planners with applicable safety controls listed. Refer to the "High Hazard Power Tools" section of this HASP.***

Daily Pre-Task Planners will also be reviewed by the OBG SSL or Site Superintendent prior to work.

OBG Site Work Permits (SWPs)

OBG requires that Site Work Permits (SWPs) be issued for the tasks listed below.

> ***NOTE – All persons must be trained and authorized by OBG prior to completing SWPs. All permits are to be filled out correctly before any work is to be performed. Follow proper procedures for each permit, and notify every party involved or affected by the work to be performed prior to the commencement of work.***

- *Hot Work Permit – Required for any type of hot work. Following the conclusion of hot work, 30 minutes of fire watch. All required air monitoring results, must be recorded on the hot work permit. Permits only issued at the time of work no permits may be completed in anticipation of Hot Work. All responsible parties must be trained in their roles and responsibilities.*
- *Confined Space Permit – Must be used with all permit required confined spaces, and the air monitoring log in the back must be filled out throughout the duration of the confined space work. Contact must be made and maintained with Site security via two-way radio. Follow all protocols before entering a confined space, crew must poses documented PRCS training.*

> ***Note: In order to re-classify or classify a confined space, you must have the required Confined Space Entrant, Attendant, and Supervisor Training.***

- *Energized Electrical Work Permit [DAILY] Used when working on energized electrical systems when de-energizing is not possible. Approval must be made prior.*

2.1.12 Site Layout & Work Zones

The visible delineation of the Construction Area is required to prevent unauthorized persons from entering. Physical markings of the perimeter of the Construction Areas can be accomplished through the use of fencing, wood barricades, rope, barricade tape, etc. Existing structures or land features may also be utilized where appropriate.

The use of barricade tape for outdoor work zones that will be setup for greater than 24 hours is not permitted.

Warning signs will be posted on at the perimeter of Site to alert Site personnel and the public. Signs shall be approximately 10 inches by 14 inches in size and of aluminum or steel construction for outdoor use. The Site perimeter must be posted but with a sign that states "***DANGER – CONSTRUCTION AREA – UNAUTHORIZED PERSONNEL KEEP OUT"*** (Emedco # 42525) or acceptable alternate.

2.1.13 Vapor & Odor Control

Vapors released during site activities represent a potential health hazard and odor problem. The following controls will be implemented to mitigate these issues:

- Controlling the amount of impacted soils disturbed or placed concurrently.
- Air monitoring will be conducted per the Community Air Monitoring Program (CAMP)

2.1.14 Dust Control

Dust released during placement activities represents a nuisance and potential health hazard. The following controls will be implemented to mitigate dust issues:

- Water will be used to suppress dust during any activities which disturb existing soils or as required by dust monitoring and visual observations
- A water truck will be on site to support dust control if dry, dusty conditions are encountered

- The site speed limit of 10 mph (or as otherwise posted) will be enforced. Slower vehicle speeds reduce road dust and minimize the potential for accidents and spills. Dust monitoring will be conducted per the Community Air Monitoring Program (CAMP)

2.2 DAILY SAFETY MEETINGS

Daily safety meetings are documented using the Daily Pre-Task Planner when only OBG personnel are on-Site, otherwise OBG SSL will attend the morning safety meeting of the work team which was previously outlined in the ***Pre-Work Safety Planning*** section of this HASP.

> ***The intent of the daily safety meetings is to encourage daily safety planning (top portion of the Daily Pre-Task Planner) by Supervisors and support communication between Supervisors and their respective field crews (bottom portion of the Daily Pre-Task Planner).***

The use of Pre-Task Planners during daily safety meetings provides documentation about what "safety messages" site personnel are receiving on a daily basis. Pre-Task Planners also provide a checklist to monitor changes to site personnel, equipment, work methods, or conditions that may affect hazards and require different safety precautions. Pre-Task Planners are intended to supplement, but not replace, Pre-Work JSAs and safety plans. Pre-Task Planners will be retained on site for inspection during periodic safety audits.

The form will be completed as follows:

- Subcontractor Crew Foremen will prepare a Daily Pre-Task Planner for that day's activities or the next day's activities if the Daily Pre-Task Planner is prepared the prior afternoon
- The Supervisor/Superintendent/or Forman will review the Pre-Task Planner with his respective crew
- Each site worker will then sign the Pre-Task Planner
- All Pre-Task Planners will be returned to OBG after the day's activities are complete
- Any significant changes to the scope of work or work methods during the work shift will require revisiting the Pre-Task Planner. Recognition of previously unidentified hazards will also require revisiting their safety plan or Pre-Work JSAs.

2.3 WEEKLY TOOLBOX SAFETY MEETINGS

> ***A separate Weekly Toolbox Safety Meeting (or "All-Hands" Safety Meeting) is required on projects here separate Daily Safety Meetings are held for different work crews. When all site personnel attend the same Daily Safety meeting, a separate Weekly Toolbox Safety meeting is not necessary. Pre-task safety planning is completed by each foreman for each crew under his direction as outlined in the previous section.***

Toolbox Safety meetings are held at a minimum of once per week. The SSL on smaller projects with fewer site personnel may choose to assemble all site personnel during Daily Safety meetings and in so doing, may not hold separate Weekly Toolbox Safety Meeting. On projects where separate Daily Safety meetings are held for different field crews, the SSL will assemble all site personnel at a Weekly Safety meeting ("All-Hands" Safety Meeting). The intent of the weekly toolbox meeting is to provide additional field safety training and review relevant safety topics for approximately 15 minutes, and ensure that a consistent safety message is delivered to all site personnel on larger projects. Attendance will be documented on the Safety Toolbox Meeting Forms ***(Attachment 4 or equivalent)***

2.4 SAFETY AUDITS AND INSPECTIONS

OBG requires daily review of construction work areas by Supervisors/Foremen which they should document in their daily logs or journals. The on-Site OBG SSL will conduct weekly inspections that will be documented on OBG's Safety Short Form Audit Checklist (***Attachment 5***) or an electronic equivalent.

Direct Subcontractor Safety Competent Persons designated by OBG subcontractors will also conduct daily inspections of their work areas which are documented on a checklist or form deemed by OBG to be suitable for the size and complexity of their work.

The OBG Corporate Health and Safety Project Manager will conduct Safety Inspections on a regular basis throughout the duration of the project or more often as needed.

The OBG Corporate Health and Safety Project Manager will provide additional support on-Site for High Risk Activities.

NOTE – In addition to weekly work area inspections by OBG and subcontractors, OBG Corporate EHS may conduct periodic safety inspections or Audits.

2.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Specific PPE requirements are outlined below but a general dress code for any work areas includes long pants that must cover top of ANSI-approved protective toe leather work shoe or boot, hard hat, safety glasses with rigid side shields, and Class II Safety Vests Hi-Vis Yellow in color. Shirts must have at least 4 inches of sleeve. Long-sleeve shirts may be required at specific locations or for certain tasks. L***eather or Mechanics Gloves –are required for all tasks unless glove use is exempted on an approved OBG JSA or PTP, Cut Resistant Gloves (Class 3 or greater) are required when handing sharp objects or cutting tools.*** Direct Subcontractors must specify additional PPE as appropriate for specific work methods, tools, and equipment covered by their safety plans. Additional PPE that may be necessary is summarized in the following paragraphs.

2.5.1 Head Protection

All OBG project personnel are required to wear approved hard hats that meet ANSI Z89.1-2003. Hard hats must be in good condition and may be worn with brim to the rear when the harness is oriented properly, this however is not the preferred method of wearing a hardhat as it leaves the area above the eyes unprotected.

2.5.2 Eye and Face Protection

Project personnel are required to wear approved ANSI Z87.1-2003 safety glasses with rigid side shields. Chemical goggles are required during other activities with a potential for chemical splashes to the face. Face shields will be required when performing certain tasks (*e.g.* chipping, sawing, and handling chemicals or corrosive liquids) Face shield must be worn over safety glasses or chemical goggles.

2.5.3 Hearing Protection

Approved hearing protection must be worn as specified in all posted areas and while working with or around high noise level producing tools, machines or equipment.

OSHA Guidance: "If you have to raise your voice to be heard 3-5' away you need hearing protection"

2.5.4 Fingers, Hand, Wrist and Arm

Gloves suitable for the job being performed shall be worn shall be worn always. Tool holders should be used when driving stakes and wedges or when holding star drills, bull pins or similar tools. ***Fixed blade knives (pocket knives, razor knives, and box cutters) are prohibited and safety knives or scissors must be substituted in their place.***

Exceptions to this policy must be approved by the OBG Corporate Health and Safety Project Manager via a JSA which clearly defines why a safer tool cannot be substituted and what safety measures will be implemented to prevent injury.

2.5.5 Foot Protection

All project personnel are required to wear ***Steel Toe safety footwear (or composite)*** that is in accordance with current ASTM standards. Rubber boots with safety toe protection are required on jobs subject to chemically hazardous conditions or wet conditions.

2.5.6 High Visibility Clothing

All project personnel are required to wear high visibility clothing including a vest, shirt, or jacket. ***High visibility clothing must be predominantly safety yellow in color and must be ANSI Class II.***

2.5.7 Respiratory Protection

Respirators (including SCBAs and airlines), if used by project personnel, must meet National Institute for Occupational Safety and Health (NIOSH)/Mine Safety and Health Administration (MSHA) standards. Respirators must be inspected regularly and stored in a dust-free container. Employees required to wear a respirator must have a physician's approval and be fit tested within the last year. Employees must be clean shaven in the facial area to obtain an acceptable seal. Subcontractors must keep respirator training, fit testing, and medical clearance documentation on Site for the duration of the project and available for OBG inspection. The following table summarizes common respiratory hazards.

Respiratory Protection		
Contaminant Chemical	**Minimum Respirator Type**	**Source of Exposure**
Silica	Respirator with N100 or P100 filter	During cutting or pulverizing concrete
Carbon monoxide	Supplied Air (SCBA or Airline)	Engine combustion byproduct in enclosed or confined spaces
Metal dust	Respirator with N95 or P95 filters	Settled dusts getting airborne, grinding metals or painted surfaces, welding, or torch cutting
Metal fumes	Respirator with N100 or P100 filters	Welding or torch cutting

2.5.8 Skin

If the possibility of skin contact with chemicals, lead, asbestos or other hazardous material exists, then protective clothing will be worn.

- ***Tyvek®*** (or equivalent) – asbestos, lead, or other dust exposures
- ***Tychem QC®*** (poly-coated Tyvek®) or **Tychem SL®** (Saranex®) or equivalent – for liquid chemical exposures including liquids contaminated with PCBs
- ***Tychem SL®*** (Saranex®) ***with hood and boots*** (or equivalent) – for use with SCBAs during emergency response involving chemical releases

2.5.9 PPE Summary

In general, PPE is divided into four broad categories as outlined below.

- ***Level D PPE*** – Minimum PPE for Level D includes hard hat, safety glasses with side shield, safety shoes/boots, cut-resistant gloves, and high visibility vest. Additional PPE that may be required includes hearing protection, face shield, fall protection harness and lanyard, and Kevlar chaps and jacket (if using a chainsaw).

- » ***Modified Level D PPE*** – Level D PPE plus protective clothing to prevent skin contact or contamination of support zone areas. Additional information on chemical protective clothing, chemical resistant gloves, and face shields is described in previous paragraphs of the PPE section of this HASP.
- » ***Full Modified Level D PPE*** consists of Level D PPE plus coveralls, nitrile gloves (or equivalent), and boots or shoe covers. Full Modified Level D PPE is necessary when extensive contact with contaminated materials is anticipated, such as the manual-excavation of contaminated soils. Full Modified Level D PPE is also required when handling corrosive chemicals.
- » ***Lightweight Modified Level D PPE*** consists of nitrile gloves (or equivalent) and boots or boot covers. Lightweight Modified Level D is necessary when minimal contact with contaminated materials in anticipated and contamination control must be maintained. Appropriate tasks for Lightweight Modified Level D PPE include equipment operators with minimal direct contact, surveyors, sampling technicians, inspectors, etc. The SSL shall determine which is appropriate based on-Site conditions.

- ***Level C PPE*** – Modified Level D PPE plus air purifying respiratory protection. Additional information on respiratory protection is described in previous paragraphs of the PPE section of this HASP.
- ***Level B PPE*** – Modified Level D PPE plus supplied air respiratory protection. Level B PPE is not anticipated for this project.

The following table provides more specific initial PPE requirements for different tasks. ***When work assignments involved mixed tasks, choose the most conservative PPE or change PPE as required between different tasks.***

PPE by Task									
PPE level	———— Level D ————						Mod Level D		C
TASK	High Vis[1]	Head	Eye and Face	Foot	Hearing	Hand[2]	Hand	Skin[3]	Resp.
General Site Work (to be worn unless more specific PPE requirements are not outlined below)	X	X	Safety Glasses	X	X (when in posted areas or using loud tools)	CR (when working)			
Clearing and Grubbing	X	X	Safety Glasses and Face Shield	X	X	CR			
Intrusive excavation where contact with contaminated soils or groundwater is anticipated	X	X	Safety Glasses	X With overboots	X (when in posted areas or using loud tools)	CR			½ face or full face with OV cartridges when action levels are reached
Haul Truck Drivers (when outside vehicle)	X	X	Safety Glasses	X		CR			
Haul Truck Drivers (when inside vehicle)			Safety Glasses	X	X (when in posted areas or using loud tools)				
Heavy Equipment Operation	X	X (May be removed if within enclosed covered cab)	Safety Glasses (May be removed if in fully enclosed cab	X	X				
Welding, Cutting, Grinding	X (fire resistant)	X	Safety Glasses with Welding Visor or Face Shield	X	X	CR (leather or fire resistant)			½ face with N or P100 filter (optional)
Energized[4] Electrical Disconnects		X	Safety Glasses with arc flash face shield	X		Leather over Electric			

PPE by Task									
PPE level	———— Level D ————						Mod Level D		C
TASK	**High Vis[1]**	**Head**	**Eye and Face**	**Foot**	**Hearing**	**Hand[2]**	**Hand**	**Skin[3]**	**Resp.**
Chop/Demo/Chain Saw Cutting	X	X	Safety Glasses with face shield	X (Kevlar chaps also required)	X	CR			
Decontamination	X	X	Safety Goggles and Face Shield	X	X	nDex or Latex		Tychem QC	
NOTES	**1.** High visibility vests will not be required where persons are wearing Tyvek or Poly-Coated Tyvek **2.** **CR** = cut resistant gloves, **HR** = heat resistant, **nitrile** = 3-5 mil nitrile gloves, **nDex®** = surgical nitrile **3.** Tyvek and Poly Coat Tyvek include the use of boot covers or a boot wash to prevent the spread of contaminated materials to support zone areas and includes the use of nitrile surgical gloves (usually underneath cut-resistant gloves) **4.** Energized electrical work required all PPE as required by NFPA 70E								

2.5 TEMPORARY CORDS

Proper management of temporary cords and hoses is required to minimize the potential for slips and trips. The following guidelines should be implemented to the extent feasible:

- Cords and hoses must be run out of aisles and sidewalks (e.g., within six inches of a wall or toe board)
- Cords and small diameter hoses that cannot be run overhead or buried must be marked with cones, protected by hose ramps, or equivalent whenever the cross aisles or sidewalks
- Cords and hoses that cross roads must be protected from damage
- All temporary cords and hoses must be removed to equipment laydown areas when not in use

Cords also pose an electrical hazard if they are not protected from damage and inspected before each use. Cords may not be run through doors or windows without being protected. Cords must not be run across walkways and stairs. Cords may not be run through standing water. Ground Fault Circuit Interrupters are required on all 120v hand tools and equipment.

2.6 EXCAVATIONS

OBG employees will not assume the role of "Excavation Competent Person" for subcontractor excavations unless authorized by the Project Manager and qualified as an Excavation Competent Person in accordance with the OBG HSE Manual Excavation procedure.

All excavations greater than 5 feet deep require sloping or shoring whenever persons enter excavations OR adjacent structures may be affected by a cave-in. Subcontractors will identify in their safety plans or JSAs specific shoring systems or sloping/benching that will be used in specific areas. Excavations greater than four (4) feet in depth are classified as a non-permit confined space unless contamination is encountered. Refer to the *"Confined Space"* section of this HASP for more guidance on how excavations will be handled with respect to confined space entry requirements.

- Assume soil is Type C unless soil testing indicates otherwise and such testing is documented. Standard sloping and benching (per OSHA) will follow a 1:1.5 (V:H) cut-back associated with Type C soil.

- Shore excavations >5' where personnel must enter and sloping is not feasible. Equipment used to shore excavations MUST follow OSHA shoring tables, or the subcontractor must have ***tabulated data from the manufacturer on Site.***
- If sections of trench are less than 5' AND no cave-in hazard exists, then shoring is not required.
- ***No workers may enter excavations until the designated Excavation Competent Person has inspected the excavations.*** All excavation inspections must be documented on a ***Daily Excavation Checklist*** or an approved alternate with documentation remaining on Site for the full project duration and made available for OBG review.
- Qualified engineers will evaluate excavations that could affect the stability of adjacent structures.
- A ladder or egress ramp will be provided within 25 feet of workers who must enter excavations.
- Water will not be allowed to accumulate in trenches in a manner that will affect the integrity of excavation walls and shoring systems.
- All spoils will be kept a minimum of 2 feet from the edge of the excavations.
- Fall Protection will be provided around excavations left open during off-hours. Fall protection will consist of solid barricades (saw horses or portable chain link) or soft barricades (safety fence) off-set 6 feet from the edge.
- Pedestrian Barricades – Portable chain link fence (48 inches high) or equivalent will be used to protect pedestrians. If pedestrian traffic is re-routed to avoid excavations, pedestrian detours must be accessible to bicyclists, handicapped persons, and other pedestrian in the area who may have special needs.
- Traffic Barricades – Any excavation activities that affect public or plant roads must be equipped with traffic safety devices as required by the Manual on Uniform Traffic Control Devices. If flaggers are used on public roads, they must have received Department of Transportation (DOT) Flagger Training. All flaggers that are utilized on the plant Site must have flagger training as well.

2.7 HEAVY EQUIPMENT

Project personnel may be exposed to "struck-by" injuries by walking in close proximity to heavy equipment or vehicles and "crush" injuries if caught between heavy equipment or vehicles (or counterweights) and a fixed object. Subcontractors must comply with requirements in this section...

Operators will use seatbelts if so equipped. Heavy equipment/vehicles will be equipped with overhead and rollover protection whenever feasible. Operators will inspect equipment daily for leaks, damage, and other necessary repairs.

Heavy equipment/vehicles must be equipped with backup alarms, horns, and other safety devices installed by the manufacturer. Vehicles operated at night must have headlights, tail lamps, and reflectors. Safety devices must not be disabled.

Heavy equipment/vehicles must undergo an ***"Acceptance Inspection"*** conducted by management when first mobilized to the Site. Inspections must be documented using a checklist that is acceptable to OBG. OBG may perform the "Acceptance Inspection" or may delegate the inspection to the subcontractor superintendent/foreman who will submit documentation to OBG when complete. Defective equipment must be "rejected" and removed from Site or repaired before being placed in service.

Heavy equipment/vehicle must also be ***inspected daily***. Similar to "Acceptance Inspections," inspections must be documented using a checklist that is acceptable to OBG. Documentation must be maintained on Site and available for inspection by OBG.

Any heavy equipment/vehicle on Site for more than 30 days must be on a ***written preventative maintenance schedule*** that is in accordance with the manufacturer's requirements. The preventative maintenance schedule and documentation of completed preventative maintenance must be retained on Site and available for inspection by OBG.

2.8 FIRE PROTECTION AND PREVENTION

Hot Work Permits, subcontractor safety plans, and JSAs may supplement basic fire safety requirements outlined below by establishing specific requirements throughout the course of the project as needed to ensure that personnel and property are adequately protected from potential fires. Emergency response associated with fires is covered in the Emergency Response section of this HASP. Basic fire protection requirements include:

- Construction heaters or other forms of heat generating equipment may only be used by subcontractors with prior approval from OBG and a Hot Work Permit is obtained from the issuing authority on-Site.
- Fire hydrants and standpipes may only be used for firefighting purposes unless other use is authorized and permitted by Village of Frankfort.
- Fire hydrants and valves must not be obstructed or blocked. At least a ***6-foot*** clearance must be maintained on all sides for emergency access.
- SSL ***must inspect extinguishers monthly*** in addition to annual service provided by an extinguisher service company. Inspections and testing must be documented on ***weather-resistant tags or labels*** attached to each fire extinguisher.
- Only ***fire-resistant tarpaulins*** are allowed.
- Fire extinguishers shall be provided so that the travel distance from any work area to the nearest extinguisher is less than 100 feet. When 5 gallons or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet.

2.9 FALL PROTECTION

OSHA-approved methods of fall protection are required under the following conditions:

- An employee is working 6 feet or more above the ground
- An employee is working on scaffolding without a 42-inch railing protection
- An employee is working in an aerial lift or scissors lift
- An employee is involved in assembly/disassembly of scaffolds, work platforms or temporary surfaces working 6 feet or more above the ground
- An employee is working over dangerous equipment/conditions (at any height)
- An employee is working on a walking/working surface or roof and is within 15 feet unprotected edge or floor opening/hole that will expose the employee to a fall greater than six feet

Full body harnesses (Class III) and retractable lanyards must be secured to an anchor point that can withstand ***5,000 lbs.*** of force when used for fall arrest. Retractable lanyards are required for all elevated work requiring fall protection.

Other methods to prevent falls include ***temporary guardrails***, installation of ***hole covers, warning lines*** (15' from the edge), ***fall restraint lines***, safe use of ladders, and safe use of ***aerial lifts***.

2.10 HIGH HAZARD POWER TOOLS

Some relatively common power tools can cause serious injury and are classified by OBG as highly hazardous as outlined in OBG's HSE Manual in a procedure called, ***"Power Tools-High Hazard"***. Highly hazardous power tools include powder-actuated tools (Hilti), chainsaws, chop (or demo) saws, weed trimmers with blade cutter,

die/end grinders, powered abrasive wheel tools, hand-held hydraulic rebar benders, portable HDPE fusion welder, portable circular saw, and band saws (portable & stationary).

Safer tools should be used when feasible. When the use of highly hazardous power tools is necessary, then they must be used in accordance with requirements in this HASP and OBG's "***Power Tools-High Hazard"*** procedure with safety controls identified in JSAs which include the use of a highly hazardous power tool. At a minimum, tools must be operated in accordance with the manufacturer's safe operating guidelines. Prior to work when reviewing JSA requirements, users of highly hazardous power tools should review the OBG Safety Meeting Topic for applicable high hazard power tool listed above (or equivalent safety information). The applicable Safety Meeting Topic identifies key hazards and safety controls for each high hazard power tool.

> ***NOTE – Operators of powder-actuated tools must have a training certification as outlined in the Safety Training & Competent Persons section of this HASP. Any JHA that includes demo/chop saw use requires special review and approval as outlined in the Pre-Work Safety Planning section of this JHA. OBG requires that chop/demo saw operators wear Kevlar (or equivalent) chaps. A Kevlar (or equivalent) jacket is also required if the chop/demo saw is operated above the waist.***

2.11 HOUSEKEEPING AND MATERIAL STORAGE

The Site shall be maintained in a clean and orderly condition always. Construction areas shall be free of waste materials, debris, and rubbish that will be ***removed daily.*** Waste materials shall be placed in appropriate waste receptacles for off-Site disposal or recycling. All recycling bins must be covered with a tarp covering or roofing to prevent anything from getting to pavement and into storm drains. Items with any kind of chemical or contaminant must be removed from the property ***immediately*** following job completion. Materials and equipment shall not obstruct traffic or emergency response activities at any time. Each subcontractor will have a designated lay-down area for the storage of their project materials. It is the responsibility of the subcontractor to maintain cleanliness of their area. ***Unused tools and materials shall be returned to lay-down areas daily.***

2.12 HAZARD COMMUNICATION AND SDS

OBG is responsible for having and administering a Hazard Communication Program (Global Harmonization Program) that requires all employees to be informed about the hazards associated with chemicals used on the job and the location of the safety data sheets (SDSs) for all materials brought on-Site.

SDSs shall be requested from vendors for materials procured for the current project from all suppliers of paints, coatings, adhesives, grout, caulk, lubricants, welding products, solvents, insulation, and similar products prior to being brought on-Site. Subcontractors will submit SDSs to OBG for review and upon request.

- OBG shall complete an inventory of chemicals brought on Site;
- OBG shall confirm locations of safety data sheets (SDSs);
- Before or as the chemicals arrive on Site, obtain an SDS for each hazardous chemical and include the chemical inventory sheet (attached to the project safety plan) and add the SDS to the SDS on-Site notebook;
- Label chemical containers with the identity of the chemical and with hazard warnings, and store properly;
- Give employees required chemical-specific HAZCOM training using the chemical-specific training form included as an attachment to the project safety plan; and
- Store all materials properly, giving consideration to compatibility, quantity limits, secondary containment, fire prevention, and environmental conditions.

2.13 GENERAL WORKER SAFETY RULES

Workers follow the established safety practices for their respective tasks. The need to exercise caution in the performance of work is made more acute due to weather conditions and restrictions in mobility, peripheral vision, and communication caused by the personal protective equipment.

To enhance Site safety, the following General Worker Safety procedures have been established:

- ***Smoking or the use of any tobacco products is not permitted in work areas, smoking is allowed in designated areas only.***
- ***No firearms may be brought on Site.***
- Employ the buddy system when appropriate. Be alert.
- Minimize contact with contaminated materials.
- Avoid breathing chemical odors.
- Do not expose skin to water, chemicals, or soil. If one becomes dirty or wet with contaminated fluids, clean up immediately using plenty of water.
- Hands must be washed before eating or drinking and after using toilets.
- Consumption of alcohol or intoxication (under the influence or impaired) during work hours or while on Site is prohibited.
- Working when ill is prohibited.

3. CHEMICAL PARAMETERS OF CONCERN

The OSHA Hazard Communication Standard require that Site personnel, subcontractors, and visitors must be informed of hazards associated with their work area. Health and safety information in this HASP is intended to supplement Hazard Communication training previously provided to Site workers by his or her employers.

3.1 EXPOSURE PATHWAYS

Chemical exposures and their exposure pathways anticipated during this project include:

- Contaminated soil and/or water
- Inhalation of contaminated dusts
- Accidental ingestion of contaminants
- Skin contact/absorption with contaminated soils and/or water
- Injection through punctures and lacerations

Based upon anticipated Site activities and prudent safety and hygiene practices during Site work, ingestion of Site contaminants is unlikely. Hazardous skin contact or absorption by the various contaminants is also unlikely because of the low concentrations that are anticipated and/or the use of PPE. The primary route of exposure is inhalation of airborne contaminants and contaminated dusts generated during intrusive activities. However, inhalation of airborne contaminants approaching the OSHA PELs is unlikely because of natural ventilation of the work area, safe work practices, PPE, and/or air monitoring.

3.2 CONTAMINANTS OF CONCERN

The following paragraphs summarize the health effects of Site contaminants that are frequently of concern and other Site chemicals (if any). Site chemicals are usually those chemicals petroleum products associated with heating, vehicles, and equipment maintenance. This HASP focuses on those which are believed to have the potential to pose a significant health hazard to Site personnel based on their potential to become airborne, concentrations in soil and groundwater, and their toxicity and other hazardous characteristics. Table 3.1 – "Summary of Potential Health Effects" also includes information on exposure limits and key physical characteristics such as flammability. *Chemical Constituents of Concern (COCs) are identified below as being* (☒ **APP).** *Chemicals hazards that are not present or do not otherwise represent a serious health risk based on historical site data are identified as not applicable* (☒ **NOT APP).**

- ☐ ***APP*** / ☒ ***NOT APP***
  - **Polychlorinated Biphenyls (PCBs)** – PCBs are considered a potential human carcinogen, especially with respect to the liver. PCBs can be inhaled or absorbed through the skin. Skin effects include lesions, rashes, and severe acne-like conditions for those who may be especially sensitive to contact with PCBs. PCBs are not volatile and potential exposure will consist of contaminated dust and contact with contaminated soil and groundwater.
- ☐ ***APP*** / ☒ ***NOT APP***
  - **Lead** – Lead is a hazardous metal that was once common in paint, gasoline, and a variety of other uses. Lead is a solid material and may be inhaled as airborne dust or ingested if personal hygiene is poor. Lead can gradually accumulate in the body with frequent small exposures adding to a growing body burden. Lead is especially hazardous to young children and infants and every effort must be made to prevent site personnel from carrying lead home on contaminated clothing, tools, and equipment.
- ☐ ***APP*** / ☒ ***NOT APP***

- **Asbestos** – Asbestos is a material often used in insulation, transite panels, and roofing materials and the potential exists to encounter this material in buildings on the site. Asbestos is a naturally occurring mineral and is considered a potential occupational carcinogen by OSHA. Asbestos-related diseases such as lung cancer, mesothelioma and digestive system cancer may occur if over exposed to asbestos fibers. Asbestos and cigarette smoking interact with each other and will have an effect much greater than either one individually.

☐ ***APP*** / ☒ ***NOT APP***

- **Silica** – Crystalline silica has been classified as a human lung carcinogen. Additionally, breathing crystalline silica dust can cause silicosis, which in severe cases can be disabling, or even fatal. The respirable silica dust enters the lungs and causes the formation of scar tissue, thus reducing the lungs' ability to take in oxygen. There is no cure for silicosis. Since silicosis affects lung function, it makes one more susceptible to lung infections like tuberculosis. In addition, smoking causes lung damage and adds to the damage caused by breathing silica dust. Exposure occurs during many different construction activities. The most severe exposures generally occur during abrasive blasting with sand to remove paint and rust from bridges, tanks, concrete structures, and other surfaces. Other construction activities that may result in severe exposure include: jack hammering, rock/well drilling, concrete mixing, concrete drilling, brick and concrete block cutting and sawing, tuck pointing, and tunneling operations.

☐ ***APP*** / ☒ ***NOT APP***

- **Chromium & Hexavalent Chromium** – Chromium metal and chromium salts (Cr II/III) are naturally occurring and generally less hazardous than hexavalent chromium (Cr VI). The risk is further reduced with exposure to chromium dust as opposed to chromium fume. All chromium can affect the liver, kidneys, respiratory system and many forms can cause skin sensitization. CrVI is clearly the more hazardous form of chromium. Workplace exposure to Chromium (Cr(VI)) may cause the following health effects: lung cancer in workers who breathe airborne Cr(VI); irritation or damage to the nose, throat and lungs (respiratory tract) if Cr(VI) is inhaled; and irritation or damage to the eyes and skin if Cr(VI) contacts these organs. Workers can inhale airborne Cr(VI) as a dust, fume or mist while, among other things, producing chromate pigments, dyes and powders (such as chromic acid and chromium catalysts); working near chrome electroplating; performing hot work and welding on stainless steel, high chrome alloys and chrome-coated metal; and applying and removing chromate-containing paints and other surface coatings. Skin exposure can occur while handling solutions, coatings and cements containing Cr(VI).

☒ ***APP*** / ☐ ***NOT APP***

- **Mercury** – The nervous system is very sensitive to all forms of mercury. Methyl mercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems. Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation. Mercury is a naturally occurring metal which has several forms. Metallic mercury is a shiny, silver-white, odorless liquid. If heated, it is a colorless, odorless gas and small amounts (several milligrams) may be contained in fluorescent bulbs. Mercury may also be in switches and thermostats.

☐ ***APP*** / ☒ ***NOT APP***

- **Volatile Organic Compounds** (VOCs) – Several organic solvents may be encountered and are collectively referred to as VOCs. Residual quantities may be present in process piping and subsurface soils and groundwater and could be encountered during excavation work. Although the precise mixture is unknown, VOCs may include (but not necessarily be limited to) trichloroethylene, 1,2-dichloroethylene,

vinyl chloride, and phenol (semi-volatile) from process operations and petroleum products such as gasoline and heating oil that may be associated with site vehicles or combustion equipment.

- ☒ ***APP*** / ☐ ***NOT APP***
  - **Polycyclic Aromatic Hydrocarbons** (PAHs) –PAHs are semi-volatile organic compounds that do not readily evaporate. As a result of their low volatility, exposure to these compounds will result from airborne dusts contaminated with PAHs. Short-term (acute) effects of exposure to these compounds are the same as those associated with exposure to dusts in general and may include eye and upper respiratory tract irritation at high dust levels. High dust levels are characterized by dust levels where visible dust emissions are observed that typically obscure vision. The primary health effect associated with PAHs is cancer as a result of long-term (chronic) exposure. Several PAHs are suspected as being potential human carcinogens.

Table 3.1 – Summary of Potential Health Effects

Chemical	Location	PEL	IDLH	Characteristics	Routes of Exposure	Symptoms of Exposure & Health Effects
SEMI-VOLATILES – may include a mixture of the following						
☒ **NA** Polychlorinated Biphenyls (PCBs)	Soil and sediment	1 mg/m³ 1242 0.5 mg/m³ 1254/1260	5 mg/ m³	Oil liquids or solids that are colorless to light yellow	Inhalation Contact	PCBs are classified as probable human carcinogen by the EPA More common symptoms and health effects include skin lesions and rashes Although PCBs may create vapor, they do not evaporate easily and the most likely inhalation exposure is by dust contaminated with PCBs
☒ **NA** Phenol	Soil and sediment	5 ppm TWA (skin)	250 ppm	Colorless to light pink liquid with a sharp, medicinal, sweet, tarry odor Ionization potential = 8.5	Inhalation Absorption	Inhalation of vapors, dust, or mist contaminated with phenol may result in vomiting, difficulty in swallowing, diarrhea, loss of appetite High concentrations or chronic exposure may also cause burning in the eyes, nose and throat, dizziness, irregular breathing and abdominal pain Phenol is readily absorbed through the skin causing photodermatitis Skin contact must be avoided
☐ **NA** Polycyclic Aromatic Hydrocarbons (PAH) Also known as: PNAH Polynuclear aromatic hydrocarbons	Excavations	0.2 mg/m³ (Coal tar pitch volatiles - benzene soluble fraction) 0.15 mg/m³ (Coke Oven Emissions - benzene soluble fraction)	Not determined	PAHs do not readily evaporate. Exposure from contaminated soil/dust created during remediation activities Pure material is a brown/black tar-like substance	Inhalation Contact	High exposures (>PEL) may cause irritation of the respiratory system The skin and eyes are especially prone to irritation from contact with PAHs May cause photosensitization of the skin and eyes increasing the potential for sunburn and irritation Long-term exposure may cause skin, lung, and kidney cancer
METALS & MINERALS						
☒ **NA** Lead	Lead in soil or ground water	0.05 mg/m³ TWA 0.035 mg/m³ Action Level	100 mg/m³	Pure material is a heavy, ductile, soft, gray, solid Lead is present on site as a component of soil from paint chips	Inhalation Ingestion	Lassitude (weakness, exhaustion), insomnia Facial pallor Anorexia, weight loss, malnutrition; constipation, abdominal pain, colic

Table 3.1 – Summary of Potential Health Effects

				that have flaked off painted structures and will not resemble its pure form Lead is also a component of paint		Anemia Gingival lead line Tremor Paralysis of the wrist, ankles Encephalopathy Kidney disease Irritation eyes Hypotension
☒ NA Asbestos	Existing building: floor tiles, window caulk, roofing mastic	0.1 fibers/cc	NA	Commonly found in insulation, felt, mastic, transite panels, and a variety of other structural applications	Inhalation Ingestion Contact	Asbestosis, Mesothelioma cancer Restricted pulmonary function
☒ NA Silica	Cutting or pulverizing concrete	0.05 mg/m^3 (NIOSH)	50 mg/m^3 (quartz)	Colorless, odorless solid A component of sand, concrete and other masonry materials	Inhalation	Cough, dyspnea (breathing difficulty), wheezing Decreased pulmonary function, progressive resp symptoms (silicosis) Irritation to the eyes Potential occupational carcinogen
☒ NA Hexavalent Chromium	Chromium in soil or groundwater	0.005 mg/m^3 [skin]	15 mg/m^3	Dark-red, odorless flakes or powder (pure form)	Inhalation Contact	Irritation to the respiratory system Nasal septum perforation Liver, kidney damage Leukocytosis (increased blood leukocytes), leukopenia (reduced blood leukocytes), eosinophilia Eye injury, conjunctivitis Skin ulcer, sensitization dermatitis Potential occupational carcinogen
☐ NA Mercury	Fluorescent light bulbs and mercury switches and thermostats	0.1 mg/m^3 [skin]	10 mg/m^3	Metal: Silver-white, heavy, odorless liquid	Inhalation Contact	Irritation to the eyes and skin Cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis Tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion) Stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria
VOLATILE ORGANIC COMPOUNDS (VOCs) – may include a mixture of the following						
☒ NA Trichloro-ethylene (TCE)	Soil, groundwater, residual in drums	100 ppm TWA	1000 ppm	Colorless liquid with a chloroform odor UEL=10.5%, LEL=8.0% Combustible Liquid Ionization Potential = 9.45 eV	Inhalation Absorption Contact	Causes headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating Large amounts of may cause impaired heart function, unconsciousness, and death Breathing for long periods may cause nerve, kidney, and liver damage

Table 3.1 – Summary of Potential Health Effects

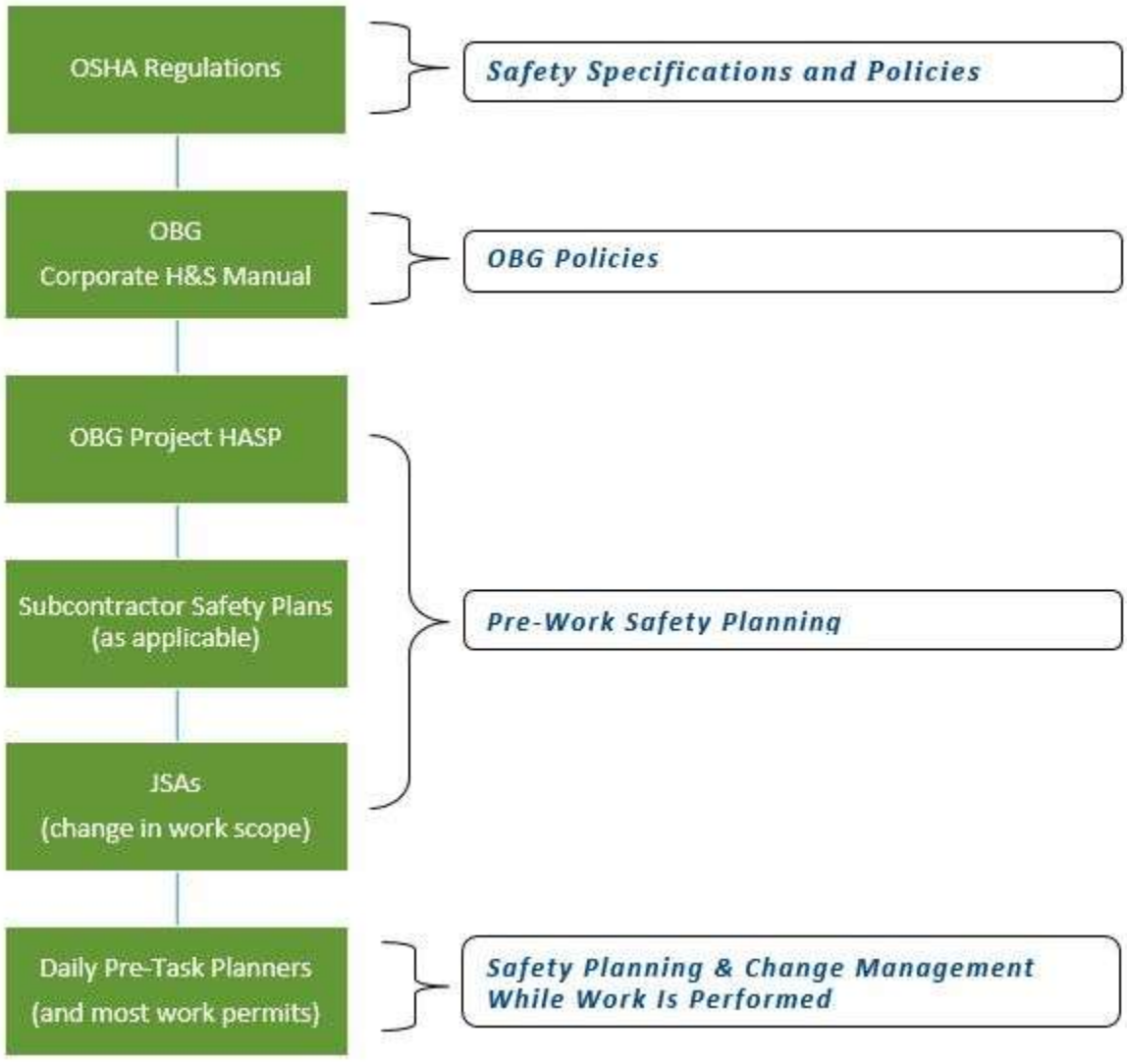
☒ NA Tetrachloro-ethylene (Perchloro-ethylene)	Soil, groundwater, residual in drums	100 ppm TWA	150 ppm [potential carcinogen]	Colorless liquid with a mild, chloroform-like odor Noncombustible Liquid Ionization Potential = 9.32 eV	Inhalation Absorption Contact	irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]
☒ NA Vinyl Chloride	soil, groundwater, residual in drums	1 ppm carcinogen	NA	Colorless gas or liquid (below 7°F) with a pleasant odor at high concentrations UEL=33%, LEL=3.6% Flammable Liquid Ionization Potential = 9.99 eV	Inhalation Contact	Lassitude (weakness, exhaustion) Abdominal pain Gastrointestinal bleeding Enlarged liver Pallor or cyanosis of extremities; liquid Frostbite Potential occupational carcinogen
☒ NA 1,2,-Dichloro ethylene	Soil, groundwater, residual in drums	200 ppm	1,000 ppm	Colorless liquid (usually a mixture of the cis and trans isomers) with a slightly acrid, chloroform-like odor. UEL=12.8%, LEL=5.6% Flammable Liquid Ionization Potential = 9.65 eV	Inhalation Contact	Irritation to the eyes and respiratory system Central nervous system depression
☒ NA Benzene	Soils, groundwater, residual in drums	1 ppm TWA 5 ppm STEL	500 ppm	Colorless vapor released from contaminated soil or water that may have a strong, irritating, or otherwise characteristic odor generally detectable at 4-5 ppm Ionization Potential = 9.24 eV	Inhalation Absorption Contact	Irritation to the eyes, nose, and throat Dizziness Dermatitis Prolonged exposure to hazardous levels may damage blood-forming systems Benzene is also a suspected human carcinogen (ACGIH 1996 Class A2)
☒ NA Toluene	Soils, groundwater, residuals in drums	200 ppm 300 ppm Ceiling	500 ppm	Colorless liquid with a sweet benzene-like odor UEL=7.1% and LEL=1.1% Class IB Flammable Liquid Ionization Potential=8.82 eV	Inhalation Contact (dermatitis)	Irritation to eyes and nose May cause skin irritation/dermatitis and headaches Exposures at or above the OSHA PEL may cause fatigue, confusion, dizziness and overall depression of central nervous system Chronic exposure or high exposures approaching IDLH levels may cause liver and kidney damage

Table 3.1 – Summary of Potential Health Effects						
☒ NA Xylene (o,m,p)	Soils, groundwater, residuals in drums	100 ppm	900 ppm	Colorless liquid with an aromatic odor UEL=6.7%-7.0% and LEL=0.9%-1.1% Class IC Flammable Liquid Ionization Potential = 8.56 eV	Inhalation Contact (dermatitis)	Irritation to eyes, nose, and throat May cause skin irritation/dermatitis and headaches Exposures at or above the OSHA PEL may cause fatigue, confusion, dizziness, nausea, vomiting, cornea (eye) damage, and overall depression of central nervous system Chronic exposure or high exposures approaching IDLH levels may cause liver and kidney damage
OTHER						
☐ NA Solvay Waste	Soil	None	None	White to gray material that ranges from almost cement-like to toothpaste-like consistency Material may "liquefy" with repeated vibration	Inhalation (residues) Contact	Primary hazard is high pH (alkaline) material that may cause skin irritation with prolonged exposure Solvay waste is not classified as hazardous waste
Footnotes	All values are 8-hour time-weighted averages (TWAs) unless otherwise indicated **PEL**: Permissible Exposure Limit, the concentration an employee may be exposed to for an 8-hour work day for a 40 hour work week for which nearly all employees may be repeatedly exposed without adverse health effects **REL**: NIOSH recommended exposure limit for full-shift exposures **STEL**: Short-Term Exposure Limit as a 15 minute average **CEILING:** maximum concentration **IDLH**: IMMEDIATELY Dangerous to Life and Health, contaminant concentration which present the possibility for severe health consequences if exposed to the IDLH concentration without the appropriate personal protective equipment (PPE) **LEL**: Lower Explosive Limit **Units: mg / m³** = milligrams per cubic meter of air | **f / cc** = fibers per cubic centimeter of air					

4. HAZARD EVALUATION

The OSHA safety regulations (29CFR1910 and 29CFR1926) require that Site personnel, subcontractors, and visitors must be informed of the hazards associated with their work activities. Hazard Identification and control begins during safety planning which is described in the ***Pre-Work Safety Planning*** section of this HASP.

Safety planning is required for work on this project and occurs at different times during the project. Each "level" of safety planning typically has differing degrees of detail and focus. However, the ultimate objective is that Site management and crafts methodically evaluate hazards and implement safety controls to prevent the occurrence of an injury, fire, explosion, spill, or property damage incident and can manage changes as they occur. The following chart provides an overview of safety planning requirements and tools outlined in previous sections of this HHASP.



Safety Plans, JSAs, and Safe Work Permits developed subsequent to this HASP by OBG or subcontractors (if any) will identify hazard controls that are consistent with this HASP. Subcontractors may use an OBG Pre-Work JSA template **(Appendix A)** or request approval from OBG to use an alternate JSA template. Submitting standard

company policies or programs is not acceptable. Preliminary identification of hazards and their respective controls for major work tasks or phase are outline in **Table 4.1**.

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
GENERAL SAFETY HAZARDS **Mandatory PPE:** **Level D PPE** **(Refer to PPE section of HASP for specific components of Level D PPE based on the task being performed)** **As needed PPE:** **Face shield for all grinding, torch cutting, pressure washing** **Covered tasks:** **This section covers safety hazards and their associated controls that are applicable to a variety of crafts/trades.** **These will only be repeated in subsequent sections when specific tasks or site conditions require changing or modifying safety hazard controls.**	Generally applicable to all trades/crafts	**Slip, trips, and falls** **Manual lifting** **Noise- during operation of heavy equipment and power tools or working adjacent to such equipment** **Electrical – shock hazards associated with the use of extension cords and power tools** ■ Contact with damaged cord ■ Overhead power lines ■ Contact with sub-surface utilities **Hand & power tools** ■ Shock ■ Flying dust, cuttings, debris ■ Hand injuries from cutting blades/bits **Ladder hazards** ■ Ladders kicking out or tipping over during use ■ Users fall from a ladder ■ Falling objects strike workers or pedestrians on lower work surfaces **Heavy equipment hazards – Working near heavy equipment requires that general safety precautions be considered. When tasks require the use of certain types of heavy equipment (e.g., manlifts, forklifts, and cranes), they will be covered in more detail with respect to those tasks.** ■ Turnover due to the slope angle and/or stability ■ Struck by injuries (counterweight swing or run-over) ■ Dropped loads ■ Hydraulic fluid leaks ■ Equipment fire	**Safety controls for slips, trips, and falls include:** ■ Daily cleanup ■ Unused materials must be stored in a designated area ■ Unused tools must be picked up daily ■ All trash, scrap metal, and construction debris must be placed in the appropriate dumpsters ■ Icy walkways, stairs, work platforms, and scaffolding must be salted prior to use. Slip-on traction devices (YakTrax®) should also be considered. **Follow proper lifting technique.** **Review primary precautions below:** ■ Keep load in close to the body ■ Keep hips and shoulders aligned (no twisting) ■ Maintain stability (keep a balanced position) ■ Think and plan difficult lifts (use two people when weight is >55-75 lbs) **Wear hearing protection while operating heavy equipment (unless with enclosed cab) or noisy power tools. Wear hearing protection if you have to raise your voice talking to someone five feet away.** **Electrical safety controls when using extension cords and power tools include:** ■ Locate and verify all building utilities with owner representative ■ Inform all site personnel that **overhead power lines are energized** and a **20-foot clearance** must be maintained » A 10-foot clearance may be used for insulated secondary lines that distribute power within the site » If the lines are <300 volts and a safety spotter observes equipment while it's moved, then a 3-foot clearance may be used ■ Use GFCIs on all power tools and extension cords ■ Inspect tools for visible damage on a daily basis ■ Inspect all flexible extension cords and power tool cords daily prior to use ■ Discard all flexible cords without a ground plug or outer insulation this is cut through. Tool cords must be in similarly good condition. ■ Do not repair flexible cords smaller than 12 gauge ■ All extension cords must be ran overhead (>7-foot) when crossing walkways or other areas of high travel or protected when run across the floor (in a manner that does not create an excessive trip hazard) ■ All extension cords must be protected when run across roadways ■ Subsurface utilities must be located and marked prior to driving stakes, fence posts, or earthwork. Temporary utilities for construction may be shallower than expected. **Perform the following to ensure that tools are in good working order** ■ Inspect tools for visible damage prior to each use. ■ Inspect all flexible extension cords and power tool cords. Discard all flexible cords without a ground plug

Table 4.1 – Hazard Identification & Control

			or outer insulation that is cut through. Tool cords must be in similarly good condition. Do not repair flexible cords smaller than 12 gauge. ■ **Do not operate tools without guards and use only in accordance with manufacturer's operating instructions** ■ Use **GFIs** on all extension cords and power tools **Ladders must be used in accordance with OSHA guidelines or fall protection must be implemented above six feet. Ladder safe guidelines include, but are not limited to:** ■ Ensure all ladders are inspected and properly labeled ■ Maintain 3-point contact while working on step ladders and extension ladders (work requiring the use of both hands when on a ladder will require the worker to tie-off) ■ Keep your torso between the rails of the ladder ■ Do not use a step ladder as a straight ladder ■ Do not stand on the top two steps of a step ladder ■ Extend extension ladders three feet above the upper level ■ Secure the top and base of extension ladders ■ Extension ladders should have a 4:1 height to base ratio ■ Do not use metal ladders within 20 feet of exposed conductors or overhead power lines ■ **Ladders must be inspected prior to each use** **Heavy equipment safety precautions include:** ■ Ensure **slopes** in designated work areas do not exceed slopes allowed by manufacturer's safe operating guidelines ■ Keep **non-essential personnel** out of areas in which heavy equipment will be operating. Portable chain link (or equivalent) will be used to secure the construction area ■ Ensure all operators are qualified and familiar with the **manufacturer's safe operating guidelines** for the equipment they are operating. Subcontractors must submit the following for specific types of equipment: ■ Forklift – Operators license ■ Manlift – Training certificate. Letter of Authorization and Training on company letterhead, or equivalent. ■ Crane – State License and/or CCO ■ **Inspect heavy equipment daily** prior to use Immediately repair any leaks ■ Operators must wear **seatbelts** at all times unless the manufacturer does not provide seat belts ■ Equipment operators must ensure workers are kept clear from **crush points** created by counterweight swings and for boom movement ■ Never lift or suspend a load over people ■ Inspect all rigging materials prior to use ■ Ensure that a **fire extinguisher** is mounted to the equipment ■ Ensure spill materials for oil/hydraulic fluid are located near the construction area

Table 4.1 – Hazard Identification & Control

SITE PREPARATION & MOBILIZATION **Minimum PPE:** **Level D PPE (Refer to PPE section of HASP for specific components of Level D PPE based on the task being performed.)** **Additional PPE:** **Hearing protection during operation of heavy equipment or other loud equipment** **Kevlar Chaps & Jacket:** **During operation of chainsaw that may be required to clear small trees and large shrubs** **Covered Tasks:** **Mobilization of equipment** **Site Survey** **Site security – perimeter safety fence installation** **Installation of silt fence, drainage swales, and other erosion controls** **Use of a "brush hog" either pulled behind a piece of heavy equipment, or on an arm that protrudes from the side of equipment.**	Laborers Equipment Operators Surveyors Delivery Personnel Utility Installation Crews	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Vegetative Clearing** ■ Biological hazards - Poison Ivy and poisonous snakes and insects ■ Ticks bites ■ Cuts/lacerations from chainsaws (if used) **Brush Hog Operation** ■ Thrown material leading to injury ■ Loss of life or limb from rotating blades ■ Loss of life or limb due to unprotected belts/pullys ■ Tipping over of Equipment due to extreme slope or equipment being off balance.	**General Hazards previously listed in the "General Safety Hazards" section of this table (liner may be installed and used on site and is extremely slippery when wet)** **Safety controls for clearing include:** ■ Know how to recognize poison ivy. Maintain alcohol wipes or rubbing alcohol to wipe down exposed skin following contact with allergy-causing oils from poison ivy. ■ Syracuse is in a high Lyme disease area. Use 25%+ DEET on skin and permethrin on Tyvek when walking into, or working in, overgrown areas. ■ All personnel using chainsaws for clearing activities must wear **Kevlar Chaps and Jacket** and hard hat mounted face shield in addition to other safety gear ■ Use heavy equipment to do as much of the vegetative clearing as possible. ■ Roots and stumps will not be removed. Removing surface vegetation without disrupting contaminated soil is not considered "intrusive." **Safety Controls for "Brush Hog" operation include:** ■ Do not operate "Brush Hog" while elevated from the ground. ■ Do not allow pedestrians to approach the Bush Hog while in operation. ■ Do not intentionally run over excessively large stumps, stones, or debris. ■ Do not operate the Brush Hog while in a vertical position or while above knee level. ■ Leave all manufacturer guards in place and do not allow workers to be exposed to moving parts of the equipment. ■ Read the manufacturers recommendations in regards to safe operating slopes. ■ Use side arm brush hog while drive equipment can be safely operated from a stable, level surface. ■ Keep side arm brush hog lowered as close to the ground as possible and as near to the equipment as possible when operating.

Table 4.1 – Hazard Identification & Control

Placement of soil cover **Minimum PPE:** **Level D PPE (refer to PPE section of HASP for specific components of Level D PPE based on the task being performed)** **Additional PPE:** **Hearing protection during operation of heavy equipment or other loud equipment** **Covered Tasks:** **use of heavy equipment to evenly place soils onto predetermined areas at specified application rates.**	Machine operator	**General Hazards previously listed in the "General Safety Hazards" section of this table** ■ Heavy Equipment Operation ■ Haul Truck Operation (inside cab/outside) ■ Contact with unprotected belts and pulleys ■ Being hit by Flying material	**General Hazards previously listed in the "General Safety Hazards" section of this table:** **Contact with unprotected belts and or pulleys** ■ Keep all guards in place when operating equipment. ■ Release all stored energy prior to maintenance being performed. ■ Do not operate with personnel in the spreader equipment.

5. EMPLOYEE AIR MONITORING

Air monitoring is to be performed in accordance with Program 2.1 of the OBG Corporate Health & Safety Manual, *Airborne Materials Exposure*, and Program 2.22 of the OBG CHS Manual, *Hazardous Waste Operations*. Presented below is the site-specific information. The purpose of air monitoring is to verify the adequacy of PPE being used and to evaluate new hazards or changing site conditions.

The **"site"** refers to the work area(s) designated for this project. **Community action levels** generally apply at the site perimeter. The **"work area or zone"** is the area immediately surrounding activities that disturb contaminated materials and is the area within which "work area action levels" apply. Exclusion Zones may be setup to coincide with the perimeter of individual work areas or encompass several work areas. Where Exclusion Zones are adjacent to the site perimeter, the most stringent of work area and community action levels shall apply.

5.1 MONITORING EQUIPMENT

Monitoring Instruments will be calibrated in accordance with manufacturers' recommendations. Air monitoring information from perimeter PIDs and dust meters will be downloaded at the end of the day. Air monitoring results will be submitted to NYSDEC on a weekly basis.

Monitoring Equipment				
Required?	**Contaminant**	**Location**	**Equipment**	**Comments**
Yes	Volatile Organic Compounds (VOCs)	1 upwind 2 downwind 1 "roving" meter for use in work areas and backup for perimeter monitors	Photoionization Detector (PID) with 10.6 eV lamp	Available from Pine Environmental 800-301-9663 (approx $200 a week)
NO	Oxygen and flammable vapors	Confined spaces	Gas Meter – Neotronics Minigas or equivalent	Available from Pine Environmental 800-301-9663 (approx $150 a week) For use if confined space entry Not to be used for ambient monitoring
YES	Dust / Particulate (PM-10)	1 upwind 2 downwind 1 "roving" meter for use in work areas and backup for perimeter monitors	Dust Meter - TSI DustTrak Model 8520 (w/ PM-10)	Available from Pine Environmental 800-301-9663 (approx $300 a week) Rent the optional TSI Environmental Enclosure for stationary locations subject to rain and prolonged sun
NO	Hydrogen cyanide		ToxiRAE Plus or Industrial Scientific T82 single gas monitors with HCN sensor	Available from Pine Environmental 800-301-9663 (approx $75 a week)
NO	VOC -benzene (Drager tube)	At the discretion of the SSL to supplement PID Readings	Drager Tube - Benzene 0.5/c (tube # 81 01841) 20 strokes, approx 20 minutes per test, uses scrubber tube to decrease interference from other VOCs	Benzene colorimetric tubes are subject to cross-sensitivity to a variety of aromatic compounds and will therefore be used only at the discretion of the SSHC or Manager of Corporate Health & Safety
YES	Mercury Vapor	Intrusive Work Activities at the discretion of the SSL	Jerome Mercury Vapor Analyzer	Available from Pine Environmental 800-301-9663 (approx. $71.50 a day)
NO	VOC - benzene (exposure sampling badge)	Intrusive Work Activities at the discretion of the SSL	3M 3520 Organic Vapor Badge for analysis by NIOSH 1500 (benzene)	Supplied by Galson Labs 888-432-5227 ($5.00 when analysis performed by Galson)

5.2 WIND DIRECTION

Wind direction will be monitored daily using visual observations with wind direction and velocity recorded in a field log.

5.3 WORK AREA (EMPLOYEE) MONITORING

The Work Area Monitoring approach will use "roving" (hand-held) equipment to periodically check breathing zone exposures in active work areas. One PID and one dust meter will be used to assess potential contamination hot spots, investigate odors, and monitor effectiveness of dust and vapor controls in the work area. Hand held meters may be used as backups to perimeter CAMP instruments if equipment fails.

Work area monitoring includes one or more of the following depending on site activities:

- **Periodic / Roving Monitoring** – The SSHC or designated alternates will conduct air monitoring using hand-held instruments within each intrusive work area when intrusive work is being conducted.
- **Confined Space Entry** – A combustible gas / oxygen meter will be required for entry into confined spaces, including excavations greater than four feet deep that are classified as a confined space. Action levels are provided in Section 5.3.1, below.
- **Hot Work** – A combustible gas / oxygen meter will be required to monitor areas where flammable vapors may accumulate prior to conducting hot work.

Work Area (Employee) Air Monitoring Action Levels

Contaminant (equipment / method)	Frequency	Action Level	SSL Action/Response
Volatile Organic Vapors (VOCs) **(PID)**	Continuously in work areas during intrusive activities (excavation work).	*5 ppm	Increase to Level C PPE (half or full-face respirator)
	When odors are encountered or changing site conditions affect hazards.		Increase to Level B (supplied air) PPE or implement additional vapor controls outlined in this HASP to keep VOC levels below 50 ppm.
	Prior to and continuous during confined space entry (i.e., excavations >4 feet and tanks).	*50 ppm	Notify the OBG Manager of Corporate Health & Safety and the Project Manager.
	NOTE: a trench or pit with limited access over 4 feet may be considered a confined space if it is sloped steeper than 1.5H:1V and/or does not have access "ramps" or stairs.	*250 ppm	STOP work and use ventilation, covers, vapor suppressants or other controls to reduce VOC levels below 250 ppm. Immediately notify the OBG Manager of Corporate Health & Safety, OBG Project Manager and Honeywell Representative.

Work Area (Employee) Air Monitoring Action Levels			
DUST / PARTICULATE **nuisance dust, PAHs, chromium, concrete dust/silica** **(Dust Meter)**	Periodically in work areas when dusty conditions are observed. NOTE: Visible dust generated by site activities that migrates past the Work Area perimeter must be controlled regardless of dust meter readings in the work area.	**1 mg/m^3	Increase to Level C PPE (half or full-face respirator). Implement additional controls outlined in the Community Health and Safety Plan (CHASP) to keep dust levels below 1 mg/m^3.
		**1.5 mg/m^3	Full-Face Level C PPE or implement additional controls outlined in the CHASP to keep dust levels below 1.5 mg/m^3 Notify the OBG Manager of Corporate Health & Safety and the Project Officer.
		**5.0 mg/m	STOP work and use investigate additional dust controls to reduce dust levels below 5 mg/m^3 (or lower). Immediately notify the OBG Manager of Corporate Health & Safety, OBG Project Officer.
Mercury Vapor	Periodically in work areas during intrusive activities.	0.025 mg/m^3	Increase to Level C (Half-face Respirator) with Mercury Vapor Cartridge.
		*.25 mg/m^3	Increase to Level C (full-face respirator) with Mercury Vapor Cartridges Stop work and investigate controls to reduce mercury levels below .25 mg/m^3 Notify the OBG Manager of Corporate Health & Safety and Project Officer
		*1.25 mg/m^3	Increase to Level B (supplied air respirator)

*** VOCs - Sustained readings for 5 minutes above background. Background readings are taken at upwind locations relative to Work Areas.**
**** DUST/PARTICULATE - 15 minute time-weighted average above upwind background readings.**

5.3.1 Confined Space Entry Monitoring

Respiratory protection and/or mechanical ventilation must be provided where hazardous atmospheres are identified or may develop during work activities. Action levels for oxygen, combustible vapors, hydrogen sulfide and carbon monoxide are outlined below and on the Confined Space Entry Permit.

- Oxygen – 19.5% to 23.5%
- LEL – 10%
- Carbon Monoxide – 35 ppm
- Hydrogen Sulfide – 10 ppm

6. MEDICAL MONITORING

Medical surveillance requirements are required by OSHA for persons who are exposed to lead, perform asbestos abatement, wear respirators, perform hazardous waste work, and other activities. Employees are required to have medical surveillance that complies with OSHA regulations.

6.1 FITNESS FOR RESPIRATOR USE

Persons who may wear respiratory protection must be provided respirators as regulated by 29 CFR 1926.103 and 29 CFR 1910.134. This Standard requires that an individual's ability to wear respiratory protection be medically certified before he / she perform designated duties. Where medical requirements of 29 CFR 1926.65 overlap those of 29 CFR 1910.134, the more stringent of the two will be enforced. *Documentation of respirator suitability must be maintained on-Site for all project personnel who may be required to wear a respirator.*

6.2 MEDICAL SURVEILLANCE

Medical surveillance examinations for persons conducting hazardous waste work, asbestos abatement, and lead work are administered on a pre-employment and periodically thereafter and as required by applicable regulations. Medical exams must be administered by a board-certified (or one who is eligible for board certification) physician in Occupational Medicine. The examining physician is required to make a report to the employer of any medical condition which would place employees at risk when wearing a respirator, wearing other personnel protective equipment, or working with hazardous materials. Subcontractors must maintain medical records in accordance with OSHA regulations. *Documentation of medical clearance to perform regulated work activities (such as hazardous waste operations, asbestos abatement, lead abatement, etc.) must be maintained on Site for all project personnel who may perform regulated work.*

6.3 HEAT STRESS MONITORING

Heat stress monitoring of personnel wearing protective clothing should commence when the ambient temperature is 70°F or above. To monitor heat stress risk, the OBG SSL (or designated alternate) will use one of the following methods:

- Monitoring Heat Stress Index

  Implement heat stress precautions in accordance with the Heat Stress Index of the work area.

Heat Index Chart
Temperature (°F) vs. Relative Humidity

(F)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
115	111	115	120	127	135	143	151												
110	105	108	112	117	123	130	137	143	151										
105	100	102	105	109	113	118	123	129	135	142	149								
100	95	97	99	101	104	107	110	115	120	126	132	136	144						
95	90	91	93	94	96	98	101	104	107	110	114	119	124	128	134	140	147	154	161
90	85	86	87	88	90	91	93	95	96	98	100	102	106	109	113	117	122	127	132
85	80	81	82	83	84	85	86	87	88	89	90	91	93	95	97	99	102	105	108
80	75	76	77	77	78	79	79	80	81	81	82	83	85	86	86	85	86	88	89
75	70	71	72	72	73	73	74	74	75	75	76	76	77	77	78	76	76	77	77

Heat Index	Heat Stress Risk and Preventative Measures
VERY HIGH (EXTREME) 115 or higher	Heatstroke/sunstroke highly likely with continued exposure. • **Moderate and strenuous outdoor activity prohibited**
HIGH 104-115	Sunstroke, heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity. • **Strenuous outdoor activity while wearing Tyvek is prohibited without the use of personal cooling devices.** • **Workers must drink every 15 minutes or more frequently at their discretion** • **Air conditioned break areas must be available.**
MODERATE 91-103	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity. • **Strenuous outdoor activity while wearing Tyvek is prohibited above a HSI of 99 without the use of personal cooling devices and is recommended for lower HSI.** • **SSHC to monitor employees for symptoms of heat stress.** • **Workers must drink every 30 minutes or more frequently at their discretion.** • **Air conditioned break areas must be made available for morning, lunch, and afternoon breaks.**
CONCERN (CAUTION) 75-90	Fatigue possible with prolonged exposure and/or physical activity. • **SSHC to monitor employees for symptoms of heat stress.** • **Workers must drink every 60 minutes or more frequently at their discretion.** • **Shaded break areas must be made available for morning, lunch, and afternoon breaks. Air conditioning is recommended.**

Source: National Weather Service heat index table modified by OSHA (https://www.osha.gov/SLTC/heatillness/heat_index/pdfs/all_in_one.pdf) for use at work sites.

- Monitoring Heart Rate

Heart rate should be measured by the radial pulse for a 30 second period as early as possible in the rest period. If the heart rate exceeds 110 beats per minute, shorten the next work cycle by one-third and keep the rest period the same. If the heart rate still exceeds 110 beats per minute at the next rest period, shorten the following cycle by one-third.

- Monitoring Oral Temperature

Oral temperature should be measured at the end of the work period (before drinking). If oral temperature exceeds 99.6°F, shorten the next work cycle by one-third without changing the rest period. If the oral temperature still exceeds 99.6°F at the beginning of the next rest period, shorten the next work cycle by one third. Do not permit a worker to wear a semi-permeable or impermeable garment when his / her oral temperature exceeds 100.6°F.

- Preventing Heat Stress
  - **Know the Symptoms** - Some symptoms associated with heat stress are: Employees should be aware of these symptoms with themselves and with their co-workers:
    - an elevated heart rate, lack of concentration, difficulty focusing on a task, fatigue
    - irritability and/or sickness
    - cramps, rash, headache
    - loss of desire to drink water
    - fainting
    - skin clammy, moist and pale (severe heat exhaustion)
    - skin extremely dry and red (heat stroke);
  - ***Acclimatize*** - When high heat stress conditions arise, employees should be exposed to the heat for short work periods followed by longer periods of work. Acclimatization usually takes five (5) days and should be provided for all new employees and employees returning from an absence of two (2) weeks or more. Contact Corporate Health and Safety for proper procedures.
  - ***Hydration & Pace of Work*** - Make sure all employees intake plenty of water throughout the work day (sometimes as much as a quart per worker per hour) and let employees know where the drinking water is located. Adjust your work pace and expectations on how much work can be done during periods of high heat stress. Workers cannot do as much during periods of high heat stress compared with similar periods of low heat stress. After acclimatization, workers may be able to resume a more "normal" work pace as long as fluid intake is adequate.
  - ***Work/Rest Periods*** - If possible, heavy work should be scheduled during the cooler parts of the day (i.e., early morning) and rest periods should be taken in cool areas for longer periods.
  - ***Personal Protective Equipment (PPE)*** - Employees using PPE (i.e. Tyvek® suits or other equipment which may retain heat) can be more susceptible to heat stress due to the fact that heat/sweat often cannot escape the suits and/or the equipment. Persons wearing PPE that contributes to heat stress require more hydration, longer rest periods, or a reduced pace of work. Also, more careful monitoring of each person's health status is required by co-workers and management.
- General First Aid for Heat Stress

Mild heat stress: Immediately bring employee to a cool place and have them rest and drink liquids. Provide off-Site medical attention for employees who do not fully recover within one (1) hour.

Severe Heat Stress/Heat Stroke: If an employee faints, experiences coordination problems or appears confused or disoriented, then immediately contact emergency services. If employee is suspected of heat stroke, soak employee in their clothes in cool water and contact emergency services. A person afflicted with heat stroke WILL DIE if not promptly treated.

6.4 COLD STRESS MONITORING

The timing and location of this project may be such that heat / cold stress could pose a threat to the health and safety of Site personnel. Work / rest regimens will be employed as deemed necessary. However, subcontractor Safety Competent Persons may initiate heat/cold stress monitoring at any time as necessary to protect their employees. Special clothing and an appropriate diet and fluid intake will be recommended to all on-Site personnel to further reduce these temperature-related hazards.

Work / rest schedules must be altered to minimize the potential for cold stress. Cold stress is defined as a decrease in core body temperature to 96.8 deg. F and / or cold injury to body extremities. Decreases in core body temperature are associated with reduced mental alertness, reduction in rational decision making, or loss of consciousness in severe cases. Symptoms of cold stress include pain in extremities (i.e. hands and feet) and severe shivering. If workers experience these symptoms, then stop work and implement the following controls.

- Workers must don adequate dry insulating clothing; and
- Adjust the work / rest schedule to increase the amount of rest / rewarming time.
- Toolbox safety meetings discussing symptoms of cold stress, clothing requirements, and work breaks must be held when the wind chill temperature (see Appendix A) drops below 0 deg. F and each day the wind chill temperature is below 25 deg. F.

The wind chill index provided below shows the effective cooling on exposed skin. When the wind blows across the skin, it removes the insulating layer of warm air adjacent to the skin. When all factors are the same, the faster the wind blows, the greater the heat loss, which results in a colder feeling. Wind chill temperatures that are **25 deg. F** below zero or are extremely dangerous. Workers must protect any exposed skin, especially the face, ears, and fingers.

Wind Chill Chart (Temperature vs Wind Speed)							
Wind Speed-mph							
Calm	5	10	15	20	25	30	35
Temperature (Degrees F)	Wind Chill						
45	43	34	29	26	23	21	20
40	37	28	23	19	16	13	12
35	32	22	16	12	8	6	4
30	27	16	9	4	1	-2	-4
25	22	10	2	-3	-7	-10	-12
20	16	3	-5	-10	-15	-18	-20
15	11	-3	-11	-17	-22	-25	-27
10	6	-9	-18	-24	-29	-33	-35
5	0	-15	-25	-31	-36	-41	-43
0	-5	-22	-31	-39	-44	-49	-52
-5	-10	-27	-38	-46	-51	-59	-64
-10	-15	-34	-45	-51	-59	-64	-67
-15	-21	-40	-51	-60	-66	-71	-74
-20	-26	-46	-58	-67	-74	-79	-82
-25	-31	-52	-65	-74	-81	-86	-89

If you would like to calculate the wind chill index for combinations of temperature and wind other than those given in the table above, you can use the formula:

WC = 91.4 - (0.474677 - 0.020425 * V + 0.303107 * SQRT(V)) * (91.4 - T)

where: WC = wind chill index; V = wind speed (mph); T = temperature (° F)

7. EMERGENCY RESPONSE PLAN

This emergency response section details actions to be taken in the event of Site emergencies. The SSL is responsible for implementation of emergency response procedures and will ensure that a **First Aid/CPR trained person is on Site always when work activities are in progress.**

7.1 EMERGENCY PHONE NUMBERS AND NOTIFICATIONS

To be posted or provided on Site. Emergencies encountered on this Site will be responded to by a combination of off-Site emergency services and Site personnel.

EMERGENCY NUMBER Fire, Explosion, Emergency Medical, and Spills that may reach surface waters	
Site Address	**Phone Number**
LCP Former Erie Canal Property **100 -348 Belle Isle Rd** **Solvay, NY 13209**	Level 3 – ONSITE CREW RESPONSE LEVEL 2 – ERT RESPONSE 315-715-1800 LEVEL 1 – OFF SITE RESPONSE 911

EMERGENCY NOTIFICATIONS Fire, Explosion, Emergency Medical, OSHA-Recordable Injuries, Spills		
Honeywell		
INSERT CLIENT MANAGER TITLE	Shane Blauvelt	**Phone:** 315-552-9749 **Cell:** 315-559-9740
OBG - All emergencies immediately (and first aid injuries within 24 hrs.)		
Project Manager	Brad Kubiak	**Cell:** 315-882-2755
Construction Manager/SSL	Ed Prossner	**Cell:** 315-383-8897
Health and Safety Project Manager	Steven Thompson, CHST	**Cell:** 315-560-5018
Manager of Corporate Health & Safety	Jeffrey R. Parsons, CIH	**Cell:** 315-391-0638
REGULATORY AGENCIES		
OSHA – Syracuse, NY Office	OBG to notify OSHA… ▪ Within 8 hrs for any fatality ▪ Within 24 hrs for any in-patient hospitalization, amputation, or loss of an eye	**Phone:** 315-451-0808
SPILL NOTIFICATION – NYSDEC Spill Response	All petroleum spills must be reported to the NYS Spill Hotline within 2 hours of discovery, except spills which meet **all** of the following criteria: 1. The quantity is known to be less than 5 gallons; and	**Phone:** 800-457-7362

EMERGENCY NOTIFICATIONS		
	2. The spill is contained and under the control of the spiller; and 3. The spill has not and will not reach the State's water or any land; and 4. The spill is cleaned up within 2 hours of discovery. A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable.	

CONTACT NUMBERS FOR OFFSITE MEDICAL RESOURCES		
Local Hospital	Upstate Medical University 750 East Adams Street Syracuse, NY 13210-2375	**Phone:** 315-464-5611
WorkCare Incident Intervention	Call for all minor (non-emergency) injuries	**Phone:** 888-449-7787
OCCUPATIONAL CLINIC	Industrial Medical Associates 961 Canal St, Syracuse	**Phone:** 315-478-1977

7.2 EMERGENCY ROUTE

Refer to attached **Figure 1** for Hospital Route Map.

7.3 EMERGENCY INVENTORY

In addition to those items specified elsewhere, OBG will maintain the following equipment:

- First aid / Bloodborne pathogens kit – The minimum recommended size is a 25-person first aid kit.
- Fire extinguishers – located within 25 feet of hot work
- Spill Control Kit(s) – Provide all applicable spill control supplies to contain spills.

7.4 GENERAL EMERGENCY RESPONSE PLAN

7.4.1 Evacuation Signal

In addition to the Site-specific alarms, verbal/radio communications directing project personnel to evacuate or a building fire alarm will also be used. Do NOT leave Site vehicles or equipment on access roads and emergency exits such that emergency response vehicles or personnel may be obstructed. The project notification to evacuate to the muster point is *one long blast of the air horn.*

7.4.2 Muster Point

The muster points in event of an emergency that requires evacuation of the work area are the primary muster point at the Main entrance at the intersection of Belle Isle Rd and Mathews Ave. The muster point will be

reviewed with all personnel during their initial Project Health and Safety Orientation. The SSL or designee will account for all project personnel at the Muster Point following an evacuation.

7.5 CALL FOR EMERGENCY SUPPORT

In the event of a Site emergency, the OBG SSL or designee will call 911. When necessary, the SSL will coordinate the arrival of on-site emergency personnel with the site owner's security, safety, and/or emergency response employees.

The SSL or designee will briefly explain the nature of the emergency and Site conditions as follows:

- Indicate his/her name
- Location of emergency (Site address)
- Description of emergency conditions that may require special rescue equipment, such as confined spaces; excavations, and elevated work platforms
- Potential chemical hazards and recommended PPE
- Emergency decontamination procedures
- Incident Command System (ICS)

7.5.1 Incident Command System (ICS)

The OBG SSL or designated alternate shall function as the initial incident Commander when the emergency plan is initiated by calling 911. The SSL will decide whether site personnel will evacuate to the Muster Point or divert site resources (personnel and equipment) to provide initial response actions in accordance with this HASP until emergency responders arrive on site. When emergency responders arrive, the SSL will identify himself or herself as "in charge" and transfer authority to the arriving Incident Commander.

7.6 FIRE AND EXPLOSION RESPONSE PLAN

> ***NOTE – Site personnel will respond to incipient stage fires using 20 lb Type ABC dry chemical fire extinguishers. Heavy water spray is best for larger fires which will be applied by the fire department responding to our "911" call.***

All fires or explosions must be reported to the OBG Health and Safety Project Manager and the OBG Project Manager. Refer to contact information in the "**Emergency Phone Numbers & Notifications**" section of this HASP.

A fire that cannot be readily extinguished with a fire extinguisher will be considered major and will require evacuation of the work area personnel to **Muster Point** areas per this HASP. However, the SSL or designee may only approach fires/explosions to the extent that fire safety considerations allow. If personal injuries result from any fire or explosion, the procedures outlined in the Personal Injury Response Plan will also be followed.

7.7 PERSONAL INJURY RESPONSE PLAN

Treatment for minor injuries will be provided on site using available first aid supplies and personnel trained in first aid. For **minor injuries** that are not life-threatening but require further medical attention, all OBG subcontractors must agree to have their employees treated by occupational physicians at occupational clinics whenever possible. Subcontractors are expected to accommodate this objective whenever feasible.

WorkCare Incident Intervention – WorkCare is a service available to OBG employees for non-emergency injuries as outlined below. Subcontractors are not able to utilize OBG's subscription to this service but are encouraged to setup a WorkCare account for their own employees.

- **All OBG employees will call WorkCare for minor injuries** that include any strains, cuts for which an employee is not confident that a band aid is sufficient, tick/insect bites for which the employee is concerned about infection or Lyme, any other work-related injury for which the employee would like to talk to a WorkCare medical professional regarding proper treatment or follow-up.
- **WorkCare posters must be posted at each job site with a field office or trailer.**
- Minor (not life threatening) injuries that require medical attention will be treated at the "Non-Emergency Med Treatment" clinic identified above **unless an alternate clinic is recommended by WorkCare**. If no clinic is available or identified, then default to the "Emergency Medical Treatment" facility.

The preferred occupational clinic for non-emergency medical treatment during normal business hours is **Industrial Medical Associates (IMA) 961 Canal Street Syracuse.** Emergency rooms may be used to treat minor injuries that require further medical treatment after normal business hours.

Emergency or life-threatening injuries, including puncture wounds to the head, chest, and abdomen, serious head and spinal cord injuries, and loss of consciousness must be treated at the hospital emergency room.

Route maps to the hospital (***Figure 1***) must be posted in the OBG on-site office trailer and all subcontractor office trailers (if any).

7.8 SPILL RESPONSE

Site personnel will be properly trained and equipped to handle small spills. Spill sorbents will be staged onsite in readily visible locations for emergencies. The minimum size spill kit should have the capacity to cleanup and containerize spills of **55 gallons**. Potential spills include leaking gasoline, diesel, antifreeze, hydraulic fluid, or oil from heavy equipment. If a spill of any type should occur, the SSHC or designee should report the spill immediately to a site owner representative and implement procedures in this Spill Response Plan. Site personnel will generally respond to spills as follows:

- **Stop the leak immediately** if it can be done without directly contacting the leaking material. Generally, this will consist of turning heavy equipment off to remove pressure on various fluid systems.
- Remove or stop all **ignition sources** (hot work, generators, etc.) that are within 25' of any part of the spill.
- On-site personnel should immediately secure the area to **prevent unauthorized entry** into the spill area.
- Although not likely given the anticipated types of spills, the SSHC or designee should initiate the *General Emergency Response Plan* in this HASP if a spill may cause an explosion, death, or serious injury.
- Site personnel may only respond to **incipient stage fires** regardless if such fires are associated with a spill.
- **Confined Space Issue** – If the leak occurs in an excavation where natural ventilation is limited, air monitoring will be required prior to entering the spill area. This is primarily an issue for fuel (gasoline, diesel, and kerosene) spills. The SSHC will determine if a fuel spill requires air monitoring.
- **PPE for Spills ≤55 gallons** to open areas generally requires Modified Level D PPE (poly-coat Tyvek, nitrile gloves, and boot covers or boot decontamination). Over-boots or boot covers may also be used if persons cleaning the spill would have to walk on spilled materials. Latex gloves are not acceptable and will degrade with exposure to petroleum products. Spills into confined spaces will require following PPE and other safety procedures specified on Confined Space Entry Permit (***Attachment 8***).

7.9 EMERGENCY REPORTING

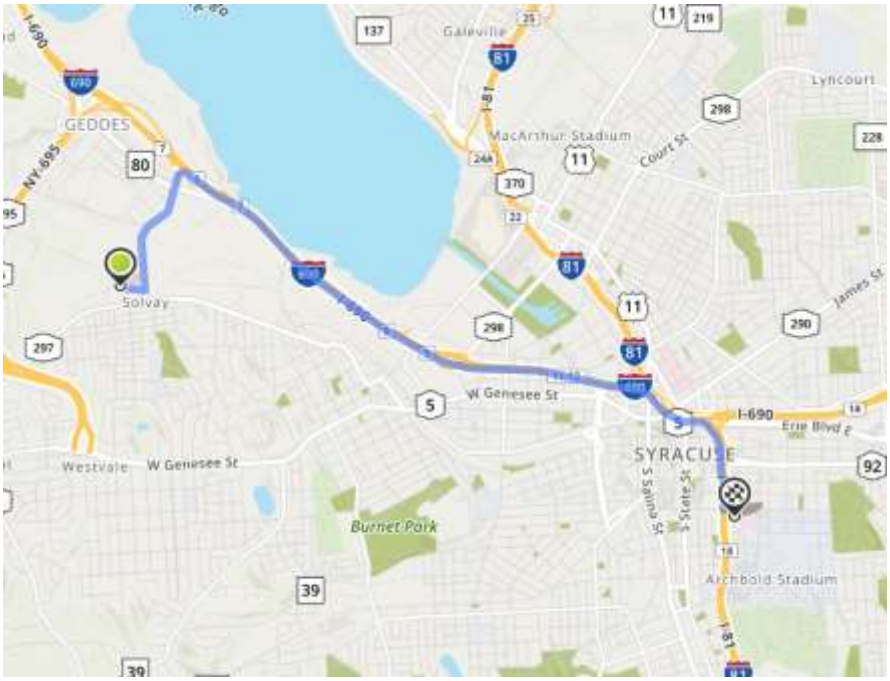
Any emergency or accident will be reported to OBG Manager of Corporate H&S and the Site/Project Manager. The OBG Corporate Manager of Corporate H&S will review all emergency or accident reports and may further investigate any such report if necessary. The OBG Manager of Corporate H&S will see that the area

officer of OSHA is notified within 8 hours should the emergency cause three (3) or more personnel to be injured and transported to the hospital, or if there is a fatality. If the Corporate Safety Manager cannot be located, then the SSHC will make such notification.

An *Incident Investigation Form* (*Attachment 11*) must be completed for all injuries, illnesses, spills, fire, explosion, or property damage greater than $1,000. The absence of an injury does not preclude the need to complete an Accident Investigation Form as such incidents will be classified as "near miss" or "other." The form must be completed or reviewed by the SSHC or designee. It will include, but is not limited to, the nature of the problem, time, location, and corrective actions taken to prevent recurrence. This **report must be completed and sent to the OBG Corporate Safety Manager and site owner's representative within 24 hours.** If all the "facts" cannot be determined in that period of time, then a draft report will be submitted and a final report will be submitted ***immediately*** upon completing the investigation.

Figures

FIGURE 1- HOSPITAL ROUTE MAP



1. Start out going east on Mathews Ave, toward Bridge St/NY-297
2. Turn left onto Bridge St/NY-297
3. Merge onto I-690 E.
4. Merge onto I-81 S toward Binghamton
5. Take the Harrison St exit. EXIT 18, toward Adam St.
6. Keep left to take the ramp toward Suny upstate medical univ/Suny esf.
7. Turn slight right onto Almond St.
8. Turn left onto E. Adams St.
9. 750 E Adams St is on the right

Attachments

PRE-WORK BRIEFING

Client:		
Project Name:		**Project No.**
Project Location:		
SSL:		
Main Points of Briefing:	☐ O'Brien & Gere Safety Requirements ☐ Site-Specific Safety Pan or JSA ☐ Site Owner Safety Requirements	**Other:**

The purpose of the Pre-Work Briefing is to provide ***site-specific safety orientation*** to employees and subcontractors. This certifies that undersigned individuals have read, understand, and agree to comply with applicable ***site-specific safety requirements*** that can be obtained from site safety plans, site Job Safety Analyses (JSAs), site owner requirements, and/or other site safety documents furnished to them by O'Brien & Gere. The undersigned individuals acknowledge that these safety requirements are not "all-inclusive" and that they will be expected to follow any additional safe work practices applicable to their specific scope of work.

Print Name	Signature	Company	Date

-- Have EACH employee sign this form before they begin work on site --

ENTRY/EXIT LOG

Project Name		**Date**	
Project Location		**Job & Phase #**	

Name	Company	Time In	Time Out	Reason

DAILY PRE-TASK PLANNER

Project Name:		**Date:**	
Company Name:		**Project No.:**	
Authorized Tasks Scope of Work for the day (be specific):			

YES	NO	Supervisor/Superintendent/Foreman Planning
		Project Safety Orientation has been provided to all workers prior to work. **IF NO**, please explain below:
		Pre-Work Documentation has been submitted for all workers. **IF NO**, identify the missing information: ☐ Drug Testing ☐ Training Certificates ☐ Other:
		The **Health & Safety Plan (HASP)** or **Job Safety Analysis (JSA)** is applicable to the Authorized Tasks and safety requirements in the HASP or JSA have been implemented. **IF NO**, explain below:
		ANY **unusual or changed site conditions** that may affect safety hazards. **IF YES**, explain in "*Key Safety Instructions*" and review appropriate changes to safety equipment or procedures. ☐ Heavy Rain ☐ Possible Lightening ☐ High Winds ☐ Heat ☐ Cold ☐ New Work Area ☐ Other:
		ANY **new tools or equipment or changes to work methods** that may affect safety hazards. **IF YES**, explain in "*Key Safety Instructions*" and review appropriate changes to safety equipment or procedures.
		Permits & Inspections needed for authorized tasks? (check all that apply) ☐ Permit-Required Confined Space Entry ☐ Hot Work ☐ Daily Excavation Checklist ☐ Non-Permit Confined Space Downgrade ☐ Line Break ☐ Daily Scaffolding Inspection ☐ Alternate Entry (Confined Space) ☐ Crane Pick ☐ Other:

YES	NA	Superintendent/Foreman Safety Message and Information to Field Crew(s)
		PPE was reviewed with emphasis on any new PPE or changes to PPE from previous day: (check all that apply) **Eye Protection:** ☐ Safety glasses ☐ Chemical Goggles ☐ Dust Goggles ☐ Face Shield **Head Protection:** ☐ Hard Hats **Foot Protection:** ☐ Safety Shoes ☐ Chemical Resistant Over-boots **Ear Protection:** ☐ Ear Plugs/Muffs **Hand Protection:** ☐ Cut-Resistant Gloves ☐ Chemical Resistant Gloves ☐ Other: _____ **Fall Protection:** ☐ Harness & Lanyard with shock absorber ☐ Harness & Lanyard without shock absorber ☐ Other Fall Protection: **Live Electrical:** ☐ Electrical Face Shield ☐ Electrical Coveralls ☐ Electrical Gloves **Clothing:** ☐ Tyvek ☐ Tychem QC ☐ Tychem SL ☐ Kevlar Chaps/Vest ☐ High Vis Vest **Work Over Water:** ☐ Life Vest ☐ Ring Buoy ☐ Rescue Skiff/Boat **Other (describe):** ☐
		Permits have been reviewed with field crew(s).
Key Safety Instructions Or Message For The Day:		

O'Brien & Gere Representative (review):		
Subcontractor Foreman/Supervisor Signature (authorize):		
Crew Signatures (acknowledge):		

SAFETY/TOOLBOX MEETING ATTENDANCE

Client:		**Project No.:**	
Project Name:		**Today's Date:**	
Project Location:			
Conducted By:			
Meeting Topic:			

Name	Signature	Company Name

Safety Meeting Topics (be specific)

KEEP COPIES OF ALL TOOLBOX MEETING MINUTES WITH PROJECT RECORDS

SAFETY AUDIT CHECKLIST

Project Name & No.:		**Auditor:**	
Project Location:		**Date of Audit:**	
Site Supervisor:		**Time of Audit:**	
cc List:	Project Manager, Manager of Corp H&S		

TRAILER (place an X in one of the three categories for each item - specify deficiencies below)

N/A	Y	N	Description
			First aid supplies available. The site relies on
			Emergency numbers posted.
			OSHA and Department Of Labor **Poster** conspicuously posted.
			Corporate Health and Safety Manual Available.
			A project **safety plan or JSA** was developed and reviewed with site workers.
			Subcontractors have current **Safety Prequalification** form on file.
			Toolbox safety meetings documented.
			Daily excavation inspections documented on a *Daily Excavation Checklist*.
			Hot work/confined space entry permits documented and issued daily.
			Energized Electrical Work Permits issued for ALL work (including inspections) within energized electrical equip.
			Written "Notice to Proceed" sent to the steel erection subcontractor?
			O&M projects have **equipment-specific Lockout/Tagout** (LOTO) procedures

NOTES: (Identify Major Subcontractors. Explain corrective actions for ALL observed deficiencies and indicate when corrective actions are completed and by whom. Use reverse side as necessary.)

FIELD (place an X in one of the three categories for each item - specify deficiencies below)

N/A	Y	N	Description
			Hard hats and safety glasses used in ALL construction areas.
			Ear protection used where noise requires you to raise your voice to be heard <5 feet away.
			Tick Prevention – DEET & Permethrin repellants used for work in ALL overgrown areas on projects in NY, NJ, PA, CT, and MA? (Use as necessary in other states.) Tick prevention is addressed in safety plan or JSA?
			Fall protection used by employees working above 6 feet and in manlifts; (see JSA for exceptions)
			Ladders used properly: stepladder fully open, extension ladder 3' past upper surface & tied off
			Good **housekeeping**, job-site looks neat. (aisles clear, designated lay-down areas, etc.)
			Manual Lifting risks are minimized - ☐ Toolbox Training ☐ Dolly ☐ Forklift ☐ Other:
			All chemicals and **chemical containers** properly labeled.
			Cylinders properly secured (upright and bound from tipping) and not set directly on ground.
			Oxygen & flam. gas cylinders separated by 20 feet and away from heat producing devices.
			Barricades setup around the Exclusion Zone, unattended excavation/holes, edges, scaffolds
			GFIs used on all extension cords and temporary 110/120 volt wiring.
			Excavations >5' are sloped/shored and inspected by competent person prior to entry.
			Rescue services notified of **confined space entry**. Specify Service:
			Retrieval equipment (harness, lifeline, and hoisting apparatus) setup during **confined space** entry
			Scaffolds erected over 10' have guardrails at 21" and 42" and a 4" toeboard around all sides
			Heavy Equipment & Off-Road Vehicles are in good condition, inspected daily, & operated safely.
			Cranes have documented monthly and annual maintenance inspections.
			Crane operators are qualified: ☐ license ☐ ___yrs exp. ☐ training cert ☐ other (specify)
			Lockout/Tagout is used - each employee has own lock – a tag is attached to all locks
			Personnel performing **inspections within energized equipment >50V** have NFPA 70E training, Arc Flash PPE, and other safety precautions outlined on an Energized Electrical Work Permit. (Access panels to energized electrical equipment must not be opened without such precautions in place.)
			Air monitoring being performed and documented as required by the site safety plan or JSA.

NOTES: (Explain corrective actions for ALL observed deficiencies and indicate when corrective actions are completed and by whom. Use reverse side as necessary.)

SOIL ANALYSIS CHECKLIST

Client:		**Today's Date:**	
Project Name:		**Job No.:**	
Project Location:		**Weather:**	
Competent Person:			
Where was the sample taken:			
Excavation Length, Depth & Width	**L:**	**D:**	**W:**

NOTE: IF soil is assumed to be Type C, then soil analysis is not necessary. Type C represents the most conservative classification.

VISUAL TEST						
Particle type	☐ Fine grained (cohesive)	☐ Granular (sand/silt or gravel)	☐ Other:			
Water conditions	☐ Wet	☐ Dry	☐ Seeping Water	☐ Surface Water Present	☐ Submerged	
NOTES:						

Yes	No	N/A	Description
			Layered soils dipping into excavation? If *Yes*, describe:
			Excavation exposed to vibrations? If *Yes*, from what:
			Previously disturbed soils?
			Crack like openings or sprawlings observed?
			Underground utilities? If *Yes*, what type:
			Layered soils? ***Note:*** *The least stable layer controls the soil type.*

MANUAL TEST				
Plasticity	☐ Cohesive	☐ Non-cohesive	**Dry Strength**	☐ Cohesive (broken w/ difficulty)	☐ Granular (crumbles easily)
Wet shake	☐ Water comes to surface (granular material)		☐ Surface remains dry (clay material)	

THUMB TEST *NOTE: Used to estimate unconfined compressive strength of cohesive soil. Performed on undisturbed soils.*		
Test performed	☐ Yes ☐ No ☐ N/Ap, Explain:	
Soil indented by thumb with very great effort		☐ Type A
Soil indented by thumb with some effort		☐ Type B
Soil easily penetrated several inches by thumb with little or no effort. ***NOTE: If soil is submerged, seeping water, subjected to surface water, runoff, exposed to wetting.***		☐ Type C

PENETROMETER or SHEARVANE TEST *NOTE: Used to estimate unconfined compressive strength of cohesive soils:*		
Test performed	☐ Yes ☐ No	Device Used/Serial #:
Soil with unconfined compressive strength of 1.5 tsf or greater		☐ Type A
Soil with unconfined compressive strength greater than 0.5 tsf and less than 1.5 tsf		☐ Type B
Soil with unconfined compressive strength of 0.5 tsf or less. If soil is submerged, seeping water, subjected to surface water, runoff, exposed to wetting		☐ Type C

NO soil is type A if fissured, subject to vibration, previously disturbed, layered dipping into excavation on a slope of 4h:1v

SOIL CLASSIFICATION			
☐ Stable Rock	☐ Type A	☐ Type B	☐ Type C

SELECTION of PROTECTIVE SYSTEM **(Refer to Appendix F of 29CFR1926)**			
☐ Sloping (Appendix B) specify angle: _____	☐ Timber shoring (Appendix C)	☐ Trench shield Max depth in this soil: ____	☐ Hydraulic shoring (Appendix D)

-- Keep 1 copy of EACH Soil Analysis Checklist on site for the project duration --

DAILY EXCAVATION CHECKLIST

Client:			**Today's Date:**	
Project Name:			**Approx. Temp**	
Project Location:			**Approx. Wind Dir**	
Job No.:			**SSHC:**	
Excavation Depth & Width:	**D:**	**W:**	**Soil Class:**	
Protective System Used:				
Activities in Excavation:				
Competent Person:				

Excavation > 4' deep? ☐ Yes ☐ No If ***Yes***, - Evaluate if the excavation is a permit-required confined space or can be downgraded to a Non-Permit Space

CAUTION*: Any excavation over 5 feet must be sloped or shored. Excavations >20 feet require review by a Professional Engineer. Any items marked* ***NO*** *on this form* ***MUST*** *be corrected prior to any employees entering the excavation. Review Excavation from the Corporate Health & Safety Manual for guidance.*

YES	NO	N/A	INSPECTION ITEMS
			GENERAL
			Employees in, or near, excavations are protected from cave-ins or from being struck by loose rock/soil
			Spoils, materials, and equipment set back at least 2 feet from the edge of the excavation
			Engineering designs for sheeting and/or manufacturers data on trench box capabilities on site
			Adequate signs posted, and barricades provided
			Training (i.e, Toolbox meeting) conducted with employees prior to employees entering excavation
			Proper sloping, shoring, and/or distance controls are in place to prevent damage to footings, foundations, sidewalks, roadways, and similar structures from cave-ins or excavation equipment.
			UTILITIES
			Utility company contacted and given 24 hrs notice and/or utilities already located and marked
			Overhead lines located, noted, and reviewed with operator
			Utility location reviewed with operator, and precautions taken to ensure contact does not occur
			Utilities crossing the excavation supported, and protected from falling materials
			Underground installations protected, supported or removed when excavation is open
			WET CONDITIONS
			Precautions taken to protect employees from water accumulation (i.e., continuous dewatering)
			Surface water or runoff diverted/controlled to prevent accumulation in the excavation
			Inspection made after every rainstorm or other hazard-increasing occurrence
			HAZARDOUS ATMOSPHERE
			Air in the excavation tested for oxygen deficiency, combustibles, or other contaminants
			Ventilation used in atmospheres that are O_2 rich or deficient and/or contains hazardous substances
			Ventilation provided to keep LEL below 10%
			Emergency equipment available where hazardous atmospheres could or do exist
			Safety harness and lifeline used
			Supplied Air necessary (if **Yes**, contact CHS prior to entry)
			ENTRY & EXIT
			Exit (i.e., ladder, sloped wall) no further than 25 feet from ANY employee
			Ladders secured, and extended 3 feet above the edge of the trench
			Wood ramps constructed of materials of uniform thickness, cleated together on the bottom.
			Employees protected from cave-ins when entering or exiting the excavation

Keep 1 copy of EACH Daily Checklist on site for the project duration

NOTE: Separate forms are required for each excavation

CONFINED SPACE ENTRY PERMIT

GENERAL INFORMATION & HAZARD REVIEW

☐ **Permit-Required Confined Space Entry** ☐ **Alternate Entry Approach** ☐ **Non-Permit Space Designation**

Project Name:		**Project Number:**	
Location of Work:			
Description of Confined Space:			
Description of Work to Be Performed:			
Special Safety Precautions to Be Observed:	☐ NONE or Specify:		

Potential Hazards - mark (☒) all that apply:	☐ **NO SERIOUS HAZARDS IDENTIFIED required for Non-Permit Space Designation**	☐ **PHYSICAL HAZARDS ELIMINATED Identified by an * - required for Alternate Entry**
☐ Decomposing organic matter - Low Oxygen ☐ Rusting metal - Low Oxygen ☐ Leaking nitrogen, carbon dioxide, helium, argon, & other inert gas lines - Low Oxygen ☐ Leaking natural gas, hydrogen, acetylene, propane, and other flammable gas lines - Flammable Atmosphere (high LEL) ☐ Engine exhaust/burning - Carbon Monoxide (CO) ☐ Leaking process lines - Flammable and/or Toxic	☐ Sewer gas - Flammable from methane, toxic from hydrogen sulfide, Flammable & Toxic from illegally discharged chemicals. ☐ Leaking underground fuel tanks infiltration into sewers, vaults, & pits - Flammable & Toxic ☐ Welding/Torch Cutting - Toxic (carbon monoxide), Flammable (acetylene), & high or low Oxygen atmospheres ☐* Equipment energy sources - Physical hazards (shock, entanglement, moving parts)	☐* Dangerous internal configuration ☐* Falls >6' - Near unprotected edge or hole ☐* Loose materials such as sand, grain, & sawdust - Physical Hazard (engulfment) ☐* Sudden changes to water flow or level - Physical Hazard (drowning) ☐* Steam piping & hot surfaces - Physical hazards (thermal burns, obstruct vision) ☐ Other:

SAFETY CHECKLIST

CHECK (✓) EACH QUESTION: YES or Not Applicable	**YES**	**NA**	**CHECK (✓) EACH QUESTION: YES or Not Applicable**	**YES**	**NA**
1. Has all equipment that could cause **electric shock** or injury from **moving parts** been **locked & tagged** by **each entrant**?			**7.** Are **cave-in, engulfment & drowning** hazards controlled?		
2. Is **process piping** isolated and **locked & tagged** by each entrant per facility owner and/or O'Brien & Gere procedures?			**8.** Have precautions been taken to control **vehicle and pedestrian traffic** around the confined space entrance?		
3. Has vessel/piping been **drained, cleaned or purged**?			**9. Rescue team** has been notified?		
4. Has a **hot work permit** been issued and all fire prevention controls are in place?			**10. Emergency contact** number has been identified: ☐ **911** ☐ **Other:**		
5. Can **sparks** ignite material in vicinity, sewers, lower floors?			**11. Communication** procedures between attendant & entrants have been reviewed: ☐ **Verbal** ☐ **Radio** ☐**Other:**		
6. Has **fall protection** been provided for work above 6'?			**12.**		

SAFETY EQUIPMENT

CHECK (✓) ALL SAFETY EQUIPMENT NECESSARY				**(Minimum PPE - hard hat, safety glasses, and safety shoes)**			
Goggles		Rubber Boots		Grounding Equipment		Retrieval Equipment - tripod/winch	
Face Shield		Half-face Respirator		Non-sparking Tools		Harness with Retrieval/Tether Line	
Un-coated Tyvek Suit		Full-face Respirator		Vapor/Explosion Proof Light		**Ventilation Equip.-blower & duct (required for alternate entry)**	
Tychem QC Suit		Air-line Respirator or SCBA		Fire Extinguisher			
Tychem SL (Saranex) Suit		Safety Belt/Harness		Water hose			
Acid Suit		Ladder/Scaffold		Barricades & Signs			
Plastic Apron		Lockout/tag out equipment		Communication Equipment			
Nitrile or Vinyl Gloves		GFCI		Probing Staff (for water depth)			

AIR MONITORING

	Air Monitoring Equipment	**Air Tests**	**Limits**	**Required?**	**Frequency**	**Results**
		Oxygen	19.5%-23%	☐ **Y** ☐ **N**	☐ initial only ☐ continuous	
		LEL	≤10%	☐ **Y** ☐ **N**	☐ initial only ☐ continuous	
		CO	≤35 ppm	☐ **Y** ☐ **N**	☐ initial only ☐ continuous	
		H_2S	≤10 ppm	☐ **Y** ☐ **N**	☐ initial only ☐ continuous	
				☐ **Y** ☐ **N**	☐ initial only ☐ continuous	

ENTRANT & ATTENDANT REVIEW & PRE-ENTRY BRIEFING for PERMIT-REQUIRED CONFINED SPACES

A pre-entry briefing is REQUIRED. Entrants and Attendants have been notified of hazards in the work area and have been instructed in the safety equipment and procedures necessary for safe entry by the Entry Supervisor. The briefing also includes a review of emergency evacuation procedures, communication procedures, this permit, and other safe work practices. Persons have been instructed to report any unsafe or unusual conditions.

	Entrant:	print	sign	**Entrant:**	print	sign
	Entrant:	print	sign	**Entrant:**	print	sign
	Entrant:	print	sign	**Attendant:**	print	sign
	Entrant:	print	sign	**Attendant:**	print	sign

ENTRY SUPERVISOR / PERMIT AUTHORIZATION			**PERMIT DURATION (1 shift maximum)**	
O'Brien & Gere:	print	sign	**Entry Date:**	____/____/____
Subcontractor:	print	sign	**Start Time:**	____:____
Subcontractor:	print	sign	**End Time:**	____:____ **(permit expires)**

-- Keep 1 Copy On-Site For The Project Duration --

Upon completion of fieldwork, place expired permits into project files for record keeping and review during safety audits.

HOT WORK PERMIT

Project Name		**Today's Date:**	
Project Location:		**Project No.:**	
Hot Work Location:			
Description of Hot Work Activities:			

INSTRUCTIONS:

1. Each hot work area will have a separate Hot Work Permit. Fire Watch is required unless in a designated "fabrication area."
2. O'Brien & Gere will review the permit with the subcontractor and sign if the permit is complete and precautions are identified.
3. Subcontractor will sign verifying that precautions on this permit are (or will be) in place prior to hot work.
4. Site personnel performing hot work covered by this permit will review the permit and print/sign in spaces designated for "Worker."
5. Fire Watch(s) for hot work covered by this permit will review the permit and print/sign in spaces designated for "Fire Watch."

Yes	N/A	REQUIREMENTS WITHIN 35 FEET OF HOT WORK
☐	☐	Flammable liquids, dust, lint, and oily deposits are removed.
☐	☐	Explosive atmosphere in area is eliminated.
☐	☐	Combustible dust (wood, paper, grain, aluminum, magnesium, etc.) is removed from floors, beams, and other flat surfaces.
☐	☐	Combustible floors are wet down and/or covered with damp or fire-resistant tarps.
☐	☐	Combustibles are removed when possible or protected by fire-resistant tarps or non-combustible spark/slag shields.
☐	☐	All wall and floor openings are covered to prevent access by sparks and slag.
☐	☐	Fire-resistant tarps are suspended, or barriers installed, beneath work to catch falling sparks and slag

Yes	N/A	WORK ON WALLS OR CEILINGS
☐	☐	Wall or ceiling construction is noncombustible and without combustible covering or insulation.
☐	☐	Combustibles on the other side of walls are moved away or protected.

Yes	N/A	WORK ON ENCLOSED EQUIPMENT
☐	☐	Enclosed equipment is cleaned of all combustibles.
☐	☐	Containers have been purged of flammable liquids/vapors.

Yes	N/A	FIRE WATCH / HOT WORK AREA MONITORING
☐	☐	Fire Watch will be provided during hot work and for at least **30 minutes** after hot work, including any breaks.
☐	☐	**2-A:20-BC Type ABC dry chemical** fire extinguisher is provided or acceptable alternate - specify: _____
☐	☐	Fire Watch understands how and when to call for **emergency support** and has a radio or cell phone to make the call.
☐	☐	Fire Watch understands the **P.A.S.S. approach** to using a fire extinguisher. 1. **PULL** Pull the pin. This will also break the tamper seal. 2. **AIM** Aim low, pointing the extinguisher nozzle (or its horn or hose) at the base of the fire. (Note: Do not touch the plastic discharge horn on CO2 extinguishers, it gets very cold and may damage skin.) 3. **SQUEEZE** Squeeze the handle to release the extinguishing agent. 4. **SWEEP** Sweep from side to side at the base of the fire until it appears to be out. Watch the area. If the fire re- ignites, repeat steps 2 - 4.

HOT WORK PERMIT REVIEW					
Worker:	print	sign	**Worker:**	print	sign
Worker:	print	sign	**Worker:**	print	sign
Worker:	print	sign	**Fire Watch:**	print	sign
Worker:	print	sign	**Fire Watch:**	print	sign

HOT WORK PERMIT AUTHORIZATION			PERMIT DURATION (1 shift maximum)
O'Brien & Gere:	print	sign	Start: Date ___/___/___ Time ____:____
Subcontractor:	print	sign	Expires: Date ___/___/___ Time ____:____
Subcontractor:	print	sign	

Project Name:		**Date:**	
Project Location:		**Job & Phase #**	
Area/Process Name:		**Drawing Ref:**	
Device Location:			
Device Description:		**I.D. or Label:**	

PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR IMPLEMENTATION OF LOTO (Other PPE may be necessary based on work acitivities being performed)			
☐ Safety Glasses	☐ Dust Goggles	☐ Bib-style Splash Apron	☐Fall protection harness & Lanyard
☐ Safety Shoes	☐ Leather Gloves	☐ Rain Suit (jacket & pants)	☐ Slush Boots
☐ Hard Hat	☐ Surgical Gloves	☐ Tyvek Coverall	☐ Boot Covers
☐ Face Shield	☐ Chemical Gloves:	☐ Polycoated Tyvek Coverall	☐ Arc Flash PPE
☐ Splash Goggles		☐ Saranax Coverall	☐ Electrical Gloves

LOTO INSTRUCTIONS		
	Task Description	**LOTO Equipment Needed**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

RE-START INSTRUCTIONS – Task Descriptions	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

ACCIDENT INVESTIGATION FORM

Corporate H&S to complete:	☐ **Restricted Workday (__ days)**	☐ **Near Miss**
☐ **First Aid / Notification**	☐ **Lost Workday (__ days)**	☐ **Property Damage >$1,000**
☐ **Med. Treatment Only**	☐ **Fatality**	☐ **Other:**

PROJECT INFORMATION

Client:					
Client Contact:					
Project Name:					
Project Address:		**State:**		**Zip:**	
Project Manager:		**Site Supervisor:**			
Project Supervisor:		**Foreman:**			
Project #:		**SSHC:**			
Project Phone #:		**Today's Date:**			

INCIDENT INFORMATION

DATE and TIME (hrs) of Incident:	
Specific Location of Incident On-site:	
Supervisor at Time of Incident:	

INJURED PERSON INFORMATION

☐ **NA** (✓ **if no injury**)

(get written statement – bottom page 3)

Name:		**Employment Status:**	
Home Address:		☐ Craft, Temporary, Contract ☐ Regular Status Employee * Name of Company:	☐ *Other ☐ *Subcontractor
Home Phone #:		**O'Brien & Gere:** ☐ Eng ☐ OGINA ☐ OPS ☐ Limited **Business Unit:** ☐ ENV ☐ CFS ☐ TWS ☐ OPS ☐ Corp	
Soc - Sec - Num:	provide confidentially upon request	**Experience w/ OBG:**	☐ years ☐ months
Gender: ☐M / ☐F	**DOB:**	**Total Experience:**	☐ years ☐ months

Nature of Injury, and Part of Body:	
Treatment at Hospital or Clinic?	☐ No ☐ Yes – specify:
Hospital/Clinic Street Address:	
Employee was Working:	☐ Alone ☐ With Crew or Fellow Worker (get witness names)
Specific Task at Time of Incident:	
Occupation/Craft at Time of Incident:	

WITNESS INFORMATION

(get written statement – see page 4)

Witness #1 Name:		**Contact Phone #**	
Witness #2 Name:		**Contact Phone #**	
Witness #3 Name:		**Contact Phone #**	

FULLY COMPLETE THIS FORM AND SEND TO THE MANAGER OF CORPORATE H&S (Jeff Parsons x6871) AND THE LEGAL/INSURANCE DEPARTMENT (Meg Hermann x6624) WITHIN 24 HOURS

Phone: (315) 956-6100 / Fax: (315) 463-7554

Attach All Applicable Medical Reports

cc:

ACCIDENT INVESTIGATION FORM

DESCRIBE HOW THE INCIDENT OCCURRED

Describe in ***detail***, and in chronological order, the events that lead to the accident, how the incident occurred, and any other facts you feel may be relevant to the investigation. Please avoid opinions or hearsay.

CAUSAL FACTORS

Check all that apply and identify corrective actions for each factor. Beginning with the most apparent or most direct cause of the incident, **ask "WHY" five times** to identify the sequence of events or conditions that contributed to the incident.

PROCEDURES
- ☐ Not available
- ☐ Difficult to use / understand
- ☐ Use of procedure was not required but should be
- ☐ Followed Incorrectly
- ☐ Not followed
- ☐ Inadequate details
- ☐ Situation not covered
- ☐

WORK ENVIRONMENT
- ☐ Housekeeping poor
- ☐ Hot / Cold
- ☐ Poor lighting
- ☐ High Noise
- ☐ High Radiation/Contamination
- ☐ Cramped quarters
- ☐

ENGINEERING/DESIGN
- ☐ Inadequate technical design
- ☐ Inadequate specifications
- ☐ Inadequate change mgmt

COMMUNICATION
- ☐ Misunderstood verbal directions
- ☐ No communication or untimely
- ☐ Standard terminology or signals not used or are misunderstood
- ☐ Interference from noisy environment
- ☐ Notifications late or not provided
- ☐ Job/task safety analysis not reviewed with personnel
- ☐

EQUIPMENT & TOOLS
- ☐ Wrong equipment/tool for the task
- ☐ Defective equipment/tools
- ☐ PM not done or inadequate
- ☐ Inadequate / removed guards
- ☐ Inadequate isolation (LOTO)
- ☐ No inspection of tools / equipment
- ☐
- ☐
- ☐

MANAGEMENT/ORGANIZATION
- ☐ Inadequate work planning
- ☐ Unclear reporting relationship
- ☐ Unclear assignment of responsibility or authority
- ☐ Improper delegation
- ☐ Inadequate audits/inspections
- ☐ Inadequate incident reporting
- ☐ Inadequate incident investigation
- ☐ Corrective actions not complete
- ☐ Corrective actions inadequate
- ☐ Inadequate purchasing
- ☐ Wrong person assigned to job
- ☐ Lack of supervisor knowledge
- ☐ Inadequate/lack of safety mtgs
- ☐ Inadequate control of change
- ☐ Mgmt resources inadequate
- ☐ Excessive work hours (fatigue)
- ☐ No or Inadequate enforcement
- ☐ No pre-task safety analysis
- ☐
- ☐

HUMAN FACTORS
- ☐ Lack of experience or skill
- ☐ Infrequent performance
- ☐ Operating equipment without authority
- ☐ Operating equipment unsafely
- ☐ Taking unsafe position/posture
- ☐ Poor judgement or Inappropriate risk taking
- ☐ Physical impairment (explain)
- ☐ Drugs/alcohol (explain)
- ☐
- ☐

TRAINING
- ☐ Training not provided
- ☐ Training inadequate
- ☐ Did not attend training
- ☐ Training not appropriate for the job or task
- ☐
- ☐
- ☐

CORRECTIVE ACTIONS

List the corrective actions taken to minimize the possibility of a similar incident from occurring in the future. Assign specific individuals and completion dates for each corrective action. The "Safety Audit Closeout" form can be used to help track completion of corrective actions or use the table below.

#	Description	Responsible Person	Target Completion	Actual Completion

Prepared by: (print)		**Sign:**		**Date:**	
CHS Review: (print)		**Sign:**		**Date:**	

O'BRIEN & GERE EMPLOYEE INFORMATION RELEASE

To be completed by O'Brien & Gere Employees requiring Hospital/Clinic Treatment or ANY Back Injury

Employee Name:	
Date of Injury:	

I hereby authorize O'Brien & Gere or any of its representatives to be furnished any information and facts regarding this injury, including reports and records, results and diagnosis, treatment and prognosis, estimates of disability, and recommendations for further treatment. This information is to be used for the purpose of evaluating and handling my claim for injury as a result of an incident occurring on or about the above-noted date of injury and for no other purpose, now or in the future.

O'Brien & Gere
Employee Signature: _____ **Date:** _____

EMPLOYEE & SUBCONTRACTOR INJURED PERSON STATEMENT

To be completed by O'Brien & Gere Employees and Subcontractors for ALL Accident Reports

Please describe what happened with respect to the incident that occurred on _____ (date) at the following location, _____ .

Injured Person Signature: _____ **Date:** _____

Injured Person Name (print): _____

WITNESS STATEMENT

Please describe what happened with respect to the incident that occurred on _____(date) at the following location, _____.

Company Name: _____ **Phone #:** _____

Witness Signature: _____ **Date:** _____

Witness Name (print): _____

Appendices

Appendix A

JSA Template

Safety to Zero (S20) – Safety Planning Is Critical To Our Ultimate Goal Of Zero Injuries

Project Name:		**OBG Project Officer:**	
Project Number:		**OBG Project Manager (PM):**	
JSA Title:		**OBG Site Supervisor:**	
JSA Revision Date:		**OBG Foreman or Superintendent:**	
JSA Prepared By:		**OBG Site Safety Coordinator:**	
Client Name:		**Subcontractor Company Name:**	(☐ NA)
Project Location:		**Subcontractor Project Manager:**	
Project Phone No.:		**Subcontractor Superintendent:**	
Project Fax No.:		**Sub Safety Competent Person:**	
Scope of Work covered by this JSA (identify subcontractors covered by this JSA)			
References (existing safety plans, manuals, spec's, etc.)	**[REMINDER – Update PAF to reflect a completed JSA. Place copy in PM/H&S folder.]**		
Key Hazards (focus on highly hazardous tasks)			

Safety Equipment Summary

(additional safety equipment may be required for specific hazards identified in the following sections)

☐ Honeywell-Branded Hard Hat ☐ Safety Glasses ☐ Safety Shoes ☐ Cut-Resistant Gloves

Other (specify):

☐ Honeywell-Branded High Visibility Vests (required at all times when working on site.)

☐ Ear Protection (heavy equipment, loud power tools, etc.)

☐ Fall Protection Harness & Lanyard (falls >6')

☐ Respiratory Protection (☐ N95 dust mask, ☐ half face, ☐ full-face) Specify cartridge in JSA.

☐ Tyvek or other chemical protective coverall: _____

☐ Face Shield and chemical goggles (chemical handling, line breaks, pressure washing)

☐ Nitrile Gloves (☐ Surgical Type and/or ☐ "Dishwashing" Type)

☐

Pre-Work Documentation & Certifications ***(Refer to JSA content for additional certifications and documentation that may be required.)***

Documentation and Certifications	To Be Submitted or Provided By…….
☐ Pre-Access Drug & Alcohol Testing	
☐ Subs (>30 days) informed of Random Drug Tests	
☐ Current Honeywell Safety Prequalification	
☐ "Conditions" established for Grade C & D subs	
☐ Project Safety Plan or Job Safety Analysis (JSA)	
☐ Project Safety Orientation (JSA Review)	
☐ Daily Safety Meetings (Daily Pre-Task Planner)	
☐ OSHA 10 hr Construction Safety	
☐ OSHA 30 hr Construction Safety	
☐ OSHA 40 hr Hazwoper w/ current 8 hr Refresher	

	☐ OSHA Hazwoper Medical Clearance	
	☐ Confined Space Entry Certification (necessary for permit-required entry or non-permit designations)	
	☐ Respirator Training, Fit Test, and Resp. Medical	
	☐ Excavation Competent Person designation	
	☐ Scaffold Competent Person Training	
	☐ Lifting & Rigging Plan	
	☐ Erosion Control Certification	
	☐ Heavy Equipment "Acceptance Inspections"	
	☐	
Permits & Inspections applicable to scope of work	☐ Confined Space Entry Permit ☐ Hot Work Permit ☐ Energized Electrical Work Permit (from sub) ☐	☐ Daily Excavation Inspection Checklist ☐ Daily Scaffold Inspection Tags ☐ Daily Heavy Equipment Inspection Checklist ☐

Individuals must sign the "Pre-Work Briefing" form on the last page after reviewing this JSA.

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
ELEVATED WORK		
☐ NA	FALLS > **6'** or within **15'** of a ROOF OR MEZZANINE EDGE where the fall is >6'	☐ Existing Guardrails ☐ Hole Covers Marked "HOLE" ☐ Fall Restraint ☐ Temporary Guardrails ☐ Manlifts used for elevated work ☐ _____ ☐ Warning Line 15' from Edge ☐ Fall Arrest w/ harness/lanyard (identify tie-off points) **Fall Protection Comments (describe equipment used):**
☐ NA	LADDERS / STAIRS ☐ Extension Ladders ☐ Step Ladders ☐ Fixed Ladders ☐ Stairs	☐ Employees training in safe ladder use at toolbox safety meeting ☐ Extension ladders are properly footed, secured at top, and setup at proper angle ☐ Stepladders are set on level ground or properly shimmed with spreaders locked. ☐ Stairs have proper rise over run and stairs >4 steps or 4' have guardrails. **LADDERS/STAIRS COMMENTS:**
☐ NA	SCAFFOLD Type: _____	☐ Scaffolds erected and inspected under supervision of competent person: **Competent Person:** _____ **Company:** _____ ☐ Toprail and midrail provided on scaffolds >10' (otherwise specify other fall protection) ☐ Work platforms are at least 18" wide & made of scaffold lumber or cleated aluminum planks. ☐ Scaffolds placed on mud sills, pavement, concrete or other solid surface **SCAFFOLD COMMENTS:**
☐ NA	MANLIFT used to reach work ☐ Scissor Lift ☐ Extensible Boom ☐ Articulated Boom ☐ vertical Lift ("Genie")	☐ Operators are sufficiently trained, experienced and qualified. ☐ Equipment is inspected after mobilization and is in good condition. ☐ Harness & Lanyard worn whenever operating the lift (scissor lifts are not excepted) ☐ Overhead and surface obstructions are reviewed with operators prior to use. **MANLIFT COMMENTS:**

	HAZARD	HAZARD CONTROLS (check all that apply and comment as required)
EXCAVATIONS / TRENCHING		
☐ NA	☐ Max Depth ≥ 20' ☐ Max Depth ≥ 5' ☐ Max Depth <5' with potential cave-in hazard ☐ Potential permit-required confined space at depth ≥ 4' ☐ Underground utilities ☐ Structures/foundations ☐ Falls into excavations ☐ Other:	☐ Sloping & shoring for excavations ≥20' are approved by a professional engineer ☐ Sloping & shoring for excavations ≥5' when persons are exposed to cave-in. (specify below) ☐ Sloping & shoring for shallow (<5') excavations with cave-in hazard (specify below) ☐ Excavations ≥ 4' are classified as a non-permit confined space ☐ Excavations ≥ 4' are classified as Alternate Entry or Permit-Required (see confined space) ☐ Underground utilities have been identified and marked. ☐ Local "dig safe" organization has been notified for utility locations in public areas or rights of way. Number: _____ Date: _____ ☐ Hand digging within 3' of utility locations. ☐ Excavations are protected by perimeter fencing (not barricade tape): (☐ rigid fence - chain link or wood ☐ safety fence 6' from edge.) **EXCAVATION COMMENTS:**
CONFINED SPACES		
☐ NA	☐ No Serious Hazards ☐ Toxic Atmosphere ☐ carbon monoxide ☐ hydrogen sulfide ☐ ☐ Flammable Atmosphere ☐ Low Oxygen ☐ Combustible dust ☐ Other Serious Hazard: **Notes** Ladder use = limited access Alternate entry = must have ventilation and continuous air monitoring	**Specify confined space entry approach(es) to be used: [Multiple may apply based on spaces]** ☐ Confined space is altered so that it is no longer a confined space. (describe below) ☐ Confined space is downgraded to a non-permit confined space. (identify which spaces below) ☐ Alternate Entry is used. (Identify which spaces qualify for confined space entry below) ☐ Full permit-required confined space entry is used due to presence of serious hazards. **Verify Rescue Team Support [MANDATORY for permit-required entry]:** ☐ Portfolio Emergency Response Team (ERT) has been notified and is available (24hr notice) **Verify Other Applicable Requirements:** ☐ All entrants and attendants for Alternate Entry and Permit-Required Entry have confined space entry training. ☐ Mechanical ventilation and continuous air monitoring [MANDATORY for alternate entry] ☐ Refer to "Manual Lifting" section of this JSA for manhole cover removal safety. **CONFINED SPACE COMMENTS:**
LOCKOUT-TAGOUT / ELECTRICAL		
☐ NA	Maintenance, construction, or modification of processes and equipment with POTENTIAL UNEXPECTED RELEASE OF ENERGY. Identify energy types: ☐ Electrical ☐ Pressurized liquid piping ☐ Compressed gas / steam ☐ Moving Parts ☐ Hydraulic systems	**Designate Persons Responsible for Overseeing O'Brien & Gere's LOTO activities:** ☐ Qualified LOTO Coordinator (MANDATORY):_____ ☐ Test Supervisor (LOTO Equipment-Under-Test): _____ ☐ Qualified Electrical Worker (Electrical-Arc Flash): _____ **Identify or Develop Written Equipment-Specific LOTO Procedure (☒ at least one):** ☐ Willis Ave GWTP operators (OMI) to lockout equipment using OMI procedures. ☐ SCA WTP operators (OBG) will de-energize equipment following LOTO procedures integrated into SCA WTP operations procedures. (Reference procedure in "Comments.") ☐ OBG to develop and implement lockout procedures for equipment under OBG control using the "Equipment-Specific LOTO Form". (Attach completed LOTO form to JSA.) ☐ LOTO procedures are specified below in "Comments" and are equivalent to LOTO form. **Identify How Locks Will Be Applied (☒ at least one):**

	HAZARD	HAZARD CONTROLS (check all that apply and comment as required)
	☐ Chemical release ☐ Describe Equipment requiring lockout:_____	☐ Group lock box will be used with all persons working on equipment attaching their own lock(s) and tag(s). Location of lock box: _____ ☐ Equipment or process components will be individually locked with all persons working on equipment attaching their locks and tags directly on equipment. **Specify Other Lock Requirements (☒ at least one):** ☐ OBG to apply a "***Company Lock***" to prevent premature startup by owners or subcontractors. Company Locks are NOT intended to replace personal locks for anyone. Specify who is responsible for Company Locks: _____ ☐ Workers will not be allowed to work under a supervisor's lock (MANDATORY) **Specify Tags (☒ at least one):** ☐ "Danger" tags with diagonal red & white stripes (required unless client's specify different) ☐ Client-required tags specific to the site. Describe below in "Comments." ☐ "Company Locks" identified with an "Out of Service" tag and **not** a LOTO tag. [REQUIRED] **Other LOTO or Electrical Safety Requirements:** ☐ All project team personnel are informed that they may not **remove electrical panels** or otherwise expose energized electrical equipment (unless they are **NFPA 70E** trained and have implemented the required precautions). [MANDATORY] **LOCKOUT COMMENTS:**
☐ NA	OVERHEAD POWER LINES _____ KV _____ ft above ground _____ KV _____ ft above ground	☐ Request to de-energize lines will be submitted for work within 20' of power lines. Request sent to: _____ Date: _____ ☐ No one will be permitted to work <10' to power lines without lines being de-energized. ☐ Project persons are informed of 20' safety zone around energized power lines. ☐ Project persons are informed of additional restrictions required when working ≤20' but >10': ☐ Dedicated spotter for all elevated work or operation of equipment that can contact lines ☐ Barricades setup at 20' from base of power lines to establish a "restricted work area." ☐ "Power Line Safety Permit' required to work within 20' of power lines. ☐ Power lines are shielded and/or marked with high visibility material **POWER LINE COMMENTS:**
☐ NA	ARC FLASH Location: _____ Voltage: _____	☐ Electrical equipment evaluated for arc flash potential by a NFPA 70E qualified person. ☐ Persons with potential arc flash exposure are properly trained and equipped with electrically rated gloves, face shield, coveralls, etc. ☐ Non-essential personnel will be kept clear of all areas affected by arc flash ☐ Client/Owner notifications will be made in advance. (Specify below in "Comments.") **ARC FLASH COMMENTS:**
HEAVY EQUIPMENT (other than cranes)		
☐ NA	Struck By, Run-Over, Caught In Between (pinch points), Roll Over, Fluid Leaks ☐ Bulldozer ☐ Excavator ☐ Front Loader ☐ mini Skid Steer (bobcat) ☐ mini Excavator ☐ Dump Truck	☐ Qualified persons operate all heavy equipment. Qualifications were determined by: ☐ License or certificate (required for forklift and lull operators). ☐ "Good-Guy Letter" on company letterhead or email with company email address. ☐ Union Operator Local:_____ ☐ **"Acceptance Inspection"** for heavy equipment upon mobilization documented on an inspection checklist by: _____(Mgmt representative). ☐ **Daily Heavy Equipment Inspections** by Operators documented on an inspection checklist ☐ **Preventative Maintenance** performed on all heavy equipment on site >30 days (required

	HAZARD	HAZARD CONTROLS (check all that apply and comment as required)
	☐ Drill/Boring Rig ☐ Lull / Material Handler ☐ Forklift ☐ ☐ ☐ Manlift - specify type(s):	☐ Operators will be reminded of seatbelt use by: _____ ☐ High visibility vests are required for: _____ ☐ Operators will review manufacturer's safety guidelines for all equipment operated on slopes. Max. safe slope for each vehicle: _____ ☐ Counterweight swing radius will be barricaded. ☐ Operators and helpers will maintain a safe distance to moving parts. All those working near moving or rotating parts will secure loose hair, clothing, and equipment. ☐ Fall protection will be worn by all those in manlifts, scissor lifts are NOT excepted. ☐ Drill rigs will only be moved with masts lowered. Masts will be erected with outriggers fully extended when equipped with outriggers. ☐ Rigging directly to the forks of a lull, forklift, or front loader equipped forks is prohibited. Crane hook attachments will be used (specify):_____ ☐ Spill equipment is available for fuel and hydraulic fluid leaks. Location: _____ **HEAVY EQUIPMENT COMMENTS:**
HOT WORK / WELDING / CUTTING		
☐ NA	Fire, explosion, burns, UV flash, fume, gases ☐ Welding - Specify: base metal:_____ electrode:_____ Shield gas:_____ ☐ Oxy/Acetylene Cutting base metal:_____ ☐ Soldering/Brazing ☐ Grinding ☐	☐ O'Brien & Gere will issue hot work permit. Name:_____ ☐ The site owner will issue hot work permits. Name: _____ ☐ Hot work permits are visibly posted. Location(s):_____ ☐ Fire watches are identified by name and remain _____ minutes after hot work (min of 30). ☐ A 20 lb ABC fire extinguisher will be placed within 25' of hot work or as directed on permit. ☐ Painted surfaces have been evaluated for lead content by: ☐NA _____ ☐ Insulation has been evaluated for asbestos content by: ☐NA _____ ☐ Pedestrians and adjacent workers will be protected from UV Flash by _____ ☐ Sparks and slag will be prevented from falling through floor and wall openings. ☐ Air monitoring will be conducted in hazardous areas. Haz Material:_____ Areas to be Tested:_____ ☐ Oxygen and acetylene cylinders will be separated by 20' when not used within 24 hours. ☐ All compressed gas cylinders in storage will be secured upright and capped. ☐ Face shields will be used for all grinding, cutting, and welding work. **HOT WORK COMMENTS: (Identify areas or tasks requiring hot work permits.)**
POWER TOOLS, HAND TOOLS, and EXTENSION CORDS		
☐ NA	eye injury, hand/arm cuts, electrical shock, strains, foot injuries, dust	**General Tools & Equipment:** ☐ All tools and electrical cords in-use will be **inspected daily** by:

HAZARD	HAZARD CONTROLS (check all that apply and comment as required)
☐ Grinders ☐ Jackhammer/Chip hammer ☐ Needle Gun ☐ Explosive Actuated (Hilti) ☐ Chop saw ☐ Chain saw ☐ concrete/asphalt saw ☐ Sharp hand-tools (knives, cutters, scissors) ☐ **Env Investigation Tools:** ☐ Electrofishing (Fish Shocking) Equipment ☐ Hand Augers - Iwan or Spiral type ☐ Hand Sampler - Split Spoon or Thin Wall ☐ Hand Probe (GeoProbe) with ____ lb weight ☐ Manual Cathead Hoist with _____ lb weight ☐ Motorized Cathead Hoist with ____ lb weight ☐ Light-weight Motorized Auger drills (not truck-mounted) ☐ Manhole Lifting Devices **(specify in Comments)** ☐ Other (specify):	☐ Users ☐ Site Supervisor/Safety Coordinator ☐ Other: _____ ☐ Only the right tools will be used in a manner for which they were designed. [Required] ☐ **GFCIs** will be used on all extension cords and 120v power tools. ☐ All **extension cords** are in good condition with no cuts through outer insulation, ground plugs are present, and no "vinyl tape" repairs. ☐ **Face shield and chemical goggles** used required for chemical splash hazards ☐ **Kevlar chaps and jacket** required for all chainsaw work ☐ **Face shield and safety glasses** required for all grinders, jackhammers, chain saws, chemical splash hazards ☐ **Kevlar chaps and jacket** are required for all chainsaw work ☐ **Kevlar chaps** are required for chop saws, weed trimmers with blades, and similar tools ☐ **Cut-resistant gloves** are worn whenever cutting tools are used. ☐ **Safety cutters or scissors** are required for all cutting activities (no fixed-blade knives). ☐ **Hearing protection** required for which tools or areas: _____ _____ **Environmental Investigation Tools & Equipment:** ☐ All **hand augers and sampling probes** will be inspected and verified to be in good conditions with ALL parts required by the manufacturer. Inspections will be completed by: ☐ Users ☐ Site Supervisor/Safety Coordinator ☐ Other: _____ ☐ Persons using sampling probes equipped with **manual slide hammers** are physically capable of handling the weight without difficulty and keep hands clear of pinch-points. ☐ Persons using **manual and motorized cathead hoists** have been trained on how to operate them in accordance with manufacturer guidelines. **(Identify qualified persons by name in the "Comments" Section below.)** ☐ Electrofishing equipment will be **inspected** and verified to be in good conditions with ALL parts required by the manufacturer and exterior cords have no cuts through outer insulation and no "vinyl tape" repairs. Inspections will be completed by: ☐ Users ☐ Site Supervisor/Safety Coordinator ☐ Other: _____ ☐ Persons using **Electrofishing Equipment** have been **trained** on how to operate it in accordance with manufacturer guidelines. **(Identify qualified persons by name in the "Comments" Section below.)** ☐ Electrofishing will be discontinued if the **public** approaches within **100'** ☐ Electrofishing boats will be marked with "**Danger Electricity**" signs (or equivalent) that can be read at a distance of **150'**. ☐ All electrofishing team members wear **electrically-rated rubber gloves** that are inspected daily by users and replaced every 6 months. Use leather or other cut-resistant gloves to protect the rubber gloves. (Similar to NFPA 70E requirements.) ☐ All electrofishing team members wear **chest or hip waders** to insulate the wearer from electrical shock. ☐ **Net handles** for nets used during electrofishing will be nonconductive and long enough to keep hands out of the water. ☐ The positive electrode (anode) on portable electroshockers is equipped with a **manual switch** that stops the current when released and is **not "bypassed'** with a hold-down mechanism (i.e., tape) ☐ At least **two (2) persons** on each Electrofishing boat or location are trained in **CPR**. ☐ All persons involved in electrofishing know the location of the **emergency shutoff switch**. ☐ **Backpack electrofishing equipment** is equipped with a **tilt switch** that stops the current if the operator falls. **TOOL & CORD COMMENTS:**

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
WORKING OVER/NEAR WATER OR ON ICE		
☐ NA	**drowning, hypothermia (winter months), spills to surface waterways, fall through ice** ☐ Barge-mounted drilling/boring rigs ☐ Sampling from a boat ☐ Boat required for site access ☐ Work on an ice covered body of water ☐ Other: **NOTE – See "Walking Surfaces" section of JSA for slipping hazards on icy surfaces.**	☐ 100% Fall Protection while working over water or when otherwise exposed to a drowning hazard. **(Describe how fall protection will be implemented, Tie-off points, and the equipment that will be used.** ☐ in "Comments" below ☐ in the "Fall Protection" section) ☐ A "**safety observer**" will remain on shore with the ability to contact emergency response personnel and communicate with those on boats/barges. ☐ USG-approved **flotation vests** will be used. ☐ **Ring-buoy** with 90' of rope and placed within 100' of site personnel. ☐ **Rescue skiff** will be staged such that one person can immediately launch the skiff. ☐ At least **one person will be available to launch** and operate the rescue skiff. NOTE - "Safety Observer" may launch rescue skiff after making emergency response notification(s). ☐ Ice Safety - **Core samples** will be taken every 100' on lakes or 50' on rivers to evaluate the thickness and quality of ice (i.e., *clear/blue ice* = best quality, *white/opaque ice* = moderate quality/use caution, *gray/slushy ice* = poor quality/unsafe). ☐ Ice Safety - Conservative **load estimates** are established for static and/or moving loads as appropriate for the type of work being conducted. Load estimates are explained: ☐ in "Comments" below ☐ in an attached document ☐ Spill Control - **Floating booms** will be used around barges, shore-based heavy equipment, or other locations where hydraulic fluid may leak from equipment into surface water. ☐ Spill Control - **Silt curtains** will be suspended below floating booms. ☐ Boats and Barges will not be operated above their **weight capacity**. ☐ Boats and barges operated (or potentially operated) in **bad weather** will be operated below their weight capacity by _____% (suggest at least 25%). ☐ Boat and barge emergency calls - **Weather resistant radios** that broadcast on Coast Guard frequencies (Channel 16 VHF/FM or 2182 MHZ) will be available for emergency calls. ☐ Boat or barge-based operations will be discontinued when NOAA issues a **small craft advisory** or when sustained **wind speeds of 20 mph** are observed and create dangerous wave or boat/barge handling conditions. ☐ **NOAA Weather Radio Receiver** will be used to monitor weather conditions that may affect boat or barge-based activities. **WORKING OVER WATER COMMENTS:**
MANUAL MATERIAL HANDLING & STORAGE / HOUSEKEEPING / WALKING SURFACES (includes manhole covers, heavy lifting, slippery surfaces, and steep slopes)		
☐ NA	back or shoulder strain, struck by falling objects, trips and falls, incompatible materials (fire or explosion) ☐ hvy manual lifting (>50 lbs) ☐ chemical storage ☐ compressed gas storage ☐ Tall storage greater than 2 pallets stacked. ☐ Material & equipment laydown areas ☐ Trash & debris removal ☐ Temporary cords & hoses placed across walkways	☐ Mechanical lifting equipment used to reduce manual material handling: (☐ Forklift/Lull ☐ Heavy Equipment ☐ Chain-fall ☐ _____) ☐ Manual lifting more than 50 lbs by a single person will be avoided. ☐ Good manual lifting techniques will be reviewed with the following trades/persons prior to site work: _____ ☐ Incompatible chemicals will be separated by 20' or a concrete block wall. ☐ Secondary containment will be provided for the following chemicals: _____ _____ ☐ Safety equipment will be located near chemical storage. ☐ Spill Kit ☐ Emergency Shower ☐ Eyewash ☐ Drench Hose ☐ Splash PPE ☐ Flammable gases and oxygen will be separated by 20'. ☐ All compressed gas cylinders will be transported vertically and secured upright.

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
	☐ Manhole Cover Removal ☐ Tripping Hazard (cords, hoses, uneven surfaces) ☐ Slipping Hazard (icy, muddy, oily, etc.) ☐ Steep sloped surfaces ☐	☐ Equipment and materials will be stacked in laydown areas with aisles as necessary for safe access. All un-used equipment & materials will be returned to laydown areas daily. Designated laydown areas:_____ ☐ Materials will not be stacked greater than 2 pallets high without being secured. ☐ Trash and debris will be removed daily and placed in designated containers. Specify debris segregation and location of disposal containers below. ☐ Hoses & Cords will be run out of walkways (e.g., within 6" of walls or 7.5' overhead) whenever possible or will be clearly marked by cones or barricades. ☐ **Manhole covers** will ONLY be removed with tools specifically designed to remove them including J-hooks that are at least **30"** long. No pry bars, shovels, or screw drivers. ☐ **"Stuck" manhole** removal equipment and procedures are described in "comments." ☐ **"Paved-over"** manhole removal equipment and procedures are described in "comments." ☐ **Slippery surface** – work area inspected for icy surfaces which will be salted/sanded. ☐ **Slippery surface** –YakTrax® or similar slip-on traction devices will be used for icy areas. **MATERIAL HANDLING & HOUSEKEEPING COMMENTS:**
TRAFFIC WORK ZONES, SIDEWALK OBSTRUCTION, and ATVs		
☐ NA	☐ Vehicle accidents ☐ Utility Vehicle Use ☐ Pedestrians struck by vehicles or heavy equipment ☐ Pedestrians falls ☐ Pedestrian struck-by falling objects	☐ DOT signal devices will be used to re-route vehicles around excavations or busy site entrances/exits that affect road traffic. ☐ Flaggers will be used and have DOT Flagger Training ☐ Procedures for work vehicles to enter/exit traffic work zones are **required when** work zones are setup in high speed roadways or when potential blind-spots exist. Explain in "Comments." ☐ Pedestrian traffic will be safely routed around or over excavations. ☐ Pedestrian traffic will be safely routed around or under overhead work. ☐ Recreational Style ATVs are prohibited. [MANDATORY] ☐ ATUVs allowed with rollover protection, seat belts, horn, and lights. ☐ Golf Carts allowed if speed ≤20 mph and operated only on site roads (no off-road use). **TRAFFIC & SIDEWALK COMMENTS:**
CRANES & RIGGING		
☐ NA	tip-over, struck-by dropped loads, Crane Make:_____ Crane Model:_____	**Operator is qualified with NY State License: (Check License Type Below)** ☐ Class A Unrestricted ☐ Class B Hydraulic >28T ☐ Class C Boom Truck ≤28T ☐ Other (Class D, E, or F): _____ ☐ Crane signal person is qualified and has documented OSHA signal person training ☐ Rigging personnel are designated as qualified by their employer. ☐ Lifting & Rigging Plan will be prepared by: Company Name:_____ ☐ No Lifting & Rigging Plan is required - crane work is not a critical lift. ☐ Annual crane maintenance certification within last 12 months. Date:_____ ☐ Periodic crane inspection within 30 days. Date:_____ ☐ Site owner notified by: Name:_____ Date: _____ **CRANES & RIGGING COMMENTS:**

	HAZARD	HAZARD CONTROLS (check all that apply and comment as required)
STEEL ERECTION		
☐ NA	structural collapse (falls, hot work, cranes, and rigging are covered elsewhere in this JSA)	☐ Written "notice to proceed" will be sent to the steel erection sub. Date:_____ ☐ Written notice of any bolting or rod modifications made by after drawings were "issued for bid" to the steel erection sub. Date(s):_____ **STEEL ERECTION COMMENTS:**
CONCRETE / MASONRY		
☐ NA	struck by injury, trips & falls, cuts from rebar, skin burns from contact with concrete (concrete saw, jackhammers, fall protection, heavy equipment are covered elsewhere in this JSA)	☐ All rebar ends <6' must be protected by rebar caps ☐ Only authorized persons will be allowed to walk on rebar pads to minimize the number of persons at risk of tripping or falling. ☐ Concrete truck operator will be instructed to take direction only from the concrete worker who is handling the discharge chute/hose when related to moving the discharge chute/hose. ☐ Finishers, masonry workers, & others who must kneel extensively will be provided kneepads. ☐ Temporary steps will be provided for all elevation changes ≥18". **CONCRETE MASONRY COMMENTS:**
BIOLOGICAL HAZARDS (Site Surveys & Inspections, Clearing & Grubbing, Caretaking Services)		
☐ NA	Infection, Lyme Disease, West Nile Virus, Eastern Equine Encephalitis (EEE), Severe Rash, Allergic Reaction, Venom effects ☐ Ticks ☐ Mosquitoes (EEE, WNV, etc) ☐ Venomous Snakes ☐ Venomous Spiders ☐ Poison Ivy, Oak, or Sumac ☐ Bees & Wasps ☐ Fire Ants ☐ Other (identify below):	☐ Use **DEET** (25%-98%) repellent on skin for protection against mosquitoes, ticks, and similar insects. Use higher concentrations for heavily infested areas. ☐ Use **Permethrin** repellent on clothing in areas heavily infested with ticks, chiggers, etc. ☐ Persons working in tick-infested overgrown areas instructed to wear **spun-poly or Tyvek coveralls** [required for all persons in ESR and working in the NE region plus NJ, & PA.] ☐ Persons returning from work in tick-infested areas instructed to perform **periodic field checks** for ticks and a thorough **tick inspection** as soon as they get home. ☐ Employees (only) instructed to **call WorkCare** for embedded ticks from fieldwork. ☐ All site personnel will be instructed on how to **identify poison ivy, sumac, and oak**. (O'Brien & Gere Field Identification Guide or equiv. has been posted? ☐ YES ☐ NO) ☐ Poison ivy **barrier creams** (e.g., Ivy Block) will be used on exposed skin prior to the workday. ☐ Poison ivy **neutralizing wipes or rubbing alcohol** will be used on hands and exposed skin following work activities or incidents where contact with poison ivy/oak/sumac is suspected. ☐ **Protective coveralls** (such as Tyvek™) will be used to prevent contact with ticks or poison ivy. ☐ All site personnel will be instructed on how to **identify venomous snakes** indigenous to the area. List venomous snakes of concern in the "Comments" section below. (O'Brien & Gere Field Identification Guide or equiv. has been posted? ☐ YES ☐ NO) ☐ All field personnel with a potential to **encounter venomous snakes** will wear: ☐ Snake Chaps AND/OR ☐ High Leather Safety Boots (NOT ankle-high boots/shoes) ☐ All site personnel will be instructed on how to identify **venomous spiders** indigenous to the area. List venomous spiders of concern in the "Comments" section below. (O'Brien & Gere Field Identification Guide or equiv. has been posted? ☐ YES ☐ NO) ☐ Site personnel with known **allergies** to bee/wasp stings, fire ant bites, or other insect bites carry an "EpiPen" or equivalent medication prescribed for treating allergic reaction. **BIOLOGICAL HAZARDS COMMENTS:**

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
ENVIRONMENTAL HAZARDS / HAZARDOUS WASTE SITE WORK		
☐ NA	Exposure to hazardous vapors or dust, contact with contaminated materials, fire, explosion. Contaminants of Concern and hazardous chemicals include: ☐ volatile organic compounds (describe:_____ _____) ☐ semivolatile organic cmpds (describe:_____ _____) ☐ metal dusts (describe:_____ _____) ☐ PCBs ☐ Caustic (NaOH) ☐ Acid (H2SO4, HCL) ☐ ☐ (many other hazardous waste site hazards are covered elsewhere in this JSA)	☐ Site workers with a potential for contact with contaminated materials and work in Level C PPE will have OSHA 40-hour training, current 8-hour refresher, and medical exam. ☐ Site workers with minimal contact with contaminated materials and no work in Level C PPE will have OSHA 40-hour or 24-hour training, current 8-hour refresher, and medical exam. ☐ Foremen or Supervisors overseeing field crews will have 8-hour OSHA Supervisor training. ☐ No intrusive work activities or areas are anticipated with current scope of work. ☐ Intrusive work activities include: _____ _____ ☐ The perimeter of intrusive work areas are identified by:_____ ☐ Decontamination of personnel or equipment is not anticipated with the current scope of work. ☐ Decontamination of personnel and small tools will be conducted as follows: _____ _____ ☐ Decontamination of heavy equipment will be conducted as follows: _____ _____ ☐ Heavy equipment leaving the site will be inspected by: _____ ☐ **Work area monitoring** is not anticipated with the current scope of work. ☐ **Work area air monitoring** will be conducted per attached air monitoring plan. ☐ **Work Area Air Monitoring** as follows for: ☐ Dust, ☐VOCs, ☐Other:_____ Description: _____ **Action Levels[1] / Description & Response Actions** **<X:** 1. Level D PPE (General PPE as required in this JSA) **X:** 1. Half or Full Face Level C PPE - Tyvek, boot covers, nitrile gloves, half or full face w/ respirator with _____ cartridges changed (☐ daily, ☐ _____) OR 2. Implement additional engineering or administrative controls to reduce contaminant concentrations below action level(s). **10X:** 1. Full Face Level C PPE w/ Quantitative Fit Testing (no half-face) 2. Or Reduce contaminant(s) below Level B action level(s). **50X:** 1. Level B PPE – PPE same as above with a supplied air respirator 2. Or STOP work until contaminant levels can be reduced. 3. Notify the Project Manager and Client Representative. **????:** 1. STOP work 1. Sustained 1 minute ☐ **Community Air Monitoring** is not anticipated with the current scope of work. ☐ **Community Air Monitoring** is required per the attached air monitoring plan s. ☐ **Community Area Air Monitoring** as follows for: ☐ Dust, ☐ VOCs, ☐ Other:_____ Describe: _____

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)

Action Levels[1]	Description & Response Actions
<0.1 mg/m³	1. Normal Operation
0.1 mg/m³	1. Increase demolition dust controls until dust levels at the site perimeter (fence line) are <0.1 mg/m³
0.15 mg/m³	1. STOP work and evaluate alternate work methods or dust controls 2. Implement revised work methods and dust controls to maintain dust levels at the site perimeter <0.1 mg/m³ 3. Resume work.

1. 15 minutes time-weighted average

ENVIRONMENTAL & CHEMICAL HAZARD COMMENTS:

OTHER HAZARDS & CONTROLS not addressed in other sections of this JSA

☐ NA	☐ ☐ ☐

EMERGENCY RESPONSE	
911 Service is Available ☒ Yes ☐ No	**Cell Phone Required** ☒ Yes ☐ No
LEVEL 1 EMERGENCY: Off Site Emergency Responders	**911 then 315-715-1800**
LEVEL 2 EMERGENCY: Portfolio Emergency Response Team (ERT)	**315-715-1800**
LEVEL 3 EMERGENCY: Project Response Personnel	**Number:**

WORK AREA DESIGNATION – STAGING AREA – MUSTER POINT	
Emergency Responder Staging Area most appropriate for project location: • Identify most applicable based on project location(s) and Portfolio Emergency Response Plan. • The "911" system has been informed of these designations. • Obtain appropriate emergency response map from Appendix A of the Portfolio Emergency Response Plan	**Work Area #1** – Lake Front: ☐ Honeywell Lake Office ☐ Honeywell Spano Gate **Work Area #2** – Willis Ave: ☐ Honeywell Willis Ave Plant **Work Area #3** – Wastebeds 1-8: ☐ Orange Lot Access Gate **Work Area #4** – Matthews Ave/LCP: ☐ Honeywell Bridge Street Plant ☐ Matthews Ave (west of Belle Isle Road) **Work Area #5** – SCA: ☐ Honeywell Gere Lock Gate **Work Area #6** – Nine Mile Creek & Geddes Brook ☐ Pope's Soccer Field Parking Lot ☐ State Fair Gate #7 **Work Area #7** – Upper Harbor Brook: ☐ Honeywell Spano Gate ☐ Honeywell Buttler Fence Gate ☐ Honeywell County Gate ☐ **Other (specify)**:
Muster Point (for local/project evacuation):	

EMERGENCY CONTACT INFORMATION			
Emergency Medical– Hospital Name: Hospital Address:	**University Hospital** 750 East Adams Street, Syracuse, NY	**Number:**	315 464-5611 (Emergency Dept.)
Non-Emergency Med.– Clinic Name: Occupational Clinic Address:	**Industrial Medical Associates** 61 Canal Street, Syracuse, NY	**Number:**	315-478-8513
Minor Injury Support for OBG Employees:	**WorkCare Incident Intervention**	**Number:**	888-449-7787
Police Department Name **(non-emergency numbers)** (Select based on project location)	☐Syracuse – 511 S. State Street	**Number:**	315-442-5111
	☐Camillus - 4600 West Genesee St		315-487-0102
	☐Geddes - 1000 Woods Road		315-468-3283
	☐Solvay -507 Charles Avenue (in Geddes)		315-468-2521
	☐Lakeland (see Geddes)		315-468-3283
	☐Other (specify):		
Fire Department Name **(non-emergency numbers)** (Select based on project location)	☐Syracuse Fire Prev. –201 E Washington St	**Number:**	315-448-4777
	☐Camillus - 5801 Newport Road		315-672-9207
	☐Solvay -1925 Milton Ave (in Geddes)		315-468-1710
	☐Other (specify):		
Off Site Local Spill Response:	Sun Environmental Inc.	**Number:**	315-218-6995
Trucking Related Emergency Response:	Big Red Trucking	**Number:**	315-413-0911
NYS DEC	**(Region 7, Syracuse)**	**Number:**	315-426-7200
OSHA	3300 Vickery Rd. North Syracuse NY	**Number:**	315-451-0808
	NYS Spill Response	**Office Number:**	845-256-3121

EMERGENCY CONTACT INFORMATION			
National Response Center (NRC) for Oil/Chemical Spills:			1-800-457-7362 1-800-424-8802
Honeywell Project Contact Name & Title:		**Office Number:** **Cell Number:**	
O'Brien & Gere Project Officer:		**Office Number:** **Cell Number:**	
O'Brien & Gere Project Manager:		**Office Number:** **Cell Number:**	
O'Brien & Gere Construction Manager:		**Office Number:** **Cell Number:**	
O'Brien & Gere Field Supervisor Name:		**Cell Number:**	
O'Brien&Gere Site Safety & Health Coordinator:		**Cell Number:**	
Subcontractor Field Supervisor:		**Cell Number:**	
Subcontractor Safety Competent Person:		**Cell Number:**	
Portfolio Health and Safety Specialist:	Steven Thompson, CHST	**Cell Number:**	315-560-5018
HSP2 Health and Safety Director:	Jeffrey Parsons, CIH	**Cell Number:**	315-391-0638
Portfolio ERT Leader:	William (Bill) Moon – Parsons H&S	**Cell Number:**	315-323-8175
Honeywell Ops Manager (Work Area 1,5)	Bob Rule	**Number:**	865-548-6719
Honeywell Ops Manager (Work Area 1,5)	Dan Grainer	**Number:**	865-621-9315
Honeywell Ops Manager (Work Area 2,3)	Steve Miller	**Number:**	315-935-5400
Honeywell Ops Manager (Work Area 4,5,6)	Michael Savage	**Number:**	315-436-0765
Off-Site Responder Liaison	Peter Alberti	**Number:**	315-427-7801
Public Concerns or Questions	Craig Milburn (Honeywell)	**Number:**	315-552-9784
	Stephanie Harrington (NYSDEC)	**Number:**	315-426-7403
Media Inquires	Victoria Streitfeld (Honeywell)	**Number:**	973-455-5281

EMERGENCY PROTOCOLS
(based on Honeywell Portfolio Emergency Response Plan)

EMERGENCY RESPONSE COMMENTS:

Portfolio Standard Response Levels From Lowest Severity (3) to Highest (1):

Response Level 3	Response Level 2	Response Level 1
■ Activate project response ■ Consult ERP Response Action Plan ■ Notify Construction Manager ■ Notify Honeywell Ops Manager	■ Activate ERT (315-715-1800) ■ Notify Project Manager ■ Notify Honeywell Ops Manager ■ Consult ERP Response Action Table (common response actions summarized below)	■ Activate Appropriate Off-Site Emergency Responders ■ Notify ERT ■ Notify Project Manager ■ Notify Honeywell Ops Manager ■ Notify Off-Site Responder Liaison ■ Send Spotters to Staging Area ■ Consult ERP Response Action Plan ■ (common response actions summarized below)

Incident Command System (ICS)/Emergency Protocols

- Witness to incident notifies SHSO/Supervisor, who upon arrival becomes the initial Incident Commander (IC).
- Initial IC determines the level of emergency
- If Level 1 response is necessary, initial IC identifies a minimum of 2 (if possible) spotters to go to the Staging Area.

- Spotters meet the off-site responders at pre arranged Staging Areas as identified by the ERP and escort responders to the location of the emergency.
- 1st responding ERT member typically becomes IC once on site.
- 1st responding agency's IC qualified public safety responder typically becomes IC once on site.

Notifications

Upon occurrence of any injury, fire, explosion, major spill (beyond incidental), property damage >$1,000, or significant near-miss that could have resulted in a fatality , or disabling injury, IMMEDIATELY NOTIFY the O'Brien & Gere Project Manager, O'Brien & Gere Portfolio Health and Safety Specialist, and the Honeywell Representative.

Written Report

Complete an *Incident Report*, or Near Miss Form within **24 hours** and submit to the O'Brien & Gere Portfolio Health and Safety Specialist for review. Report may be submitted as a "draft" or "preliminary" and updated as additional information is identified.

Injury Response

Level 3 - First aid injuries will be handled on site with in crew FA-trained personnel. First aid supplies are located: _____.

- Minor (not life threatening) injuries that require medical attention will be treated at the "Non-Emergency Med Treatment" clinic identified above **unless an alternate clinic is recommended by WorkCare**. If no clinic is available or identified, then default to the "Emergency Medical Treatment" facility.
- **All O'Brien & Gere employees will call WorkCare for minor injuries** that include any strains, cuts for which an employee is not confident that a band aid is sufficient, tick/insect bites for which the employee is concerned about infection or Lyme, any any other work-related injury for which the employee would like to talk to a WorkCare medical professional regarding proper treatment or follow-up.
- **WorkCare posters must be posted at each job site with a field office or trailer.**

Level 2 - First aid injuries will be handled on site with advanced FA/CPR trained ERT personnel. First aid and CPR supplies are located with ERT Staff.
Minor (not life threatening) injuries that require medical attention will be treated at the "Non-Emergency Med Treatment" clinic identified above. If no clinic is available or identified, then default to the "Emergency Medical Treatment" facility.

Level 1 - Life Threatening injuries are an emergency and require implementing emergency response (911).

Fire or Explosion

Level 3- Incipient stage (trash can size) fires may be handled by site personnel using fire extinguishers or hoses.

Level 1- Larger fires will require that affected personnel are evacuation to the identified muster point and implementing emergency response (911)

Spill Response

Level 3- Minor or incident spills will be cleaned up by site personnel using supplies that are located: _____.

Level 2- Major spills that exceed the available supplies and resources to safely control and cleanup will require contacting the ERT.

Level 1- Major spills that exceed the available supplies and resources to safely control and cleanup may require contacting the off-site spill responder indicated above for "Spill Response" and in accordance with existing site spill response plans

NOTE: Petroleum products spills of greater than 5 gal and/or any Chemical Spill requires NYSDEC notification

Public and Media Protocols

- No one is authorized to speak with the media or public unless specifically approved by Honeywell.
- If approached by the **media**, recommend then refer them to the "***Media Contact***" listed under Emergency Contact Information.
- If a complaint or question is received from the **public**, provide them the "***Public Concerns or Questions***" contacts listed under Emergency Contact Information.

HOSPITAL ROUTE MAP

Appendix B

Lifting and Rigging Plan

PROJECT INFORMATION

All Lift Plans must be submitted at least 24 hours prior to hoisting any loads unless otherwise approved by O'Brien & Gere.

Project Name:		**Prepared By:**	
Project Location:		**Date:**	
Lift Supervisor:		**Lift Location:**	
Company:		**Scheduled Lift Date(s):**	

1. CRANE INFORMATION

a) Type of Crane:	
b) Maximum Capacity:	
c) Crane Inspection by Qualified Person in Last 30 Days? (attach copy)	**Date:** **Complete By:**
d) Annual Maintenance Certification in last 12 Months? (attach copy)	**Date:** **Completed By:**

2. CRANE OPERATOR, SIGNAL PERSON, & RIGGER INFORMATION (per 29CFR1926 Subpart CC)

a) Crane Operator is Qualified? (attach copy – less than 5 yrs old)	☐ State License or ☐ Certified Crane Operator (CCO) or ☐ Employer Certification (accredited written exam and practical test procedures)
Experience on current type of crane	**Years:** **Months:**
b) Crane Signal Persons Qualified?	☐ Certification attached
c) Riggers are Qualified	☐ Qualified Riggers are identified below: name:
d) Crane Assembly/Disassembly Director	☐ Crane Operator is designated as the Competent & Qualified Person or ☐ Alternate Competent & Qualified A/D Director designated: name:
e) Crane Assembly/Disassembly Procedures will be on site	☐ Follow Manufacturer's Procedures or ☐ Follow Written Company Procedures

3. LIFT SPECIFICATIONS – (attach copy of load charts)

a) Max. Radius during Lift (ft):	
b) Length of Boom (ft)	
c) Angle of Boom at Pick (deg.)	
d) Angle of Boom at Set (deg.)	
e) Rated Capacity of load line (lbs.)	
f) Rated Capacity for Lift (lbs.)	

4. WORK AREA SKETCH

Include a description of the area where lift will be made. Indicate location of power lines, pipe racks, tanks, vessels and all other potential obstructions. Show the travel of the boom with load. Show the distances between the crane and load at pick and set. Indicate "See Attached" if drawings or sketches are attached.

5. CAPACITY OF RIGGING EQUIPMENT

All slings, chains, spreader bars, shackles, & other rigging equipment must have load rating tags or markings and must be inspected prior to the lift. Show how rigging equipment will be used in the "Sketch of Load & Rigging Arrangement" (7).

a) Vertical (lbs) – adjust for sling angle	
b) Choke (lbs) – adjust for sling angle	
c) Basket (lbs) – adjust for sling angle	
d) Size of Choker	
e) Number of Chokers	
f) Size of Shackle(s) (inches)	
g) Capacity of Shackle(s) (lbs)	

6. WEIGHT OF THE LOAD

Weight (in lbs) of Load including rigging equipment, crane hook, and crane cable. Worst case lift may be used when planning a multiple lifts from the same crane location. Load must be less than the rated load for the lift in 3f.

a) Crane Hook & Cable	
b) Rigging Equipment (slings, spreader bars, shackles, etc.)	
c) Load	
d) TOTAL (a+b+c)	

7. SKETCH OF LOAD AND RIGGING ARRANGEMENT

Be specific. Show ALL rigging equipment between the crane hook and the load. Additional room for notes and sketches is on the last page.

8. POWER LINE SAFETY

Yes	No	(This section is required for crane lifts near overhead power lines. Refer to "Definitions" for Table A.)
		Will any part of the equipment, load line or load approach closer than *20'* to lines *<350 kV* or closer than *50'* to lines that are *350 kV to 1,000 kV*? If "NO", then Section 8 does not apply.
If yes to above then choose one of the three options below:		
		OPTION 1: Confirm from utility that line is de-energized and visually Grounded at worksite.
		OPTION 2: Confirm no part of equipment may encroach upon lines via encroachment precautions
		OPTION 3: Contact utility to confirm line voltage and set a revised safe approach distance based on *Table A*.
Mandatory Encroachment Precautions for Options 2 and 3 above (must initiate all the following)		
		Conduct a planning meeting to review location of lines and preventive measures in place; and
		Tag Lines (if used) must be non-conductive; and
		Erect and maintain elevated warning line in view of operator at 20' or 50' or distance on *Table A*.
In addition to the Precautions listed above you must implement at least one of these:		
		Use a proximity Alarm to give operator sufficient warning to prevent encroachment; or
		Use a dedicated spotter who is in constant contact with operator; or
		Use a device that automatically warns operator to stop in case of encroachment; or
		Use a device that automatically limits the range of movement, set to prevent encroachment; or
		Use an insulating link between end of the load line and load.
Crane operations where Table A clearances are used must implement additional precautions as outlined below.		
		Will any part of the crane, load line, or load approach closer than the *Table A* distance? If "*NO*" then the remainder of Section 8 does not apply. If "*YES*", then all of the following requirements must be implemented and the requested information provided.
		The utility agrees that it is infeasible to de-energize & Ground or relocate the power line(s). Utility Name: Date of Consultation:
		Utility or licensed Prof. Engineer has determined that the following alternate minimum clearance is applicable for site work. Information must be received in writing (email) and attached to this plan. Utility or PE Name: Date Min. Clearance
		A meeting was held with utility or PE to review crane safety procedures as outlined in this plan.
		Automatic reclosing features were made inoperative by utility (if so equipped).
		Utility installed line hose or cover up except where unavailable due to voltage.
		This Lifting & Rigging Plan and other referenced documents are retained on site.

9. PRE-LIFT PLANNING CHECKLIST

N/A	Yes	No	Description (Place a ✓ under N/A, Yes, or No for each item)
			a) Has a safety plan, Job Safety Analysis (JSA), or equivalent safety planning document been completed?
			b) Is a pre-lift meeting scheduled to review this Lifting & Rigging Plan?
			c) Has an inventory of equipment been done?
			d) Are Load Charts available and a copy attached to lift plan?
			e) Have weather conditions been considered? (maximum wind speed = mph)
			f) Has electrical safety been reviewed? (especially power lines when applicable)
			g) Has communication been considered?
			h) Have the use of barricades been reviewed?
			i) Copy of the annual crane maintenance certification included with lift plan?
			j) Copy of the periodic crane inspection conducted in last 30 days attached?
			k) Copy of A/D, operator, Signal Person, and Rigger certifications attached?

If "NO," explain:

APPROVALS: (SIGNATURES REQUIRED)

Qualified Crane Operator		Date	
Sub-Contractor Lift Supervisor		Date	

REVIEWED BY: (SIGNATURES REQUIRED)

O'Brien & Gere Supervisor		Date	
O'Brien & Gere Safety (for critical lifts)		Date	

DEFINITIONS:

Assembly/Disassembly Director (A/D) – The A/D is competent and qualified to implement crane assembly and disassembly procedures. The A/D ensures that the crane is only assembled or disassembled by qualified riggers. When setting the crane, the A/D must consider ground conditions, weather, obstructions, and public safety associated with the counterweight and load path. The A/D may also be the Crane Operator or Lift Supervisor.

Competent – Capable of identifying existing & predictable hazards related to the subject *and* has the authority to take prompt corrective measures.

Critical Lift – At a minimum, Critical Lifts include those that exceed **80%** of the crane's rated capacity for the lift, lifts near power lines, and lifts that require moving loads over occupied structures. O'Brien & Gere may require a Lifting & Rigging Plan for other lifts if the effect of dropping, upset, or collision of equipment could:

- Cause significant work delay
- Cause undetectable damage resulting in future operational or safety problems
- Result in significant release of hazardous materials or other undesirable conditions.
- Present a potentially unacceptable risk of personnel injury or property damage.

Lift Supervisor – The person responsible for the overall execution of the planned lifts. The Lift Supervisor is responsible for selecting qualified riggers, crane operators, and signal persons. The Lift Supervisor is also responsible for ensuring rigging materials are in good condition or replace equipment that does not pass inspection by the Qualified Rigger. The Lift Supervisor will revise the Lifting and Rigging plan if crane locations must be changed, rigging arrangements are modified, loads change, or upon other material changes that deviate from the original rigging plan.

Qualified – A person, who, by possession of a recognized degree or certificate, or by professional standing, or who, by extensive knowledge, training, and experience, has successfully demonstrated an ability and competence to solve problems relating to the subject matter and work.

Qualified Operator – One whose competence to operate equipment safely and effectively (including the ability to accurately spot and control loads) can be demonstrated to and accepted by management. Responsible to operate the crane in accordance with the manufacturers recommended procedures and to review and follow any Lifting & Rigging Plans that may have been developed. Qualified Operators are required to conduct **daily visual** inspection and **documented monthly/periodic** inspections to ensure that the crane is in a safe condition for use. Employer qualifications are not portable.

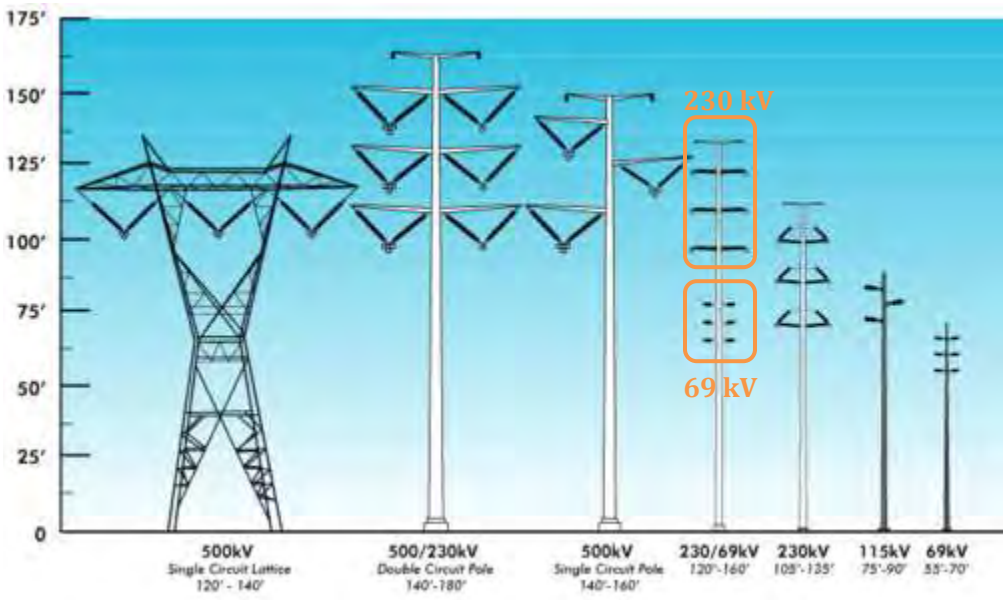
Qualified Rigger – One whose competence in this skill has been demonstrated by experience accepted as satisfactory by the rigger's employer. The Qualified Rigger is responsible for reviewing and implementing rigging requirements and following acceptable industry rigging techniques. The Qualified Rigger is also responsible for inspecting all rigging equipment and removing defective equipment from service. Employer qualifications are not portable.

Qualified Signal Persons – One who has demonstrated an understanding of crane signals in a verbal or written test and has demonstrated the ability to use signaling procedures in a practical test. Employer qualifications are not portable.

Table A – Represents the minimum clearances allowed by OSHA regulations (29CFR1926.1408 and .1409) following confirmation of line voltage from the utility owner.

Minimum Clearance Distances					
Voltage (kV)	Distance (ft)	Voltage (kV)	Distance (ft)	Voltage (kV)	Distance (ft)
Up to 50	10	>350 to 500	25	>1,000	As established by the utility owner or register P.E.
>50 to 200	15	>500 to 750	35		
>200 to 350	20	>750 to 1,000	45		

Additional Power Line Information – The utility industry uses different pole and tower designs for different types of lines and voltages. Although not a substitute for confirming line voltage with the utility owner, the diagram below can be used for general guidance in the field.



ADDITIONAL NOTES OR SKETCHES


OBG
Part of Ramboll

Community Health and Safety Plan (CHASP)

Community Health & Safety Plan
LCP Former Erie Canal and West Flume Property
Town of Geddes, Onondaga County, NY
Index No. R7-2018-06-01

Honeywell

May 2019

OBG
Part of Ramboll

TABLE OF CONTENTS

LIST OF FIGURES

1. INTRODUCTION

1.1 PURPOSE OF THE COMMUNITY HEALTH AND SAFETY PLAN

The purpose of this Community Health and Safety Plan (CHASP) is to identify planned activities required to construct the Interim Remedial Measure (IRM) and the steps that Honeywell and its contractors will take to ensure protection of the local community and environment.

1.2 SITE DESCRIPTION

The Site comprises approximately 8 acres in the Town of Geddes, Onondaga County, New York. The Site is located in an industrial area east of Belle Isle Road, west of Bridge Street, and south of the New York State Fairgrounds. The project location is presented on **Figure 1**. A scrap yard and former NAKOH Chemical Company are located northeast of the Site, and a cogeneration facility is located west of the Site. The Former West Flume is a man-made drainage channel that runs east to west though the Site, collected runoff from the site and storm water from the Village of Solvay.

1.3 SCOPE OF WORK

OBG is managing the construction of the IRM at the site. This will require the regrading of a portion of the Site and clearing of existing surface overgrowth. Clearing is anticipated to be performed with the use of mechanical means (wood chipper) and some limited hand clearing. Intrusive work is anticipated as the clearing will include grinding of stumps and grading to facilitate future installation of a bike trail. Heavy equipment will be used to place a vegetated soil cover. OBG's scope of work is outlined below and includes activities:

1 Mobilization Site Preparation

2 Site Grading

3 Installation of a Soil Cover

4 Demobilization

1.4 PROJECT PERSONNEL AND ORGANIZATION

The following are key project personnel with respect to OBG's Scope of work.

Key Project Personnel	
NYSDEC	
Tim Larson	Project Manager
OBG	
Paul Schultz	Project Officer
Brad Kubiak	Project Manager
Ed Prossner	Construction Manager
Steve Thompson	Project Health and Safety Manager
Jeffery Parsons	Corporate Health and Safety Manager
Honeywell	
Shane Blauvelt	Project Manager

2. COMMUNITY AIR MONITORING PLAN

The objective of this Community Air Monitoring Plan (CAMP) is to describe air monitoring during the project's field construction activities including grubbing of vegetation, site grading, import of cover materials, and placement of cover materials. Cover materials will include select fill and topsoil.

The air monitoring program described herein has been designed using the New York State Department of Health (NYSDOH) *Generic Community Air Monitoring Plan* (gCAMP) (**Exhibit 1**) and Fugitive Dust and Particulate Monitoring Plan (Exhibit 2) guidance for evaluation of potential airborne contaminant releases as a direct result of investigative and remedial work activities.

Perimeter air monitoring will be conducted to evaluate potential air quality impacts during site construction activities. Monitoring for volatile organic compounds (VOCs) and dust will be performed during intrusive activities, which include grubbing of vegetative material and site grading. During non-intrusive construction, perimeter air will be monitored for dust only. Non-intrusive construction activities include import of cover materials and placement of cover materials.

2.1 COMMUNITY RECEPTORS

The project site is bordered to the north by industrial properties, to the east by Bridge Street, to the south by Matthews Avenue, and to the west by Belle Isle Road. Based on review of aerial photographs, the nearest non-commercial public and/or recreational areas are located as follows:

- Boyd Park approximately 1,200 feet to the southwest
- New York State Fairgrounds approximately 1,850 feet to the north
- Woods Road Park approximately 2,150 feet to the southeast

The nearest residential receptors to the project site consist of homes approximately 750 feet to the south, southeast, and southwest. Additional residential receptors are located approximately 3,650 feet west, and 1,550 feet northwest of the project site.

2.2 MONITORING LOCATIONS

Air monitoring will be conducted along or within the perimeter boundary line around the overall project site shown on **Figure 1**. The perimeter boundary follows Bell Isle Road to the west of the site, the security fence and gravel access road to the north of the site, Bridge Street to the east of the site, and generally along the southern most electrical transmission lines to the south of the site. In general, for each work area within the project site, air monitoring stations will be placed within the site perimeter boundary such that the downwind station will be between the work area and the nearest downwind receptor.

Air monitoring locations will be selected at the beginning of each work day based on the predicted predominant wind direction for the day. There will be one upwind and up to two downwind monitoring stations. In cases where there are two spatially separated work areas, the two downwind stations will be separated so one is downwind of each work area. The upwind monitor will be used to evaluate ambient background conditions for both downwind locations.

Air monitoring locations may be moved during the day if the predominant wind direction shifts into a new quadrant or if the work area changes. Site wind conditions will be monitored each day by either a portable on-site weather station or the Honeywell 10-meter weather station located at Willis Avenue along the east edge of the Semet Ponds.

2.3 DUST MONITORING

Dust monitoring will consist of continuous real-time air measurements of particulate matter less than 10 microns (PM_{10}) upwind and downwind of daily construction activities. Dust measurements will be made using portable aerosol monitors (ThermoFisher ADR-1500 or TSI DustTrak 8533, or equivalent) located at the upwind

and downwind monitoring stations. The ADR and DustTrak are photometric light-scattering instruments that continuously measure airborne particulates from 1 microgram per cubic meter (µg/m^3) to over 100 milligrams per cubic meter (mg/m^3) and record the results in time-averaged concentrations.

Dust monitoring work perimeter limits will be based on guidance contained in the NYSDOH gCAMP. Dust levels will be expressed as 15-minute time-averaged concentrations. Work perimeter limits and corrective responses will be as follows:

- Control Level - If the downwind PM_{10} level is 100 µg/m^3 above the upwind level for a 15-minute period or if airborne dust is observed leaving the site perimeter, then additional dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM_{10} levels do not exceed 150 µg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- Work Perimeter Limit - If, after implementation of dust suppression techniques, downwind PM_{10} levels are greater than 150 µg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM_{10} concentration to within 150 µg/m^3 of the upwind level and in preventing visible off-site dust migration.

Background will be identified by the upwind station concentrations for each 15-minute period. Each dust monitor will automatically alert an air monitoring technician (either visual or audible alarm, pager, or text message) to indicate high readings that may lead to potential exceedances of work perimeter limits. The air monitoring technician will then alert the site construction manager.

2.4 VOC MONITORING

VOC monitoring will consist of continuous real-time air monitoring of total VOCs (TVOCs) will be made using real-time TVOC analyzers (RAE Systems MiniRAE 3000, or equivalent). The MiniRAE 3000 is a UV-light photo-ionizing detector (PID) that continuously measures TVOCs from 0.1 to 15,000 parts per million (ppm), and records the results in time-averaged concentrations. The PIDs will be operated at the monitoring stations located upwind and downwind of daily construction activities.

TVOC work perimeter limits will be based on guidance contained in the NYSDOH gCAMP. Additional lower level criteria have also been incorporated to provide corrective responses prior to reaching the Project CAMP TVOC guidance limits. TVOC results will be expressed as 15-minute time-averaged concentrations. Work perimeter criteria and corrective responses will be as follows:

- Investigation Level - If the downwind TVOC level is 2 ppm above the upwind (background) level for a 15-minute period, then the emission sources will be investigated and evaluated.
- Control Level - If the downwind TVOC level is 3 ppm above the background level for a 15-minute period, controls or countermeasures will be employed on the operation activity or activities causing the concentration increase. Controls/countermeasures may include use of spray foams to cover the emission source, or modifications to work activities. Work may continue with controls and countermeasures provided that downwind VOC levels do not exceed 3 ppm above the background level.
- Work Perimeter Limit - If the downwind TVOC level exceeds 5 ppm above the background level for the 15-minute period, work activities will be temporarily halted or restricted and monitoring continued. If the TVOC level readily decreases (per instantaneous readings) below 5 ppm (above background), work activities can resume with continued monitoring. If the downwind TVOC level persists in excess of 5 ppm (above background), work activities will continue to be halted, the source of vapors identified, controls/countermeasures taken to abate emissions, and monitoring continued. After these steps, work

activities can resume provided that the TVOC at the downwind perimeter site is below 5 ppm (above background) for the 15-minute average.

Background will be identified by an upwind perimeter sample for each 15-minute period. Each PID will automatically alert the air monitoring technician (either visual or audible alarm, pager, or text message) to indicate high readings that may lead to potential exceedances of action criteria. The air monitoring technician will then alert the site construction manager.

2.5 QUALITY CONTROL AND QUALITY ASSURANCE

Calibration checks of real-time dust analyzers and PIDs will be conducted at the beginning of each day following applicable manufacturer's guidelines. Records of daily field activities, instrument field checks and daily calibrations will be documented in a field site log or on pre-printed field forms.

2.6 DATA MANAGEMENT AND REPORTING

Data will be manually or automatically saved to a PC computer each day. Data will be reviewed to evaluate periods of valid and invalid data, and results summarized in daily reports, which will include the following:

- Daily construction activities and air monitoring period,
- Air monitoring locations,
- Summary of air monitoring results,
- Meteorological summary including shifts in wind direction requiring station re-locations, and
- Summary of any action level or work perimeter limit exceedances, and corrective response.

At the conclusion of the air monitoring program, final results will be presented as part of the project construction completion report that will include:

- Air monitoring methodologies,
- A tabulated summary of the results,
- Assessment of air quality levels versus action criteria.

3. PROJECT SAFETY MANAGEMENT AND MONITORING

The LCP Former Erie Canal and West Flume Property IRM will involve work activities adjacent to roads that are accessible to the public; including Mathews Ave., Belle Isle Rd., and Bridge St. Site security at the established work areas and traffic management will be evaluated to make sure that appropriate controls and monitoring programs are in place during implementation of the project. These controls and monitoring programs are described in the section.

This CHASP incorporates by reference the Occupation Safety and Health Administration (OSHA requirements in 29 CFR Part 1910, 29 CFR 1926, and the OBG Corporate Health & Safety Manual (CHS Manual). A copy of the OBG CHS Manual will be maintained on site for reference.

3.1 SITE SECURITY AND CONTROL

The majority of the work activities will take place on the LCP Former Erie Canal and West Flume property. Public access to this property will be restricted for the safety of both the public and site workers. With large equipment in constant operation, these types of construction sites have inherent risks. Work activities are carefully planned, and site workers are required to go through site and activity-specific training to minimize potential risks associated with the work they will be completing. Properly planned site security is vital for the protection of the public, who may be unaware of site conditions or may not understand the risks associated with project operations.

3.1.1 Site Layout and Work Zones

Work areas will be established to support the project and include equipment and material staging areas and areas where grading and capping will take place. Access to these areas will be restricted. Site workers will also provide security surveillance. Site related activities are anticipated to take place 8 hours a day, Monday through Friday. General security measures at all work areas will include clearly identifying each area as needed (*e.g.* with flagging tape, construction fencing, etc.) and restricting access where work is taking place. Additional measures may be taken to secure equipment left unattended. For example, portable equipment will be secured in designated areas, heavy equipment will be relocated to a safe location, and work areas will be properly barricaded. Temporary fencing and signage will be installed as required in places where work activities may be taking place. The Site perimeter will be posed with signs stating "DANGER – CONSTRUCTION AREA – UNAUTHORIZED PERSONNEL KEEP OUT" or acceptable alternate.

3.1.2 Vapor and Odor Control

Vapors are not anticipated to be an issue during the execution of this project. If vapors do become a problem, the following controls will be implemented to mitigate the issues:

- Limiting amount of soil and other material disturbed,
- Use of polyethylene sheeting (for covering disturbed soils, material stockpiles, ext.),
- Use of water spray,
- Stop of work as described is Section 2.3.1.

3.1.3 Dust Control

Dust released during remedial activities represents a nuisance and potential health hazard. The following controls will be implemented to mitigate dust issues:

- Waster will be used to suppress dust on haul roads and access ways as required by dust monitoring and visual observations,
- A water truck will be on site to support dust control activities if dry, dusty conditions are encountered,

- The site speed limit of 10 mph (or as otherwise posted) will be enforced. Slower vehicle speeds reduce road dust and minimize the potential for accidents and spills.

3.2 TRAFFIC MANAGEMENT

Truck and heavy equipment traffic will represent the most frequent point of interaction between the project and members of the local community and is therefore one of the most critical elements of community health and safety planning. A driver management program will be established and will serves to communicate project requirements to truck drivers and equipment operators. The program also monitors compliance with project traffic rules. This program also prescribes measures for addressing out-of-compliance operators, up to removal of non-compliant operators from the project.

In addition to the safety program, heavy equipment operators must have a license or certificate that indicates they have passed a written and "road" test for the type of equipment they will be operating. Heavy equipment will be equipped with backup alarms, horns, and other safety devices.

Temporary fuel storage tanks will be labeled as to their content and be protected from collision by site vehicles using solid barricades including balusters, chain link fence, or equivalent. Spill kit (55-gallon sorbent capacity contained in an overpack) and one 20lb Type ABC fire extinguisher will be located within 45 feet of fueling areas. Tanks will be rated for above ground use and provided with secondary containment. Tanks and dispensing hose will be bonded and grounded. Temporary secondary containment must be provided in the refueling area that includes the storage tank and dispensing hoses.

4. CHEMICAL PARAMETERS OF CONCERN

The OSHA HAZWOPER standards (29CFR1910.120 and 1926.65) and OSHA Hazard Communication Standard require that site personnel, subcontractors, and visitors must be informed of chemical hazards associated with their work area. Exposure to surficial Solvay waste, a non-hazardous white to gray material present at the site as a result of historical industrial activities and land uses, is the primary concern for site workers and visitors. Potential exposure pathways to this material include:

- Contaminated soil and/or water
- Inhalation of contaminated dusts
- Skin contact/absorption with contaminated soils and/or water

The primary route of exposure is inhalation of airborne contaminants and contaminated dusts. However, inhalation of airborne contaminants approaching the OSHA PELs is unlikely because of natural ventilation of the work area, safe work practices, PPE, and/or air monitoring.

5. EMERGENCY RESPONSE PLAN

This emergency response section provides contact information for resources to be contacted in the event of a site emergency.

5.1 EMERGENCY PHONE NUMBERS

Emergency phone numbers will be posted or provided on site. Emergencies encountered on this site will be responded to by a combination of off-site emergency services and site personnel.

TABLE 5.1 - EMERGENCY NUMBERS

Fire, Explosion, Emergency Medical
OSHA-Recordable Injuries, Unexpected Structural Collapse, Petroleum Spills

Honeywell		
Project Manager	**Shane Blauvelt**	(315) 559-9740
State or Local Resources		
Hospital	**Upstate Medical University** 750 East Adams Street Syracuse, NY 13210-2375	(315) 464-5611
Occupational Clinic	**Industrial Medical Associates** 961 Canal St, Syracuse	(315) 478-1977
Police	**Town of Geddes Police Department** 1000 Woods Road Syracuse, NY 13209	911 (315) 468-3283
Fire Department	**Solvay Fire Department** 1925 Milton Ave Solvay NY 13209	911 (315) 468-1710
NYS DEC	To be notified by OBG upon major vapor or dust release	(845) 561-4400 (main number)
NYS DEC	**Region 7 – Syracuse** 615 Erie Blvd West Syracuse, NY	(315) 426-7200
NYSDOH	**NYSDOH** Corning Tower Empire State Plaza Albany, NY 12237	(866) 881-2809

Refer to attached **Figure 2** for Hospital Route Map.

5.2 GENERAL EMERGENCY RESPONSE PLAN

In the event of a site emergency, OBG will call the site Honeywell Emergency Response Team and/or 911. When necessary, an OBG representative will coordinate the arrival of off-site emergency personnel and Honeywell emergency response employees.

6. REFERENCES

New York State Department of Health (NYSDOH). 2000. *Generic Community Air Monitoring Plan Revision 1.* NYSDOH. http://www.dec.ny.gov/docs/regions_pdf/spldgair.pdf. June 2000.

Figures

N

LEGEND

PERIMETER AIR QUALITY MONITORING BOUNDARY

HONEYWELL
LCP SITE: FORMER ERIE CANAL/WEST FLUME IRM WP
GEDDES, NEW YORK

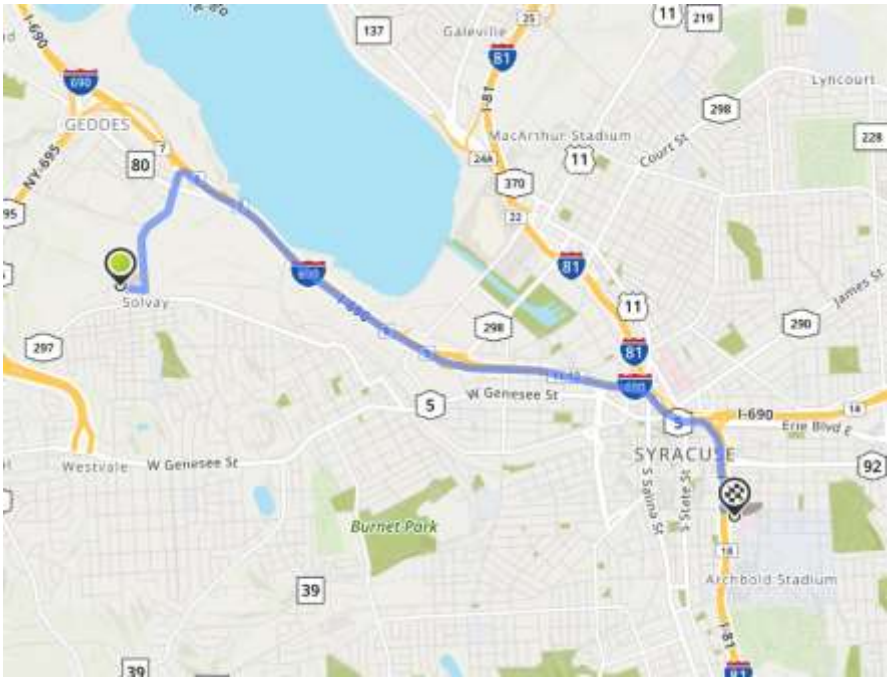
PERIMETER AIR QUALITY MONITORING BOUNDARY

0 45 90 180
Feet

1163.70388
MAY 2019

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 2 - HOSPITAL ROUTE MAP



1. Start out going east on Mathews Ave, toward Bridge St/NY-297
2. Turn left onto Bridge St/NY-297
3. Merge onto I-690 E.
4. Merge onto I-81 S toward Binghamton
5. Take the Harrison St exit. EXIT 18, toward Adam St.
6. Keep left to take the ramp toward SUNY upstate Medical Univ/SUNY ESF
7. Turn slight right onto Almond St.
8. Turn left onto E. Adams St.
9. 750 E Adams St is on the right


OBG
Part of Ramboll

Stormwater Pollution Prevention Plan (SWPPP)

Stormwater Pollution Prevention Plan
Interim Remedial Measures Work Plan
LCP Former Erie Canal and West Flume Property
Town of Geddes, Onondaga County, NY
Index No. R7-2018-06-01

Honeywell

May 2019

OBG
Part of Ramboll

MAY 8, 2019 | 1163 | 70388

Interim Remedial Measures Work Plan LCP Former Erie Canal and West Flume Property Town of Geddes, Onondaga County, NY Index No. R7-2018-06-01

Town of Geddes
Onondaga County, New York

Prepared for:

Honeywell

LIST OF APPENDICES

DOUGLAS M. CRAWFORD, P.E., VICE PRESIDENT
O'Brien & Gere Engineers, Inc.

SPDES General Permit Notice of Intent

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
HONEYWELL INTERNATIONAL INC.

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
MILLER

Owner/Operator Contact Person First Name
STEPHEN

Owner/Operator Mailing Address
301 PLAINFIELD ROAD, SUITE 330

City
SYRACUSE

State
NY

Zip
13212-

Phone (Owner/Operator)
315-552-9782

Fax (Owner/Operator)
315-552-9780

Email (Owner/Operator)
STEPHEN.MILLER@HONEYWELL.COM

FED TAX ID
22-2640650 (not required for individuals)

Project Site Information

Project/Site Name
LCP FORMER ERIE CANAL/WEST FLUME IRM

Street Address (NOT P.O. BOX)
BELLE ISLE ROAD

Side of Street
○ **North** ○ **South** ● **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
GEDDES

State
NY

Zip
13209-

County
ONONDAGA

DEC Region
7

Name of Nearest Cross Street
MATHEWS AVENUE

Distance to Nearest Cross Street (Feet)
100

Project In Relation to Cross Street
● **North** ○ **South** ○ **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)
400695

Y Coordinates (Northing)
4768632

2. What is the nature of this construction project?

○ **New Construction**

○ **Redevelopment with increase in impervious area**

● **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ● INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ● BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
8.0	4.6	0.0	0.0

5. Do you plan to disturb more than 5 acres of soil at any one time? ● **Yes** ○ **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D
%	%	%	100 %

7. Is this a phased project? ● **Yes** ○ **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date	End Date
05/15/2019	12/31/2019

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

FORMER WEST FLUME

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ● Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-15-002? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? ● **Yes** ○ **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ○ **No**
If Yes, what is the acreage to be disturbed?

.

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ◉ **Yes** ○ **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

TOWN OF GEDDES

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ **Yes** ◉ **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ◉ **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ◉ **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ◉ **Yes** ○ **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ◉ **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ○ **Yes** ◉ **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ○ **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer
O'BRIEN & GERE ENGINEERS, INC.

Contact Name (Last, Space, First)
CRAWFORD, DOUGLAS

Mailing Address
333 WEST WASHINGTON STREET

City
SYRACUSE

State NY Zip 13221-4873

Phone 315-956-6100

Fax 315-463-7554

Email
DOUG.CRAWFORD@OBG.COM

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name DOUGLAS **MI** M

Last Name CRAWFORD

Signature

Date / /

25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ● Construction Road Stabilization
- ● Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ● Stabilized Construction Entrance
- ○ Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ● Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ● Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

WOOD CHIP BERMS

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ○ All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

			.				**acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)	___.___	and/or	___.___
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	___.___	and/or	___.___
○ Tree Planting/Tree Pit (RR-3)	___.___	and/or	___.___
○ Disconnection of Rooftop Runoff (RR-4)	___.___	and/or	___.___
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			___.___
○ Rain Garden (RR-6)			___.___
○ Stormwater Planter (RR-7)			___.___
○ Rain Barrel/Cistern (RR-8)			___.___
○ Porous Pavement (RR-9)			___.___
○ Green Roof (RR-10)			___.___
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			___.___
○ Infiltration Basin (I-2)			___.___
○ Dry Well (I-3)			___.___
○ Underground Infiltration System (I-4)			___.___
○ Bioretention (F-5)			___.___
○ Dry Swale (O-1)			___.___
Standard SMPs			
○ Micropool Extended Detention (P-1)			___.___
○ Wet Pond (P-2)			___.___
○ Wet Extended Detention (P-3)			___.___
○ Multiple Pond System (P-4)			___.___
○ Pocket Pond (P-5)			___.___
○ Surface Sand Filter (F-1)			___.___
○ Underground Sand Filter (F-2)			___.___
○ Perimeter Sand Filter (F-3)			___.___
○ Organic Filter (F-4)			___.___
○ Shallow Wetland (W-1)			___.___
○ Extended Detention Wetland (W-2)			___.___
○ Pond/Wetland System (W-3)			___.___
○ Pocket Wetland (W-4)			___.___
○ Wet Swale (O-2)			___.___

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
○ **Hydrodynamic**	
○ **Wet Vault**	
○ **Media Filter**	
○ **Other**	

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name

Manufacturer

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

. **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ○ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

. **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). [ ][ ][ ].[ ][ ][ ]

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ○ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ○ **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

An IRMWP has been prepared to remediate the LCP Former Erie Canal and West Flume Site pursuant to Order on Consent and Administrative Settlement Index No. R7-20180601 (Consent Order) between the NYSDEC and Honeywell. This SWPPP addresses activities that detailed in the Interim Remedial Measures Work Plan (IRM WP). The IRM WP describes elements of the site remedy which includes a 1-ft thick soil cover and site grading to facilitate the installation of a recreational bike trail.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP NYR
- ● Other ACO R7-20180601
- ○ None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ● **No**
If Yes, Indicate Size of Impact. .

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ○ **Yes** ● **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ○ **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. NYR

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name: STEPHEN

MI: J

Print Last Name: MILLER

Owner/Operator Signature:

Date: / /

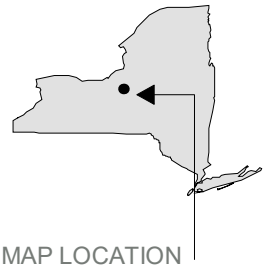
Location Map

FIGURE 1

1/8/2019 4:00:51 PM

I:\Honeywell.1163\70388.LCP_ERIE_CANAL_DESIGN\Docs\DWG\MXD\2018 Summary Report\Figure 1_Site Location Map.mxd

ADAPTED FROM: SYRACUSE WEST USGS QUADRANGLE



MAP LOCATION

HONEYWELL
LCP SITE: FORMER ERIE
CANAL/WEST FLUME
INTERIM REMEDIAL MEASURE WORK PLAN
GEDDES, NEW YORK

N

SITE LOCATION

0 1,000 2,000 4,000
Feet

1163.70388
JANUARY 2019

1:24,000

O'BRIEN & GERE ENGINEERS, INC.

Erosion and Sediment Control Specification

02570 - EROSION AND SEDIMENT CONTROL

02570 – 1 GENERAL

This Section includes temporary erosion and sediment control measures intended to minimize erosion of soils and sedimentation of lands and waters adjacent to or affected by the proposed Interim Remedial Measures Work Plan (IRM WP) at the LCP Former Erie Canal and West Flume Property.

02570 – 1.01 REFERENCES

All work will be performed in substantive compliance with the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-15-002). Materials and installation will be in accordance with the latest revisions of the following codes, standards, and specifications:

1. NYSDEC Standards and Specifications for Erosion and Sediment Control. (NYSDEC 2016).
2. New York State Stormwater Management Design Manual (the design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2015).

Approval from the NYSDEC will be received prior to disturbance of more than 5 acres at one time.

02570 – 1.02 SUBMITTALS

Submit shop drawings of silt fence and vegetative seed mixes for review.

02570 – 2 MATERIALS

02570 – 2.01 GENERAL

Provide all necessary supervision, labor, equipment and materials needed to perform the specified work. Materials may include silt fence, vegetation, wood chips, stone, erosion control fabric, and other manufactured products to reduce erosion and control sedimentation.

02570 – 2.02 SILT FENCE

Posts will be steel (either T or U type) or 2-inch square hardwood with 10-foot spacing. Wire fence backing will be woven wire, 14.5 gauge, with 6-inch maximum mesh opening.

Geotextile filter cloth sizing will be as recommended by the manufacturer. The material will have a minimum tensile strength of 120 pounds (test procedure ASTM D1682).

02570 – 2.03 STABILIZED CONSTRUCTION ACCESS

Stone used for stabilized construction accesss will be a minimum of 2-inch stone. Equivalent material may be used with approval.

Geotextile bedding will consist of Mirafi 500X or equal.

Overall dimensions and installation notes are as shown on the Design Drawings.

02570 – 2.04 TEMPORARY VEGETATION

See Section 3.02.

02570 – 2.05 CONSTRUCTION PATHWAY STABILZATION

Access pathways shall be installed with the materials specified on the Design Drawings prior to use.

02570 – 2.06 DUST CONTROL

Measures may include water application or mulching.

02570 – 2.07 WOOD CHIP BERM

Wood chips shall be from native woody vegetation and shall be free of any refuse, contaminants or other materials toxic to plant growth. Chips from allelopathic species such as black walnut (*Juglans nigra*) shall not be used.

Material from plants identified on the Prohibited and Regulated Invasive Species - 6 NYCRR Part 575 (http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf) shall not be used.

02570 – 3 CONSTRUCTION DETAILS

02570 – 3.01 SEQUENCE

A temporary stabilized construction access will be installed in the ingress and egress locations. If needed, vehicles/equipment will be washed on the access prior to leaving the site. Periodic top dressing of the access will be performed as necessary as material accumulates to prevent tracking of material onto off-site roadways.

Wood chip berms or silt fencing will be installed along toes of embankments, on downstream portions of the site perimeter, and around spoil piles and stockpiles. Double layers will be installed on slopes in excess of 15% and adjacent to streams, wetlands, and Onondaga Lake.

Staging/laydown areas for vehicles and construction equipment will be located on stabilized portions of the site.

Construction pathway stabilization shall be installed along proposed routes.

Additional erosion and sediment control (ESC) facilities will be installed as shown on the Design Drawings and as recommended following periodic inspections. These facilities will remain in place until construction activities are completed and the site is stabilized.

The site will be cleared and grubbed as needed within the limits of work only. Cleared vegetation, soil, and other debris will be stockpiled in approved areas for disposal at an approved location. Chipped vegetation may be used for creating wood chip berms, as mulch (as long as the depth of material does not exceed two inches in any location), and other approved uses if it is derived from native species approved by a biologist.

Upon stabilization of the site and approval of final site inspection, temporary ESC measures will be removed.

02570 – 3.02 TEMPORARY STABILIZATION

The Project approach includes planting the Project area with permanent vegetation as soon as practicable. In the event of unforeseen Project delays (*i.e.,* longer than the time frames in Permit No. GP-0-15-002), areas will be temporarily stabilized with the following measures:

1. Place additives by approved methods.
2. The seed will not be more than two years old. The seed vendor shall provide certified germination tests that are not more than six months old at the time of seeding operations. The seed mixture may be varied to suit special conditions of soil peculiar to the areas to be seeded. Seed that has become wet, moldy, or otherwise damaged in transit or storage will not be acceptable.
3. Temporary seed will be oats (or similar annual cover crop that does not persist to the next year) applied at a rate of 45 pounds per acre. If performed between October 1 and March 31, winter wheat or approved equal will also be applied at a rate of 10 pounds per acre. Spread seed by hand or approved sowing equipment.
4. After sowing has been completed, straw mulch shall be applied evenly over the entire seeded area at a rate of 2 tons per acre if organic mulch has not yet been applied in that area.

02570 – 3.03 PERMANENT STABILIZATION

Permanent stabilization measures will be initiated pursuant to the IRAWP, Design Documents, and the New York State Standards and Specifications for Erosion and Sediment Control (NYSDEC 2016) as soon as practicable. For portions of the site where soil disturbance activities have permanently ceased, stabilization measures must be implemented within 7 days of the conclusion of activities. This requirement does not apply if the installation of stabilization measures is precluded by snow cover or frozen ground conditions; however, measures will be implemented as soon as practicable.

02570 - 3.04 ADDITIONAL STORMWATER CONTROLS

Listed below is a description of additional controls and measures that will be implemented at the site to minimize sediment transport via stormwater.

Proper precautions will be taken so soil does not spill or is tracked onto adjacent roadways during earthwork. Soil will be removed as soon as practicable so that it does not enter surface and subsurface drainage systems.

Dust control measures will be provided before dust migrates off-site. Measures may include water application or mulching but will not include use of chemical additives without prior approval from the NYSDEC.

Planting materials will be properly stored and/or contained.

Chemicals (*e.g.* herbicides) with spill potential shall have secondary containment (*e.g.,* spill pallets) or be stored indoors in sealed, non-leaking containers.

02570 – 3.05 MAINTENANCE

Construction period operation and maintenance:

1. Clean, repair and/or replace silt fences, wood chip berms, construction accesss, and swales as necessary.
2. Remove sediment from swales, silt fence, wood chip berms, and sediment traps when it has accumulated to one half the design capacity.
3. Clean and/or sweep affected roadways and pathways daily, or more frequently if otherwise required following periodic inspections.
4. Observe equipment and vehicles within the work area, particularly for identification of vehicles leaking petroleum products that could enter stormwater drainage facilities.
5. Stabilized construction accesss and construction access pathways will be re-dressed as necessary.
6. Remove debris and litter on a weekly basis or more frequently if necessary.

Post-construction operation and maintenance:

1. Vegetation within the Project area will be monitored and maintained. Dead vegetation will be replaced as necessary to maintain a minimum ground coverage of 80%.
2. Areas will be maintained and/or reseeded or stabilized to protect against erosion.
3. Sloughing or erosion of embankments will be repaired.
4. Inspect down-gradient swales and rip-rap aprons annually. Remove and dispose of trees, brush, obstructions and other foreign objects to prevent interference with proper facility function.
5. Inspect and clean down-gradient stormwater management facilities as necessary to maintain full flow capacity. Remove sediment and other debris as needed.

02570 – 3.06 INSPECTION DURING CONSTRUCTION

General

A qualified inspector[1] will inspect the proposed erosion and sediment control measures and disturbed areas of the construction site for compliance with the SWPPP until the site is stabilized. The qualified inspector will evaluate whether site-generated sediment is entering natural surface water bodies located within, or immediately adjacent to, the site boundaries. Digital photographs, with date stamp, will be taken that show the conditions of erosion and sediment control facilities and stormwater management practices that have been identified as needing corrective actions. Additional photographs will be taken after implementation of corrective actions showing the condition of the facilities and practices. These photographs will be attached to the inspection form within seven calendar days of the respective inspection.

[1] Qualified inspector means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or other NYSDEC endorsed individual(s). It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four hours of training every three years.

The qualified inspector will conduct at least one inspection every seven calendar days. For sites where the NYSDEC has authorized greater than 5-acres of soil at one time, the qualified inspector will conduct at least two site inspections every seven calendar days, with a minimum of two full calendar days between inspections. A typical inspection report form for conducting the inspections is included in Appendix F of the SWPPP.

The qualified inspector will complete the inspection report form following each inspection. The inspection report form will include the inspector's name, date, findings of the inspections, notes, and actions taken to repair/replace defective control measures. A site map indicating locations of areas of concern and drainage pathways will be included. Within one business day of the completion of an inspection, the qualified inspector shall notify site personnel of any corrective actions that need to be taken. Corrective actions shall be initiated within one business day of this notification and shall be completed within seven calendar days following the date of the inspection. Further mitigation measures will be taken if warranted. Each inspection report is to remain on file at the site as part of the SWPPP until the site is stabilized and the SPDES Notice of Termination (NOT) is submitted to the NYSDEC.

Prior to construction, at least one "trained contractor[2]" shall be identified who will be responsible for implementation of the SWPPP and inspection of the erosion and sediment controls in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (NYSDEC 2016). At least one trained contractor shall be on site on a daily basis while soil disturbance activities are being performed.

Temporary Construction Shutdown (Winter Conditions)

When soil-disturbing activities have been temporarily suspended (*e.g.*, winter shutdown) and temporary stabilization measures have been applied to disturbed areas, periodic inspections by the trained contractor may be halted. However, the qualified inspector must perform a site inspection at least once every 30 calendar days. The NYSDEC shall be notified in writing prior to reducing the inspection frequencies. Inspections by the trained contractor and qualified inspector shall resume in accordance with this Section as soon as soil disturbance activities resume.

02570 – 3.07 NON-STORMWATER DISCHARGES

Areas at the site dedicated for construction vehicle transit or equipment staging shall be identified by the trained contractor which will be monitored and where runoff can be controlled. Cleaning of construction vehicles and equipment will occur in designated staging/laydown areas. Chemicals and detergents will not be used.

Water used for dust control measures will be applied using proper quantities and equipment to avoid runoff to the extent practicable. No chemical additives will be used.

[2] Trained contractor means an employee from the contracting (construction) company that has received four hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the trained contractor shall receive four hours of training every three years. It can also mean an employee from the contracting (construction) company that meets the qualified inspector qualifications (*e.g.* licensed Professional Engineer, CPESC, Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity). The trained contractor will be responsible for the day to day implementation of the SWPPP.

02570 – 3.08 SPILL PREVENTION

The following spill prevention measures will be performed:

- Products will be kept in their original containers with the original manufacturer's label to the extent practicable.
- Materials with potential for spillage that are stored on-site will be stored in a neat, orderly manner in their appropriate containers and in secondary containment.
- Substances will not be mixed with one another unless recommended by the substance manufacturer.
- Whenever possible, product will be used up or packages re-sealed before proper management of contents and containers off site.
- Manufacturers' recommendations for proper use and disposal will be followed.
- Inspection will be made for proper use of materials.
- On-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage of petroleum products. Petroleum products will be stored in closed containers which are clearly labeled. Used oils will be disposed of properly.
- Materials will be brought on-site in the minimum quantities required to limit on-site storage.
- Refueling of vehicles and equipment will occur a minimum of 50-feet from streams, lakes and wetlands.

02570 – 3.09 SPILL CONTROL PRACTICES

Spills of petroleum, toxins, or hazardous material will be reported to the appropriate State or local government agencies. Spills will be cleaned upon discovery.

Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the recommended methods and cleanup supplies.

Materials and equipment necessary for spill cleanup will be kept in an on-site material storage area. Equipment and materials will include but not be limited to shovels, rags, gloves, goggles, spill control materials, sand, sawdust, and trash containers specifically for this purpose.

The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

A spill report will be completed and will include a description of the spill, what caused it, and the corrective measures taken. Spills shall be reported the NYS Spill Hotline (1-800-457-7362) within 2 hours of discovery unless the quantity is known to be less than 5 gallons and is contained.

02570 – 3.10 CERTIFICATIONS

Contractor Certification - Each Contractor involved in soil disturbance shall understand and sign a form (see Appendix E) containing the following certification statement:

> "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that Honeywell or the operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge

Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

Prior to construction, at least one qualified inspector will be identified who shall understand and sign a form containing the following certification statement:

> "I hereby certify that I meet the criteria set forth in the General Permit to conduct site inspections for this Project and that the appropriate erosion and sediment controls described in the SWPPP and as described in the Pre-construction Site Assessment Checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction."

02570 – 3.11 NOTICE OF INTENT/TERMINATION

The completed and signed SPDES Notice of Intent (NOI) will be submitted to the NYSDEC prior to initiation of construction activities. The SPDES NOT will be completed and submitted to the NYSDEC upon completion of construction and stabilization of the Project area.

Pre-Construction Requirements

PRE-CONSTRUCTION REQUIREMENTS: PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

PREAMBLE TO SITE ASSESSMENT AND INSPECTIONS

The following information is to be read by all person's involved in the construction of stormwater related activities for this project:

- Honeywell shall have a "qualified inspector[1]" conduct an assessment of the site prior to the "commencement of construction[2]". Honeywell shall certify using this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed and implemented to ensure overall preparedness of the site for the "commencement of construction[2]".
- When construction starts, site inspections shall be conducted by the "qualified inspector" at least once every seven calendar days. For sites where Honeywell has received authorization from the New York State Department of Environmental Conservation (NYSDEC) to disturb greater than five acres of soil at one time, the "qualified inspector" shall conduct at least two site inspections every seven calendar days. There shall be a minimum of two full calendar days between inspections. Honeywell shall maintain a record of all inspection reports on site and have them available to the permitting authorities upon request.
- Prior to filing the Notice of Termination (NOT) or the end of permit term, Honeywell shall have a "qualified inspector" perform a final site inspection. The "qualified inspector" shall certify that the site has undergone "final stabilization" using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing, etc.) not needed for long-term erosion control have been removed. In addition, Honeywell must identify and certify that all permanent structures described in the SWPPP have been constructed and the operation and maintenance plan has been received and will be implemented to ensure the structure(s) continuously functions as designed.
- This document needs to be kept on file at the work site (*e.g.,* in the work trailer) at all times.
- Honeywell and the Contractors shall read the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities GP-0-15-002. This SWPPP has been prepared for this project to assist the Contractors with compliance with GP-0-15-002. The Contractors must follow the SWPPP and understand that this document constitutes the minimum standards for compliance.
- In the event of a transfer of ownership or responsibility for stormwater runoff, Honeywell (permittee) must notify the new Owner in writing of the requirement to obtain permit coverage by submitting a new Notice of Intent. Once the new Owner obtains permit coverage, Honeywell shall submit a completed NOT with the

[1] "Qualified Inspector" includes persons knowledgeable in the principles and practices of erosion and sediment controls, such as a licensed professional engineer, certified professional in erosion and sediment control (CPESC), registered landscape architect or other NYSDEC-endorsed professional. It also means someone working under the direct supervision of the licensed professional engineer or licensed landscape architect, provided that person has training in the principles and practices of erosion and sediment control.

[2] "Commencement of construction" means the initial disturbance of soils associated with clearing, grading, or excavation activities, or other construction activities that disturb or expose soils such as demolition or stockpiling of fill material.

PRE-CONSTRUCTION REQUIREMENTS:
PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

name and permit identification number of the new Owner. If Honeywell maintains ownership of a portion of the construction activity and will disturb soil, they must obtain their coverage under the general permit. Permit coverage for the new Owner will be effective when an acknowledgement letter is received from the NYSDEC confirming receipt of the completed Notice of Intent (NOI), provided Honeywell was not subject to a sixty business day authorization period that has not expired as of the date the Department receives the NOI from the new Owner.

- Prior to commencing soil disturbance, Honeywell and the Contractors must complete the forms and certifications in this Appendix. This information shall be kept up to date.
- All enclosed certifications shall be completed and each subcontractor shall complete their portion of the certification. Each certification is to be completed and signed by a president, treasurer or vice president, or any person who performs similar policy or decision-making functions, and by the on-site individual having responsibility for the firm and each one of the subcontractors implementing erosion control measures.
- The Contractors need to start corrective measures within one day after notified of inspection.

PRE-CONSTRUCTION REQUIREMENTS:
PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization: _____

PRE-CONSTRUCTION SITE ASSESSMENT CHECKLIST

Construction (soil disturbance) shall not commence until all Erosion and Sediment Control Facilities have been installed, inspected, and found acceptable by Honeywell. Add comments below as necessary.

1. NOTICE OF INTENT, SWPPP, AND CONTRACTOR'S CERTIFICATION

Yes	No	NA	
[ ]	[ ]	[ ]	Has a Notice of Intent been filed with acknowledgement letter received from the NYSDEC?
[ ]	[ ]	[ ]	Has MS4 Approval Letter (if needed) been received?
[ ]	[ ]	[ ]	Is the SWPPP on site? If yes, where? _____
[ ]	[ ]	[ ]	Is the SWPPP current? What is the latest revision date? _____/_____/_____
[ ]	[ ]	[ ]	Is a copy of the NOI on site? If yes, where? _____
[ ]	[ ]	[ ]	Have all the Contractors involved with the stormwater-related activities signed a Contractor's Certification Statement (Appendix D-3)?
[ ]	[ ]	[ ]	Have the Contractors' Construction Stabilization Schedule (Appendix D-2) been received?

2. RESOURCE PROTECTION

YES	No	NA	
[ ]	[ ]	[ ]	Are construction limits clearly flagged or fenced?
[ ]	[ ]	[ ]	Have the important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips (especially in perimeter areas) been flagged for protection?
[ ]	[ ]	[ ]	Were creek crossings installed prior to land-disturbing activity?
[ ]	[ ]	[ ]	Have wetlands been identified, flagged, and protected?

3. SURFACE WATER PROTECTION

YES	No	NA	
[ ]	[ ]	[ ]	Has clean stormwater runoff been diverted from areas to be disturbed?
[ ]	[ ]	[ ]	Have bodies of water either on-site or in the vicinity been identified and protected?
[ ]	[ ]	[ ]	Have appropriate practices to protect on-site or downstream surface water been installed?
[ ]	[ ]	[ ]	Are clearing and grading operations divided into areas <5 acres?
[ ]	[ ]	[ ]	Has any grading operation occurred prior to this inspection, except for Erosion & Sediment Control Practice installation?

PRE-CONSTRUCTION REQUIREMENTS:
PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

4. STABILIZED CONSTRUCTION ACCESS

YES	No	NA	
[ ]	[ ]	[ ]	Has a temporary construction entrance been installed to capture mud and debris from construction vehicles before they enter the public highway?
[ ]	[ ]	[ ]	Have other access areas (entrances, construction routes, and equipment parking areas) been stabilized immediately as work takes place with gravel or other cover?
[ ]	[ ]	[ ]	Is there a plan to remove or clean sediment tracked onto public streets on a regular basis?

5. PERIMETER SEDIMENT CONTROLS

Yes	No	NA	
[ ]	[ ]	[ ]	Do the silt fence and wood chip berm material and installation comply with the contract drawing, SWPPP and specifications?
[ ]	[ ]	[ ]	Are silt fences and wood chip berms installed at appropriate spacing intervals?
[ ]	[ ]	[ ]	Were sediment trapping devices installed as the first land disturbing activity.

6. POLLUTION PREVENTION FOR WASTE AND HAZARDOUS MATERIALS

Yes	No	NA	
[ ]	[ ]	[ ]	Has Honeywell and/or Operator or designated representative been assigned to implement the spill prevention avoidance and response approach?
[ ]	[ ]	[ ]	Are there appropriate materials to control spills on site? If yes, where? _____

Items that need to be addressed prior to Qualified Inspector's Certification	
1	
2	
3	
4	

PRE-CONSTRUCTION REQUIREMENTS: PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

QUALIFIED INSPECTOR'S CREDENTIALS AND CERTIFICATION

I hereby certify that I meet the criteria set forth in the General Permit to conduct site inspections for this project and that the appropriate erosion and sediment controls described in the SWPPP and as described in the following Pre-construction Site Assessment Checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction.

Signature:

Name (please print):

Title: **Date:**

Company Name:

Address:

Phone: **E-Mail:**

PRE-CONSTRUCTION REQUIREMENTS: CONSTRUCTION STABILIZATION SCHEDULE

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

Contractors shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased:

- If greater than 5-acre disturbance limit is approved, 7 days from the date the soil disturbance activity ceased
- In no case more than 14 days from the date the soil disturbance activity ceased

When construction activity is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

Contractors are responsible to provide a construction schedule for review and approval by the Owner/ Operator:

Major Grading Activity	Portion of the Site	Date to Commence	Date To Be Stabilized (Permanently or Temporarily)
1. Erosion and Sediment Control Practices Installation			
2. Clearing and Grubbing and Construction Staging			
3. Site Grading			
4. Install Bike Trail Subgrade			
5. Cover Installation			
6. Seeding and Mulching			
7. Final Stabilization and Construction Cleanup			

PRE-CONSTRUCTION REQUIREMENTS: CONTRACTOR/SUBCONTRACTOR CERTIFICATION STATEMENT

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization: _____

(Each Contractor/Subcontractor is required to sign this certification statement prior to working on-site.)

CONTRACTOR INFORMATION

Contractor/Subcontractor: _____

Contractor/Subcontractor Address: _____

_____

Telephone Numbers(s): (Office) _____ **(Trailer)** _____

Contacts:
1) _____ **(Mobile #)** _____
2) _____ **(Mobile #)** _____
3) _____ **(Mobile #)** _____

Name(s) of Trained Individual(s) from Contractor's/Subcontractor's company that will be responsible for implementing the SWPPP:

Name: _____ **Title**: _____

Name: _____ **Title**: _____

Trained Contractor means an employee from a contracting (construction) firm that has received four hours of training that has been endorsed by the NYSDEC (i.e., Soil and Water Conservation District or other NYSDEC endorsed entity) in proper erosion and sediment control principles. After receiving the initial training, the trained contractor will receive four hours of training every three years. This individual will be responsible for the day to day implementation of the SWPPP.

PRE-CONSTRUCTION REQUIREMENTS: CONTRACTOR/SUBCONTRACTOR CERTIFICATION STATEMENT

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

STORMWATER MEASURES

Contractor/Subcontractor is responsible for implementing/maintaining the following stormwater and erosion control measures:

1. **Contractor's/Subcontractor's Name:**
   Measures Responsible for:
   a.
   b.
   c.
   d.
2. **Contractor's/Subcontractor's Name:**
   Measures Responsible for:
   a.
   b.
   c.
   d.
3. **Contractor's/Subcontractor's Name:**
   Measures Responsible for:
   a.
   b.
   c.
   d.

III. CONTRACTOR'S/SUBCONTRACTOR'S CERTIFICATION

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the Owner and/or Operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) general permit for stormwater discharges from construction activities, and that it is unlawful for any person to cause, or contribute to, a violation of water quality standards. Furthermore, I understand that certifying false, incorrect, or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil, and/or administrative proceedings. I also certify that I have received a copy of the SWPPP and will retain a copy of such SWPPP on-site during construction.

IV. SIGNATURE

Signature **Date**

Name (print) **Title**

Inspection Reports

FIELD RECORD COPY

INSPECTION REPORT FORM

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization: _____

Inspection Location: _____ **Inspection #:** _____
(portion of the site)

Name of the Inspector: _____ **Date/Time of Inspection:** _____

Weather Conditions: Dry Wet Sunny Rain Cloudy Snow (circle whatever applies)

Soil Condition: Wet Dry Saturated Snow covered

Project Checklist	Yes	No	N/A
Erosion and Sediment Controls:			
1. Are silt fences in place as shown on the plan and functioning as designed?			
2. Are wood chip berms in place as shown on the plan and functioning as designed?			
3. Are protected areas identified and protected?			
4. Are construction entrances stabilized and functioning as designed?			
5. Are temporary sediment traps installed and cleaned out as needed?			
6. Are construction access roads stabilized?			
7. Is there any evidence of migration of sediment off site?			
8. Is washdown water being directed to an approved sediment practice?			
Stabilization Practices:			
9. Have all disturbed portions of the site where earth disturbing activities have ceased and will not resume within 14 days (if 7 days, 5 acres disturbance waiver is granted) been temporarily stabilized by covering with plastic and mulching, or by mulching and seeding?			
10. Have all disturbed portions of the site where earth disturbing activities have permanently ceased been stabilized with topsoil, permanent seed, and mulch?			
Additional Storm Water Controls:			
11. Are material storage / handling areas properly stabilized?			
12. Are dust control measures (water application, mulching) in place?			

FIELD RECORD COPY

INSPECTION REPORT FORM

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

List Disturbed Areas	Currently Disturbed		Temp. Stabilized		Perm. Stabilized	
	Yes	No	Yes	No	Yes	No
1.						
2.						
3.						

Condition of Runoff leaving the Site	
1. **Location – 1 2 3 4 5 6**	
2. **Location – 1 2 3 4 5 6**	
3. **Location – 1 2 3 4 5 6**	
4. **Location – 1 2 3 4 5 6**	

Legend:

1. *Eroded areas need to be fixed.*
2. *Silt needs to be removed.*
3. *Operational – no current issues*
4. *Stabilized and functioning as designed.*
5. *Turbid water present.*
6. *Additional erosion control needed.*

Additional Requirements
1.
2.
3.
4.

FIELD RECORD COPY

INSPECTION REPORT FORM

Project Name: LCP Former Erie Canal and West Flume Property IRM WP

Site Location: Town of Geddes **County:** Onondaga

NYSDEC Date of Authorization:

Work performed since last inspection and effectiveness of corrective actions:

Comments on general site conditions:

Remarks/Recommendations of corrective measures needed* (attach map and photographs [with date stamping] – show corrective actions needed and areas where corrective actions have been completed since the last inspection):

*Please make a distinction between deficiencies to the SWPPP and normal maintenance items.

PLEASE SEE ATTACHED MAP FOR LOCATIONS AND PHOTOGRAPHS

WEEKLY INSPECTION REPORTS SHALL BE PROVIDED TO SWPPP CONTRACTOR WITHIN ONE BUSINESS DAY AFTER INSPECTION COMPLETION.

☐ **Site in compliance with SWPPP**
☐ **Site not in compliance with SWPPP and corrective measures are required by Contractor**

Inspector: _____ **Date:** _____
(Signature of Qualified Inspector)

Responsible Professional (if applicable): _____

SPDES General Permit Notice of Termination

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name: Honeywell International, Inc.

2. Street Address: 301 Plainfield Road, Suite 330

3. City/State/Zip: Syracuse, NY 13212

4. Contact Person: Stephen Miller | 4a. Telephone: 315-552-9781

4b. Contact Person E-Mail: Stephen.Miller@honeywell.com

II. Project Site Information

5. Project/Site Name: LCP Former Erie Canal and West Flume Property IRM WP

6. Street Address: Belle Isle Road

7. City/Zip: Geddes 13209

8. County: Onondaga

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:	
Title/Position:	
Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

NYSOPRHP Documentation

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

November 7, 2018

Susan L. Bupp
Senior Cultural Resource Specialist
Parsons Transportation Group, Inc.
100 M Street SE, Suite 1200
Washington, DC 20003
(via email)

Re: USFWS/ACE
Onondaga Lake NRD - Erie Canal Trail Project
Camillus, Geddes and Solvay, Onondaga County
18PR07156

Dear Ms. Bupp:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the opinion of the New York SHPO that no additional archaeological survey work (Phase IA/IB) is required for the project area because of previous ground disturbance. We also determined that the undertaking will have No Adverse Effect on a partially intact section of the ca.1850 Enlarged Erie Canal and the remains of Lock 50, which was determined to be eligible for inclusion in the National Register of Historic Places.

If I can be of any further assistance, please do not hesitate to contact me at (518) 268-2166 or john.bonafide@parks.ny.gov.

Sincerely,

John A. Bonafide
Director,
Technical Preservation Services Bureau
Agency Historic Preservation Officer

cc: NY-CRIS Project Contact List *(via CRIS email)*
Andy Beers *(via email)*

Design Drawings

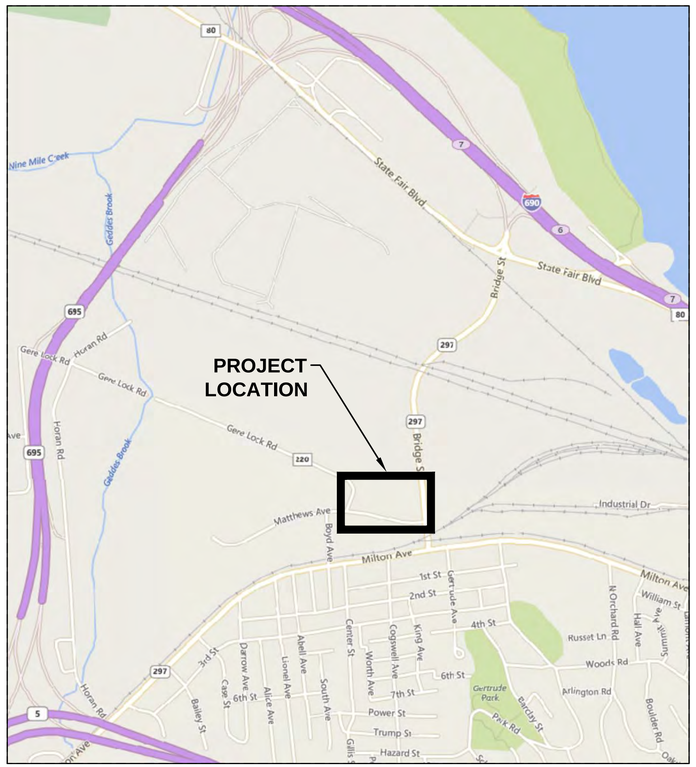
(transmitted under separate cover)


OBG
Part of Ramboll

Design Drawings

DESIGN DRAWINGS

LCP FORMER ERIE CANAL & WEST FLUME PROPERTY INTERIM REMEDIAL MEASURE



SITE LOCATION MAP
NOT TO SCALE

INDEX TO DRAWINGS

HONEYWELL INTERNATIONAL, INC.
SYRACUSE, NEW YORK

MAY 2019

O'BRIEN & GERE ENGINEERS, INC.

SAVED: 5/21/19 11:13 AM

GENERAL NOTES:

1. VERIFY ALL DIMENSIONS PERTINENT TO THE WORK OF THIS CONTRACT IN THE FIELD. IF DISCREPANCIES ARE FOUND BETWEEN THE PLANS AND PHYSICAL CONDITIONS OF THE SITE, NOTIFY THE ENGINEER AND HONEYWELL.
2. THESE DRAWINGS SHOW EXISTING CONTOURS AT A 1-FT INTERVAL.
3. PROPOSED WORK IS SHOWN IN BOLD TEXT AND LINES.

TOPOGRAPHIC SURVEY AND MAPPING:

1. TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THE CONTRACT DRAWINGS IS REFERENCED HORIZONTALLY TO THE NORTH AMERICAN DATUM OF 1983 (NAD83) AND PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (CENTRAL ZONE) AND REFERENCED VERTICALLY TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). HORIZONTAL COORDINATES ARE REFERENCED TO THE GRID COORDINATE SYSTEM.
2. TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PREPARED BY THEW ASSOCIATES, PLLC, MAP SHOWING EXISTING CONDITIONS LCP ERIE CANAL AND WEST FLUME AREA SITE HONEYWELL INTERNATIONAL, DATED JANUARY 31, 2019.
3. TOPOGRAPHIC SURVEY WAS SUPPLEMENTED FROM CONTOURS AND SURFACE RASTER OBTAINED FROM OCTOBER 2018 UAV FLIGHT BY OBG.
4. BIKE PATH DESIGN PROVIDED BY PARSONS, REFER TO ERIE CANALWAY TRAIL BID SET DATED 3/29/19.

GENERAL UTILITY:

1. THE APPROXIMATE LOCATION OF KNOWN EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS. VERIFY THE TRUE LOCATION PRIOR TO COMMENCING WORK.
2. COORDINATE WORK AFFECTING EXISTING UTILITIES WITH THE RESPECTIVE UTILITY COMPANY OWNER. DETAILS OF CONSTRUCTION AND/OR RELOCATION SHALL BE APPROVED BY THE UTILITY OWNERS AND OTHER APPROVING AGENCIES, IF REQUIRED.
3. STORMWATER CULVERT SHALL BE DR-17 IPS HDPE MATERIAL. CULVERT PIPE SHALL HAVE FUSED JOINTS AND BE INSTALLED IN ACCORDANCE WITH SECTION 33 00 01.

VEGETATION APPLICATION:

1. SEED SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 31 22 19.

EROSION & SEDIMENT CONTROL:

1. STABILIZED CONSTRUCTION ACCESS SHALL BE LOCATED AS REQUIRED PER CONSTRUCTION ACTIVITIES, SEE DETAIL 'A' SHEET C-501.
2. EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE MAINTAINED FREE OF DEBRIS AND FOREIGN MATTER AND OPERATIONAL THROUGHOUT THE DURATION OF THE PROJECT.
3. UPON COMPLETION OF THE CONTRACT WORK, EXISTING DRAINAGE SYSTEMS TO REMAIN WITHIN THE LIMITS OF THIS CONTRACT WILL BE CLEANED FOLLOWING COMPLETION OF WORK TO ATTAIN THEIR FULL FLOW CAPABILITIES.
4. ALL WORK SHALL BE PERFORMED IN SUBSTANTIVE COMPLIANCE WITH NYSDEC SPDES GP-0-15-002 AND PURSUANT TO THE PROJECT SWPPP.

ABBREVIATIONS

DI	DUCTILE IRON
CI	CAST IRON
CPP	CORRUGATED PLASTIC PIPE
ELEV	ELEVATION
EX.	EXISTING
FT	FOOT/FEET
INV	INVERT
LBS.	POUNDS
MAX.	MAXIMUM
MIN.	MINIMUM
NO.	NUMBER
O.C.	ON CENTER
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SICPP	SMOOTH INTERIOR CORRUGATED PLASTIC PIPE
TYP.	TYPICAL

LEGEND

- EXISTING MONITORING WELL
- EXISTING UTILITY POLE
- EXISTING STORM DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER MANHOLE
- EXISTING LIGHT POLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING BOLLARD
- EXISTING TELEPHONE PEDESTAL
- EXISTING GAS LINE MARKER
- EXISTING APPROX. OVERHEAD ELECTRIC
- EXISTING APPROX. UNDERGROUND ELECTRIC
- EXISTING APPROX. TELEPHONE
- EXISTING APPROX. WATER
- EXISTING APPROX. GAS
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- GUIDE RAIL
- EXISTING FENCE
- EXISTING SHEET PILE WALL
- EXCAVATION LIMITS BY OTHERS
- EXISTING CONTOUR
- SUPPLEMENTARY EXISTING CONTOUR
- PROPERTY LINE
- EXISTING RIP RAP
- COVER TYPE BOUNDARY
- PROPOSED MAJOR CONTOUR FINAL
- PROPOSED MINOR CONTOUR FINAL
- CULVERT AND END SECTION
- WOOD CHIP BERM, SILT FENCE, COMPOST FILTER SOCK OR EQUAL
- LIMIT OF PROPOSED 1-FT SOIL COVER
- STONE APRON
- STABILIZED CONSTRUCTION ACCESS
- TEMPORARY COMPOST FILTER SOCK

PRELIMINARY
NOT FOR CONSTRUCTION
DATE: MAY 21, 2019

IN CHARGE OF D. CRAWFORD
DESIGNED BY J. GEOGHEGAN
CHECKED BY R. CUDDY
DRAWN BY D. KENT

NO.	DATE	REVISION	INT.
-			
A	5/22/19	ISSUED FOR NYSDEC REVIEW	DMC

O'BRIEN & GERE ENGINEERS, INC

HONEYWELL INTERNATIONAL INC.
LCP FORMER ERIE CANAL & WEST FLUME PROPERTY
INTERIM REMEDIAL MEASURE
SYRACUSE, NEW YORK

CIVIL

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

FILE NO. 1163.70388 -002
DATE MAY 2019

C-001

I:\HONEYWELL.1163\70388.LCP_ERIE_CANAL_DESIGN\DOCS\DWG\SHEETS\70388-002-G001.DWG

SAVED: 5/21/19 4:10 PM

STONE APRON,
SEE DETAIL SHEET C-501

REMOVE AND REPLACE
EXISTING CHAIN LINK FENCE
IN-KIND AS REQUIRED

ES-2
18" INV = 393.20

ES-1
18" INV = 393.60

LIMIT OF SOIL COVER
SEE NOTES 3 AND 4, THIS SHEET
AND DETAIL 'A', SHEET C-502

FLARED END SECTION (TYP.),
SEE DETAIL SHEET C-501

TEMPORARY COMPOST FILTER SOCK
(TYP.), SEE DETAIL SHEET C-501

ERIE CANALWAY TRAIL
SEE DETAIL SHEET C-502

CHANNEL SEEDING,
SEE DETAIL 'C', SHEET C-502

COVER TRANSITION
AREA SEE DETAIL 'D',
SHEET C-502

STABILIZED CONSTRUCTION ACCESS,
SEE DETAIL SHEET C-501

EXISTING MONITORING WELL
TO BE DECOMMISSIONED (TYP)
SEE NOTE 1 THIS SHEET

EXISTING MANHOLE,
SEE NOTE 2 THIS
SHEET

WOOD CHIP BERM, SILT
FENCE, COMPOST FILTER
SOCK OR EQUAL, SEE
DETAIL SHEET C-501

Matthews Avenue

Belle Isle Road

Gravel Access Road

NOTE:

1. EXISTING MONITORING WELLS (7) TO BE DECOMMISSIONED IN ACCORDANCE WITH NYSDEC POLICY CP-43: GROUNDWATER MONITORING WELL DECOMMISSIONING POLICY.
2. EXISTING 34" CONCRETE SANITARY MANHOLE TO BE RAISED 12" TO BE FLUSH WITH FINAL GRADE.
3. PROPOSED CONTOURS ARE FINAL ELEVATIONS. THESE AREAS ARE TO BE INSTALLED IN ACCORDANCE WITH DETAIL 'A' OR 'B' ON SHEET C-502, TO PROVIDE A MINIMUM OF 1-FT IMPORTED FILL.
4. HATCHED AREAS SHOWN ABOVE ARE TO RECEIVE A MINIMUM OF 1-FT IMPORTED FILL IN ACCORDANCE WITH DETAIL 'A', SHEET C-502. PROPOSED CONTOURS HAVE NOT BEEN SHOWN IN HATCHED AREAS WHERE FINAL ELEVATIONS WILL BE ACHIEVED BY RAISING EXISTING SURFACE BY A MINIMUM OF 1-FT, PROVIDING POSITIVE SURFACE DRAINAGE, AND GENERALLY MAINTAINING EXISTING DRAINAGE PATTERNS.

SITE PLAN

SCALE: 1" = 30' 30' 0 30'

TRUE NORTH

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: MAY 21, 2019

IN CHARGE OF D. CRAWFORD				
DESIGNED BY J. GEOGHEGAN				
CHECKED BY R. CUDDY				
DRAWN BY D. KENT	A	5/22/19	ISSUED FOR NYSDEC REVIEW	DMC
	NO.	DATE	REVISION	INT.

O'BRIEN & GERE ENGINEERS, INC

HONEYWELL INTERNATIONAL INC.
LCP FORMER ERIE CANAL & WEST FLUME PROPERTY
INTERIM REMEDIAL MEASURE
SYRACUSE, NEW YORK

CIVIL

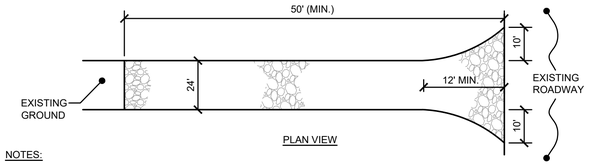
SITE PLAN

FILE NO. 1163.70388 -003

DATE MAY 2019

C-101

I:\HONEYWELL.1163\70388.LCP_ERIE_CANAL_DESIGN\DOCS\DWG\SHEETS\70388-003-C101.DWG



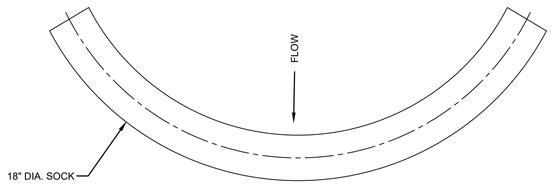
PLAN VIEW

NOTES:

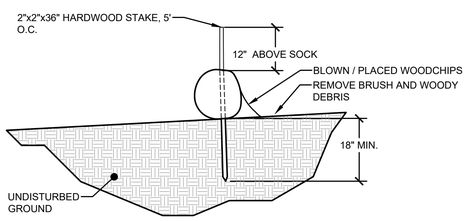
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN 6".
4. WIDTH 24' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE EGRESS OCCURS.
5. SEPARATION FABRIC (MIRAFI 500X OR EQUAL) - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - SURFACE WATER FLOWING OR DIVERTED TOWARDS CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS NOT POSSIBLE, A MOUNTABLE BERM 3' WIDE (MIN.) WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE PERFORMED IN A STABILIZED AREA.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT STORM WATER POLLUTION PREVENTION PLAN.
10. STABILIZED CONSTRUCTION ACCESS SHALL BE CONSTRUCTED IN THE APPROXIMATE LOCATIONS SHOWN AT A MINIMUM. ADDITIONAL ENTRANCES SHALL BE CONSTRUCTED AS NEEDED TO MINIMIZE SEDIMENTATION AND OFF SITE TRACKING. ADDITIONAL LOCATIONS SHALL BE AS REVIEWED BY THE ENGINEER.

A STABILIZED CONSTRUCTION ACCESS DETAIL

NOT TO SCALE



PLAN VIEW



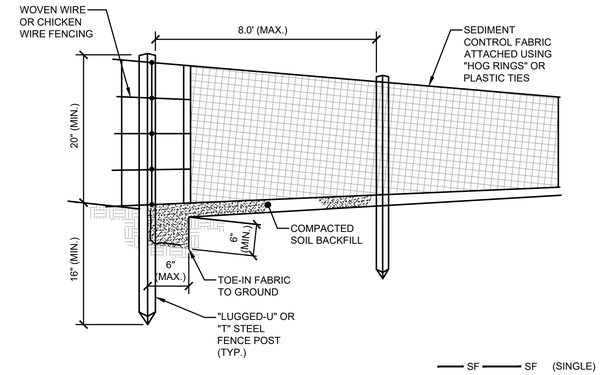
SECTION DETAIL

NOTES:

1. FILTER SOCK TO BE FILTREXX SILT SOXX, OR EQUAL.
2. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS ACCUMULATED TO ONE HALF THE DESIGN CAPACITY.
3. THE SOCK AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF WHEN THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.
4. WHEN INSTALLED IN CHANNEL, INSTALL SPACING AS SHOWN ON PLANS, OR ONE PER EVERY 18-INCH DROP IN GRADE ALONG CHANNEL.

C COMPOST FILTER SOCK DETAIL

NOT TO SCALE

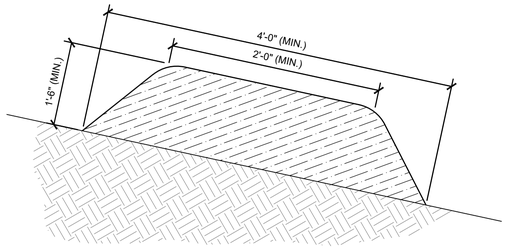


NOTES:

1. SILT FENCE SHALL BE PLACED AS DETAILED IN THE SWPPP.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION OF POSTS.
4. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, IN ACCORDANCE WITH THE SWPPP.
6. FENCE TO BE ALIGNED ALONG A SINGLE CONTOUR AS CLOSELY AS POSSIBLE.
7. FILTER FABRIC FENCE MUST BE INSTALLED AT LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION MUST BE TURNED UP SLOPE TO AN ELEVATION CHANGE OF 18".
8. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.

B SILT FENCE DETAIL

NOT TO SCALE

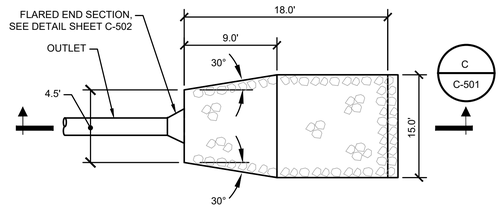


NOTES:

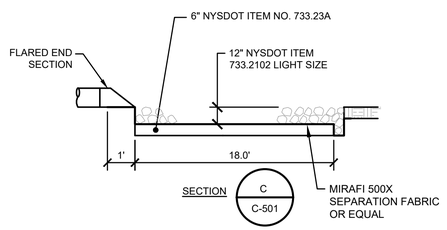
1. PRIOR TO PLACEMENT, OBSTRUCTIONS SUCH AS TREE LIMBS, LARGE ROCKS, ETC. SHALL BE REMOVED.
2. BERMS SHALL BE ALIGNED PARALLEL TO EXISTING CONTOURS AND LOCATED BELOW ALL DISTURBED AREAS.
3. WHERE PRACTICABLE, WHEN USED ADJACENT TO A WATERWAY, A MINIMUM 50' WIDE VEGETATED STRIP SHALL BE MAINTAINED DOWNGRADIENT OF THE BERM.
4. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT.
5. BERMS SHALL NOT BE LOCATED IN AREAS OF CONCENTRATED FLOW.
6. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACH HALF THE HEIGHT OF THE BERM. DAMAGED OR DETERIORATED PORTIONS OF THE BERM SHALL BE REPLACED IMMEDIATELY UPON INSPECTION.
7. WHEN THE AREA HAS BEEN PERMANENTLY STABILIZED, THE BERM SHALL BE REMOVED OR RAKED AND LEVELED.

D WOOD CHIP BERM DETAIL

NOT TO SCALE



PLAN VIEW



E STONE APRON DETAIL

NOT TO SCALE

PRELIMINARY NOT FOR CONSTRUCTION

DATE: MAY 21, 2019

IN CHARGE OF D. CRAWFORD
DESIGNED BY J. GEOGHEGAN
CHECKED BY R. CUDDY
DRAWN BY D. KENT

NO.	DATE	REVISION	INT.
A	5/22/19	ISSUED FOR NYSDEC REVIEW	DMC

O'BRIEN & GERE ENGINEERS, INC

HONEYWELL INTERNATIONAL INC.
LCP FORMER ERIE CANAL & WEST FLUME PROPERTY
INTERIM REMEDIAL MEASURE
SYRACUSE, NEW YORK

CIVIL

EROSION & SEDIMENT CONTROL DETAILS

FILE NO. 1163.70388 -005

DATE MAY 2019

C-501

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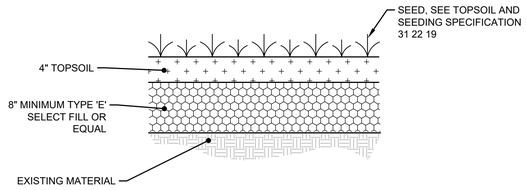
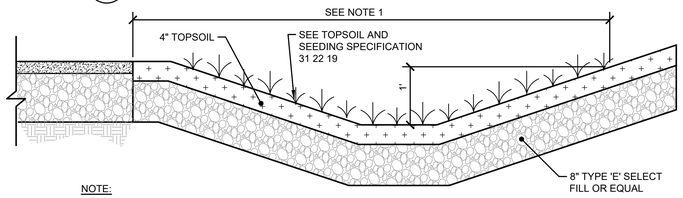


NOTE:

1. AREAS RECEIVING SOIL COVER TO BE SEEDED USING SEED MIX FROM TABLE 1 IN TOP SOIL AND SEEDING SPECIFICATION 31 22 19, UNLESS WITHIN CHANNEL (SEE DETAIL 'C', THIS SHEET)

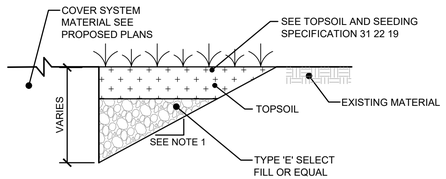
A SOIL COVER DETAIL
NOT TO SCALE



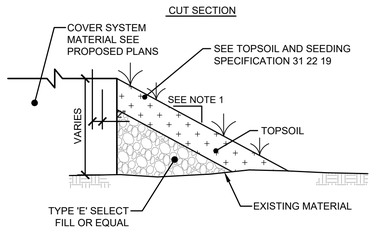
NOTE:

1. THIS AREA TO BE SEEDED USING TABLE 2 (CHANNEL SEED MIX). TO BE APPLIED FROM TRAIL EDGE TO 1-FOOT ABOVE CHANNEL BOTTOM GRADE.

C CHANNEL SEEDING DETAIL
NOT TO SCALE



CUT SECTION

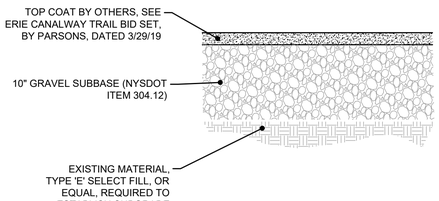


FILL SECTION

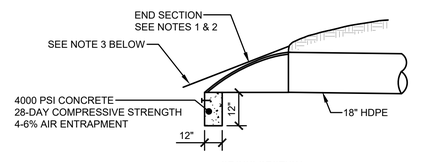
NOTE:

1. COVER TRANSITION AREAS SHALL CONSIST OF COMPACTED TYPE 'E' SELECT FILL AT A MAXIMUM OF 3H:1V SLOPE TO SURROUNDING GRADE.

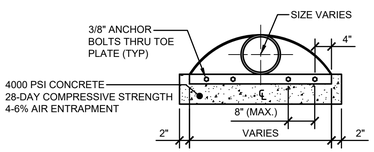
D COVER TRANSITION AREA DETAIL
NOT TO SCALE



B ERIE CANALWAY TRAIL DETAIL
NOT TO SCALE



CROSS SECTION

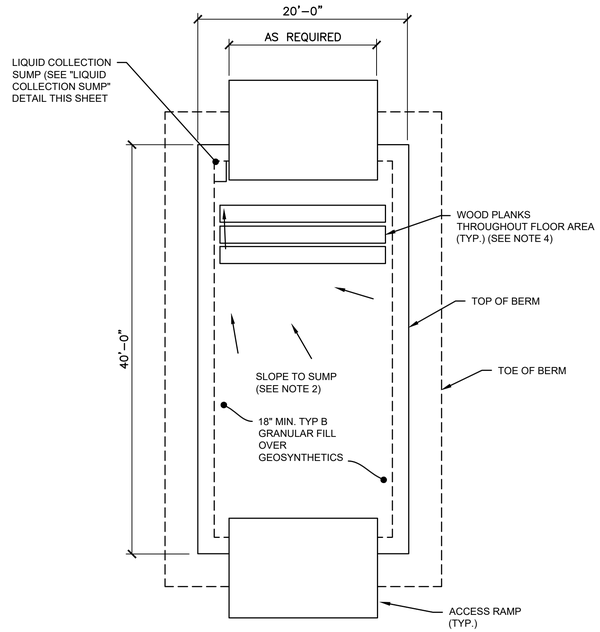


ELEVATION

NOTES:

1. FLARED END SECTION SHALL BE HDPE. SIZE AND CONNECTION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS FOR HDPE PIPE SIZE.
2. END SECTIONS TO BE INSTALLED ON PROPOSED STORM SEWER INLETS AND OUTLETS, WHERE SHOWN ON PLANS.
3. INSTALL CULVERT-END SAFETY GRATE IN GENERAL ACCORDANCE WITH NYSDOT ITEM 603-05.

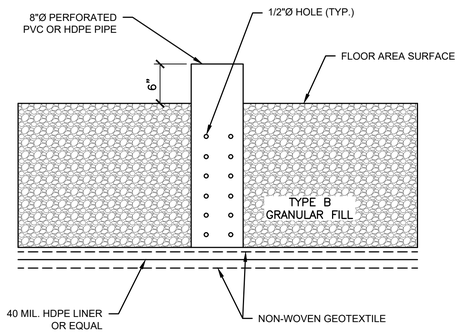
E FLARED END SECTION
NOT TO SCALE



NOTES:

1. THE SUB-GRADE SURFACE SHALL BE UNIFORM AND FREE OF DELETERIOUS MATERIALS (E.G., SHARP STONES, WOODY DEBRIS, ETC.) THAT COULD DAMAGE THE HDPE LINER.
2. THE DECONTAMINATION PAD (INCLUDING HDPE LINER) SHALL BE SLOPED TOWARD A COLLECTION SUMP TO FACILITATE THE REMOVAL OF LIQUIDS. LIQUIDS SHALL BE DISPOSED OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
3. COMPACTION OF TYPE "E" SELECT FILL MATERIAL SHALL BE SUFFICIENT DENSITY TO PROVIDE A FIRM AND UNIFORM SURFACE. PLACEMENT AND COMPACTION OF FILL MATERIAL ABOVE GEOSYNTHETICS SHALL BE PERFORMED IN A MANNER AND USING APPROPRIATE EQUIPMENT THAT AVOIDS DAMAGING THE GEOSYNTHETICS.
4. WOOD PLANKS SHALL BE PLACED ABOVE THE TYPE "C" SELECT FILL LAYER THROUGHOUT THE WORKING SURFACE OF THE DECONTAMINATION PAD TO PROVIDE A STABLE SURFACE FOR VEHICLES AND EQUIPMENT TO BE DECONTAMINATED. WOOD PLANKS DAMAGED DURING USE SHALL BE REPLACED TO MAINTAIN A STABLE WORKING SURFACE.
5. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, THE DECONTAMINATION PAD (INCLUDING GEOSYNTHETICS AND FILL MATERIALS) SHALL BE DISPOSED OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

F DECONTAMINATION PAD PLAN
NOT TO SCALE



G LIQUID COLLECTION SUMP DETAIL
NOT TO SCALE

PRELIMINARY NOT FOR CONSTRUCTION
DATE: MAY 21, 2019

IN CHARGE OF	D. CRAWFORD			
DESIGNED BY	J. GEOGHEGAN			
CHECKED BY	R. CUDDY			
DRAWN BY	D. KENT	A	5/22/19	ISSUED FOR NYSDEC REVIEW	DMC
		NO.	DATE	REVISION	INT.

O'BRIEN & GERE ENGINEERS, INC

HONEYWELL INTERNATIONAL INC.
LCP FORMER ERIE CANAL & WEST FLUME PROPERTY
INTERIM REMEDIAL MEASURE
SYRACUSE, NEW YORK

CIVIL

MISCELLANEOUS DETAILS

FILE NO. 1163.70388 -

DATE MAY 2019

C-502

Technical Specifications

SECTION 31 01 01
EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes excavation and backfilling including loosening, removing, refilling, transporting, storage and disposal of all materials classified as “earth” necessary to be removed for the construction and completion of all work under the Contract, and as shown on the Design Drawings, specified or directed.

1.2 REFERENCES

A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:

1. American Society for Testing and Materials (ASTM)

a. D1556 Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

b. D1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3) (2,700 kN-m/m^3)

c. D6398 Test Methods for Density of Soil and Soil-aggregate in Place by Nuclear Methods (Shallow Depth)

1.3 DEFINITIONS

A. Earth

1. All materials such as sand, gravel, clay, loam, ashes, cinders, pavements, muck, roots or pieces of timber, soft or disintegrated rock, not requiring blasting, barring, or wedging from their original beds, and specifically excluding all ledge or bedrock and individual boulders or masonry larger than one-half cubic yard in volume.

1.4 COORDINATION REQUIREMENTS

A. Coordinate layout and installation of all Contract work with earthwork activities and space requirements.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.1 UNAUTHORIZED EXCAVATION

A. Whenever excavations are carried beyond or below the lines and grades shown on the Contract Drawings, or as given or directed by the Engineer, all such excavated space shall be refilled with select fill, controlled low strength material, concrete or other materials as the Engineer may direct.

3.2 BACKFILLING

A. General

1. All excavations shall be backfilled to the original surface of the ground or to such other grades as may be shown, specified or directed.

2. Backfilling shall be done with suitable excavated materials that can be satisfactorily compacted during refilling of the excavation. In the event the excavated materials are not suitable, Select Fill as specified on Contract Drawings shall be used for backfilling.

B. Unsuitable Materials

1. Stones and pieces of rock greater than 3 inches in any single dimension shall not be used in any portion of the backfill.

2. Pieces of pavement, frozen earth, or other miscellaneous debris shall not be allowed in any part of the backfill.

C. Compaction and Density Control

1. Compaction and density control not applicable for top soil application. Refer to Top Soil and Seeding Specification for application direction.

2. If compaction is accomplished with a vibratory drum roller, the compaction shall be performed using a minimum 12 ton vibratory drum compactor. This type of compactor is defined as a machine which primarily develops its compactive effort from the vibrations create and is classified for use according to the developed compactive force rating per linear inch of drum width (PLI). The minimum effective compactive force, PLI, used shall be 740 PLI and the minimum effort shall be 6 passes of 4.5 feet per second. Each lift shall not exceed a loose lift thickness of 6-inches.

3. If a sheepsfoot roller is used the minimum effort will be 6 passes at a maximum of 15 feet per second, and compaction shall continue until the sheepsfoot roller can “walk out” of the compacted material.

4. Other types of compactors may be employed, subject to acceptance by the Engineer. Acceptance will be based upon the results of on-site demonstrations.

5. Where required, to assure adequate compaction, in-place density test shall be made by an approved testing laboratory.

   a. The moisture-density relationship of the backfill material shall be determined by ASTM D698, Method D.

      1) Compaction curves for the full range of materials used shall be developed.

   b. In-place density shall be determined by the methods of ASTM D1556 or ASTM D2922 and shall be expressed as a percentage of maximum dry density.

6. In areas outside the limits of the Erie Canalway Bike Trail, the Engineer shall witness adequate compaction has been achieved of a given area on a daily basis by using a fully loaded 10 wheeled dump truck as the proof rolling test. If the referenced dump truck leaves a rut that is greater than ½ inch deep or the backfill material develops a wave in front of the test truck tires then the area must be continued to be compacted.

7. Where required, to obtain the optimum moisture content add sufficient water during compaction to assure the density of the backfill. If, due to rain or other causes, the material exceeds the optimum moisture content, it shall be allowed to dry, assisted if necessary, before resuming compaction or filling efforts.

1.2 OTHER REQUIREMENTS

A. Unfinished Work

1. When, for any reason, the work is to be left unfinished, all roadways, sidewalks and work areas shall be left unobstructed with their surfaces in a safe and satisfactory condition.

B. Hauling Material over Public Roads and Streets

1. Site material shall not be hauled over public streets or pavements.
2. When it is necessary to haul imported material over public streets or pavements, the Contractor shall provide suitable, tight vehicles so as to prevent deposits on the streets or pavements. In all cases where any materials are dropped from the vehicles, the Contractor shall clean up the same as often as required to keep the crosswalks, streets and pavements clean and free from dirt, mud, stone and other hauled material.

A. Dust Control

1. Calcium chloride and petroleum products shall <u>not</u> be used for dust control.

END OF SECTION

SECTION 31 05 14
SELECT FILL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes select fill materials used as either embedment or special backfill, as specified, as directed by the Owner's Representative, or as shown on the Design Drawings.

1.2 REFERENCES

A. Materials and installation shall comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:

1. American Society for Testing and Materials (ASTM)

    a. D422 - Method for Particle-Size Analysis of Soil

1.3 SUBMITTALS

A. Submit the following as specified in the IRM WP:

1. The name and location of the source of each material.
2. An affidavit from the Owner for each product stating that the site of the source was never used as a dump site for chemical, toxic, hazardous, or radioactive materials and it is not now or ever been listed as a suspected depository for chemical toxic, hazardous, or radioactive materials by any federal, state, or other governmental agency, department, or bureau.
3. Samples and test reports of each material, including analytical data results as applicable.

1.4 DEFINITIONS

A. Special Granular Material

1. Special granular material shall mean any of the granular materials listed below or other materials ordered by the Owner.

PART 2 - PRODUCTS

2.1 SELECT FILL MATERIALS

A. Type A Select Fill

1. Crushed Gravel

    a. Thoroughly crushed, durable, sharp angled fragments of gravel free from coatings. Crushed particles shall be a minimum of 90% by weight of the particles with at least two fractured faces. The total area of each fractional face shall exceed 25% of the maximum cross-sectional area of the particle. Results of aggregate soundness loss test shall not exceed 18%. Losses from LA Abrasion tests shall not exceed 40%.

b. Crushed Gravel shall have the following gradation by weight:

% Passing	SIEVE
100	2-inch
90-100	1½-inch
0-10	¾-inch
0-5	½-inch

B. Type B Select Fill

1. Crushed Stone

a. Thoroughly washed clean, sound, tough, hard crushed limestone or approved equal free from coatings. Gradation for crushed stone shall be the same as specified for Type A Select Fill.

C. Type C Select Fill

1. Crushed Stone

a. Thoroughly washed, clean, sound, tough, hard, crushed limestone or equal free from coatings. It shall have the following gradation by weight:

% Passing	SIEVE
100	1½-inch
90-100	1½-inch
0-15	1/4-inch

D. Type E Select Fill

1. Run-of-Bank Gravel

a. Run-of-bank gravel or other acceptable granular material free from organic matter with the following gradation by weight, as determined by washing through the sieve in accordance with ASTM D422.

% Passing	SIEVE
100	1-1/2-inch
30–65	1/4-inch
0–10	No. 200

E. Type F Select Fill

1. Run-of-crusher Stone

a. Run-of-crusher hard durable limestone, or equal, having the following gradation by weight:

% Passing	SIEVE
100	2-inch
30-65	¼-inch
5 - 40	No. 40
0–10	No. 200

F. Type J Select Fill

1. Stone Substrate

   a. Washed stone substrate shall be thoroughly washed, clean, non-angular, sound, hard, round, cobbley, "river stone" or "river rock" or other equal material free from coatings and organic matter. Washed stone substrate shall have the following gradation by weight:

% Passing	SIEVE
100	4 inch
5-20	1 1/2 inch
0-10	½ inch
0 - 5	No. 200

END OF SECTION

SECTION 31 22 19
TOPSOIL AND SEEDING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes topsoil, seed, mulch, and associated work.

1.2 REFERENCES

A. Analytical References

1. pH – ASTM D4972
2. Organic Matter – ASTM D22974
3. Particle size distribution – ASTM D422
4. Organic mulch testing – AASHTO Designation MP 10-03

1.3 PERFORMANCE REQUIREMENTS

A. The Contractor shall comply with all applicable Federal, State and Local codes, ordinances, regulations, statutes and standards.

B. The Contractor shall meet or exceed all guidelines provided herein and perform corrective actions in a timely manner to achieve performance criteria given in Section 3.2.

1.4 SUBMITTALS

A. The following items shall be submitted:

1. The name and location of source and data (pH, organic matter, particle size distribution) for off-site soil.
2. Samples and test reports of each material shall include analytical data that complies with Part 375 Restricted Use Commercial; Soil Cleanup Objectives.
3. An affidavit from the Owner for each product stating that the site of the source was never used as a dump site for chemical, toxic, hazardous, or radioactive materials and it is not now or ever been listed as a suspected depository for chemical toxic, hazardous, or radioactive materials by any federal, state, or other governmental agency, department, or bureau.
4. Latin name, source and content data for seed mixes. Data for each container of seed used shall be submitted; data submitted as representative of multiple containers will not be accept
5. Should hydromulching be used, the Contractor shall submit data including material and application rates.
6. Invoices for seed procured for the project shall be submitted.
7. Should organic mulch be used source and testing data (per AASHTO Designation MP 10-03) shall be submitted.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil shall have moderate pH (5 to 7.5) and organic matter concentration ranging from 3 to 6%.

1. Topsoil shall be natural, friable and fertile soil that meets the USDA basic soil texture classes of loam, silt loam or sandy loam to be recovered from the A horizon of an in-place soil. Topsoil shall be capable of sustaining healthy plant life. Topsoil shall be unscreened but be reasonably free of subsoil, heavy or stiff clay, brush, weeds, foreign material, stones larger than 4 inches in greatest dimension. Topsoil as delivered to the site or stockpiled shall meet the following requirements:

    a. Topsoil shall be well graded and have the following particle size distribution (by weight):

        1) 85 to 100 percent passing 1 inch, 65 to 100 percent passing 1/4 inch, and 15 to 80 percent passing a Number 200 sieve (0.075 mm, 0.003 inch). The 2 micron particle size shall not be greater than 20 percent of the total sample mass, as determined by hydrometer analysis.

        2) Organic materials used in the manufacture of topsoil shall meet the requirements of NYSDOT 713-15.

        3) Each load of topsoil shall be inspected by the Owner's Representative and is subject to rejection.

B. Seed

1. Seed mixtures shall be of commercial stock of the current or prior season's crop and shall be delivered in unopened containers bearing the guaranteed analysis of the mix. Seed shall be labeled true to species and variety. The percent of pure live strain of the seed shall be submitted with the seed mixture.

2. The nursery shall provide a seed analysis report including certified analyses of percent viability, percent weed seeds, and percent of other crop seed. The certifying laboratory shall be indicated on the seed tag or on associated nursery submittals.

3. The state of origin of the seed shall be indicated on the seed tag or on associated nursery submittals.

4. The following weed seeds shall not be present in seed mix:

    a. smooth brome

    b. purple loosestrife

    c. common reed

    d. cattail

    e. reed canarygrass

    f. others included in the Federal Noxious Weeds list

    g. others included in the following citation: http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf

    Seed shall meet the standards of germination and purity set by New York State or the Association of Official Seed Certifying Agencies (AOSCA).

C. Compost, equivalent, or hydromulch shall be applied with the seed mix

1. Compost to accompany permanent seeding shall meet the requirements of AASHTO Designation MP 10-03 and as follows:

a. Minimum organic matter content 25% - 65% (dry weight basis) for surfaces to be vegetated.

b. Graded so that 100% of the material passes a 3-inch size sieve, 90-100% passes a 1-inch size sieve, 65-100% passes a ¾-inch sieve, and 0-75% passes a ¼-inch sieve. Maximum particle length shall be 6-inches.

c. Soluble salt concentrations shall be less than or equal to 5 mmhos/cm.

d. Compost shall be stable to very stable according to the current test method.

e. pH shall be between 5.0 – 8.5.

D. Seed mixes shall be as specified in Tables 1 and 2, in areas defined in the Contract Drawings.

Table 1. Successional Old Field Seed Mix[1]

Common name	Latin name	Weight percent
Oats	*Avena sativa*	32
Indiangrass	*Sorghastrum nutans*	13
Switchgrass	*Panicum virgatum*	9
Canada wildrye	*Elymus canadensis*	8
Big blustem	*Andropogon gerardii*	8
Little bluestem	*Schizachyrium scoparium*	5
American senna	*Senna hebecarpa*	4
Autumn bentgrass	*Agrostis perennans*	4
Blackeyed Susan	*Rudbeckia hirta*	4
Purple bergamot	*Monarda media*	4
Grass Leaved goldenrod	*Euthamia graminifolia*	3
New England aster	*Aster novae-angliae*	2
Annual sunflower	*Helianthus annuus*	2
Partridge pea	*Chamaecrista fasciculata*	1
Maximilian's Sunflower	*Helianthus maximilianii*	1

[1]If seed mix is applied in the fall (October 15 to December 1), add 10 pounds per acre of winter wheat (*Triticum aestivum*).

Apply seed mix at 40lb/ac

Table 2. Channel Seed Mix.[1]

Common name	Latin name	Weight percent
Oats	*Avena sativa*	21
Redtop	*Agrostis alba*	12
Virginia wildrye	*Elymus virginicus*	17
Creeping bentgrass	*Agrostis stolonifera*	14
Alkaligrass	*Puccinellia distans*	5

Table 2. Channel Seed Mix.[1]		
Common name	**Latin name**	**Weight percent**
Fox Sedge	*Carex vulpinoidea*	5
Softstem bulrush	*Schoenoplectus tabernaemontani*	5
Hardstem bulrush	*Schoenoplectus acutus*	5
Eastern bur reed	*Sparganium americanum*	5
Fowl bluegrass	*Poa palustris*	5
Ticklegrass	*Agrostis scabra*	2
Autumn bentgrass	*Agrostis perennans*	2
Path rush	*Juncus tenuis*	2
[1]If seed mix is applied in the fall (October 15 to December 1), add 10 pounds per acre of winter wheat (*Triticum aestivum*). **Apply seed mix at 30lb/ac**		

PART 3 - EXECUTION

3.1 INSTALLATION

A. Topsoil shall be applied to the required depth, as defined in Contract Drawings, and tracked perpendicular to the slope gradient.

B. Install the Successional Old Field Seed Mix (Table 1) or Channel Seed Mix (Table 2) to areas of the Site as defined in the Contract Drawings.

C. Seeding procedures

1. Seeding shall be performed during two seasonal windows: April 1 to June 15, October 15 through December 1, or as otherwise practicable and reviewed by the Owner's Representative. If site soils require stabilization at times outside of these dates, they shall be temporarily mulched using two tons per acre of straw.
2. Seeding shall not be done during windy weather (greater than 5 mph or as reviewed by the Owner's Representative).
3. Seed and compost/hydromulch shall be spread to form a continuous blanket over the prepared seed bed:
    a. If compost is used, it should be applied one to two inches thick with seed incorporated throughout the mulch profile.
    b. If hydromulch is used it shall be applied at a rate according to manufacturer's recommendations for a given slope percentage.
        1) The first pass shall include all seed and enough hydromulch for visual metering.
        2) The second pass shall include the remaining hydromulch.
    c. In areas, that are only temporarily seeded, broadcast seeding with straw placement (2 tons per acre) is also acceptable in order to prevent erosion of the soil prior to the placement of mulch and the permanent seed mix.

4. If seed is hand broadcast, soil shall be lightly raked to the extent possible to cover seed with less than 1/8th" of topsoil and to improve seed/soil contact.

3.2 MAINTENANCE

A. Restored areas shall be monitored after construction is complete and corrective measures taken to maintain 80% vegetative cover in accordance with the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002) and areas are accepted by the Owners' Representative. Maintenance responsibilities begin immediately after seeding and continue through at least the first full growing season following the year of installation.

B. Additional maintenance and monitoring activities may be performed in accordance with the project Site Management Plan or as directed by the Owner.

END OF SECTION

SECTION 31 23 00
EXCAVATION AND FILL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes excavation and backfill as required for pipe installation or other construction in the excavation or trench, and removal and disposal of water, in accordance with the applicable provisions of the Section entitled "Earthwork" unless modified herein, or as shown on the Contract Drawings.

1.2 SUBMITTALS

A. None.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 EXCAVATION

A. The trench excavation shall be located as shown on the Contract Drawings or as specified. Under ordinary conditions, excavation shall be by open cut from the ground surface. Where the depth of trench and soil conditions permit, tunneling may be required beneath cross walks, curbs, gutters, pavements, trees, driveways, railroad tracks and other surface structures. No additional compensation will be allowed for such tunneling over the price bid for open cut excavation of equivalent depths below the ground surface unless such tunnel excavation is specifically provided for in the Contract Documents.

B. Trenches shall be excavated to maintain the depths as shown on the Contract Drawings or as specified for the type of pipe to be installed.

C. The alignment and depth shall be determined and maintained by the use of a string line installed on batter boards above the trench, a double string line installed along side of the trench or a laser beam system.

D. The minimum width of trench excavation shall be 6 inches on each side of the pipe hub for 21-inch diameter pipe and smaller and 12 inches on each side of the pipe hub for 24-inch diameter pipe and larger.

E. Trenches shall not be opened for more than 300 feet in advance of pipe installation nor left unfilled for more than 100 feet in the rear of the installed pipe when work is in progress without the consent of the Engineer. Open trenches shall be protected and barricaded as required.

F. Bridging across open trenches shall be constructed and maintained where required.

3.2 SUBGRADE PREPARATION FOR PIPE

A. Where pipe is to be laid on undisturbed bottom of excavated trench, mechanical excavation shall not extend lower than the finished subgrade elevation at any point.

B. Where pipe is to be laid on special granular material the excavation below subgrade shall be to the depth specified or directed. The excavation below subgrade shall be refilled with special

granular material as specified or directed, shall be deposited in layers not to exceed 6 inches and shall be thoroughly compacted prior to the preparation of pipe subgrade.

C. The subgrade shall be prepared by shaping with hand tools to the contour of the pipe barrel to allow for uniform and continuous bearing and support on solid undisturbed ground or embedment for the entire length of the pipe.

D. Pipe subgrade preparation shall be performed immediately prior to installing the pipe in the trench. Where bell holes are required they shall be made after the subgrade preparation is complete and shall be only of sufficient length to prevent any part of the bell from becoming in contact with the trench bottom and allowing space for joint assembly.

3.3 STORAGE OF MATERIALS

A. Traffic shall be maintained at all times.

B. Where conditions do not permit storage of materials adjacent to the trench, the material excavated from a length as may be required, shall be removed by the Contractor, at his cost and expense, as soon as excavated. The excess material shall be removed to locations selected and obtained by the Contractor.

1. The Contractor shall, at his cost and expense, bring back adequate amounts of satisfactory excavated materials as may be required to properly refill the trenches.

C. The Contractor shall refill trenches with Select Fill or other suitable materials and excess excavated materials shall be disposed of as spoil.

3.4 REMOVAL OF WATER AND DRAINAGE

A. The Contractor shall at all times provide and maintain proper and satisfactory means and devices for the removal of all water entering the trench, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work.

B. The removal of water shall be in accordance with the Section entitled "Earthwork".

3.5 PIPE EMBEDMENT

A. All pipe shall be protected from lateral displacement and possible damage resulting from superimposed backfill loads, impact or unbalanced loading during backfilling operations by being adequately embedded in suitable pipe embedment material. To ensure adequate lateral and vertical stability of the installed pipe during pipe jointing and embedment operations, a sufficient amount of the pipe embedment material to hold the pipe in rigid alignment shall be uniformly deposited and thoroughly compacted on each side, and back of the bell, of each pipe as laid.

B. Concrete cradle and encasement of the class specified shall be installed where and as shown on the Contract Drawings or ordered by the Engineer. Before any concrete is placed, the pipe shall be securely blocked and braced to prevent movement or flotation. The concrete cradle or encasement shall extend the full width of the trench as excavated unless otherwise authorized by the Engineer. Where concrete is to be placed in a sheeted trench it shall be poured directly against sheeting to be left in place or against a bond-breaker if the sheeting is to be removed.

C. Embedment materials placed above the centerline of the pipe or above the concrete cradle to a depth of 12 inches above the top of the pipe barrel shall be deposited in such manner as to not damage the pipe. Compaction shall be as required for the type of embedment being installed.

3.6 BACKFILL ABOVE EMBEDMENT

A. The remaining portion of the pipe trench above the embedment shall be refilled with suitable materials compacted as specified.

1. The trench shall be refilled in horizontal layers not more than 8 inches in thickness.

2. Hand tamping shall be required around buried utility lines or other subsurface features that could be damaged by mechanical compaction equipment.

B. Backfilling of trenches beneath, across or adjacent to drainage ditches and water courses shall be done in such a manner that water will not accumulate in unfilled or partially filled trenches and the backfill shall be protected from surface erosion by adequate means.

1. Where trenches cross waterways, the backfill surface exposed on the bottom and slopes thereof shall be protected by means of stone or concrete rip-rap or pavement.

C. All settlement of the backfill shall be refilled and compacted as it occurs.

D. Surfaces shall be restored as specified or directed.

END OF SECTION

SECTION 33 00 01
PIPELINE INSTALLATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes installation requirements for metallic and non-metallic pipelines, except special pipelines where installation requirements are specified elsewhere, as shown on the Contract Drawings, complete with fittings and specials.

B. Certain features of pipes shall be as scheduled on the Contract Drawings.

1.2 REFERENCES

A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:

1. American Society for Testing and Materials (ASTM).
2. American Water Works Association (AWWA).

1.3 COORDINATION REQUIREMENTS

A. Coordinate layout and installation of new work with existing facilities and work by others.

1.4 SUBMITTALS

A. Submit the following:

1. Manufacturer's certifications that materials furnished are in compliance with the applicable requirements of the referenced standards and this specification. Layout drawings are required for pipelines to be installed within structures, showing the location including the support system, sleeves and appurtenances.

PART 2 - PRODUCTS

2.1 PIPE MATERIAL

A. Materials for the piping, joints and fittings shall be as specified in the Technical Specification Section for the type of pipe to be installed, shown in the pipe schedule or on the Contract Drawings.

1. Pipe and appurtenances shall comply with the applicable standards for its type of material.

B. Pipe Joints

1. Type of pipe joints shall be as scheduled in the pipe schedule, or as shown, or noted on the Contract Drawings.

C. Delivery Inspection

1. Pipe and appurtenances shall be inspected by the Contractor in the presence of the Engineer on delivery and prior to installation for conformance with the standards and specifications.
2. Materials not conforming to the standards and specifications shall not be stored on site but removed at once and replaced with material conforming to the specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

A. The Contractor shall examine areas and conditions for compliance with manufacturer's installation recommendations and requirements.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION – UNDERGROUND

A. General

1. Install pipelines, fittings, specials, and accessories as shown on the Contract Drawings and in accordance with the manufacturer's installation instructions.

2. Excavation and backfilling shall be in accordance with the applicable provisions of the Technical Specification Section entitled "Excavation and Fill".

3. Blocking will not be permitted under pipe, except where the pipe is to be laid with concrete cradle or encasement.

4. No pipe shall be laid upon a foundation in which frost exists; nor when there is danger of the formation of ice or the penetration of frost at the bottom of the excavation.

5. Temporary bulkheads shall be placed in open ends of pipe whenever pipe laying is not actively in process. The bulkheads shall be designed to prevent the entrance of dirt, debris or water.

6. Precautions shall be taken to prevent the flotation of the pipe in the event of water entering the trench.

B. Location and Grade

1. Pipelines and appurtenances shall be located as shown on the Contract Drawings or as directed and as established from the Contractor's control survey.

2. The alignment and grades shall be determined and maintained by a method acceptable to the Engineer.

C. Subgrade

1. The subgrade for pipelines shall be earth or special embedment as specified or directed and shall be prepared in accordance with the Technical Specification Section entitled "Excavation and Fill".

D. Pipe Joints

1. Joints shall be assembled using gaskets, lubricants and solvents as furnished by the pipe manufacturer and in accordance with the manufacturer's recommendations.

2. Joint deflection shall be in compliance within manufacturer's tolerances or as otherwise specified.

E. Embedment

1. Embedment shall be deposited and compacted in accordance with the Contract Drawings, Technical Specification Section entitled "Excavation and Fill", and the Technical Specification Section or schedule for the type of pipe being installed.

3.3 CUTTING AND SPECIAL HANDLING

A. Field cuts of pipes shall be in accordance with the manufacturer's instructions.

B. Where a pipe requires special handling or installation it shall be in accordance with the schedule for that type of pipe.

3.4 FINAL INSPECTION OF PIPELINES

A. Each section of pipe shall be inspected prior to final acceptance.

1. Leakage tests shall be performed on solid wall pipe in accordance with Section entitled "Leakage Tests".
2. The inspection shall be by observation with illumination.
3. If ordered by the Engineer, the inspection shall be by closed circuit television.
    a. Shall be monitored by both the Engineer and the Contractor.

B. The inspection shall determine the pipeline to be true to line and grade, to have no obstruction to flow, to have no projections or protruding of connecting pipes or joint materials, shall be free from cracks and shall contain no deposits of sand, dirt or other materials.

C. All deficiencies located during the inspection shall be corrected.

END OF SECTION

SECTION 33 08 01
LEAKAGE TESTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes leakage tests of all hydraulic structures and non-pressure piping for leakage as specified.

1. The Contractor shall furnish all labor, equipment, test connections, vents, water and materials necessary for carrying out the pressure and leakage tests.

B. All testing shall be witnessed by the Engineer.

1.2 SUBMITTALS

A. In addition to those submittals identified in the Contract Documents, the following items shall be submitted:

1. Reports of test results.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

TESTS ON LINED PRECAST CONCRETE STRUCTURES AND OTHER MANHOLES, VAULTS AND STRUCTURES

A. General

1. Structures and manholes designed to collect, store, or transport ground water shall be tested hydrostatically and for leakage prior to being placed in service. This includes, but is not necessarily limited to manholes, and catch basins. 2.
3. All fittings and appurtenances must be properly braced and harnessed before the structure is filled.
4. If the structure fails the test, the cause of the leakage shall be evaluated and after repairs have been made the structure shall be retested. This procedure shall be repeated until the structure complies.

B. Leakage Test

Exfiltration test may be performed prior to or after backfilling. The test shall be made by filling the structure with water and observing the level for a minimum of 12 hours.

Infiltration tests shall be performed when the groundwater level is above the joint of the top section of a precast manhole.

1. The rate of leakage shall initially be determined at intervals by means of volumetric measurement of the makeup water added to maintain the water level in the structure. Test water shall be added until the rate of leakage has stopped such that the level can be maintained without change. After this, the test water level shall be maintained for at least 12-hours, unless a longer period is determined to be required by the Engineer.
2. All exposed piping shall be examined during the test and all leaks, defective material or joints shall be repaired or replaced before repeating the tests.

3. The allowable leakage for structures shall not exceed the following in gallons per 24 hours per structure:

TYPE OF STRUCTURE	ALLOWABLE LEAKAGE
All structures	0

4. Any visible leaks shall be permanently stopped and the structure will require retesting until it has passed.

TEST FOR NON-PRESSURE PIPELINES FOR TRANSPORT STORMWATER

A. General

1. Pipelines designed to carry storm water in open channel flow or at minimal pressures shall be tested for leakage prior to being placed in service.
2. The leakage shall be determined by exfiltration, infiltration or low pressure air.
   a. The testing method directed by the Engineer shall take into consideration the groundwater elevation of the section of pipe being tested.
   b. The maximum non-pressure pipeline to be tested for leakage shall be the section of pipe through the valve vault and at the anti-seep collar or as directed by the Engineer.
3. Intermediate leakage tests during construction shall be performed as required. Upon completion of any pipeline, the entire system including manholes shall be tested for compliance to allowable leakage.
4. If the line fails the test, the cause of the leakage shall be evaluated and after repairs have been made the line shall be retested. This procedure shall be repeated until the pipe complies.

B. Exfiltration Testing

1. Exfiltration tests shall be made by filling a section of pipeline with water and measuring the quantity of leakage.
2. The head of water at the beginning of the test shall be at least 2 feet above the highest pipe within the section being tested.
   a. Should groundwater be present within the section being tested, the head of water for the test shall be 2 feet above the hydraulic gradient of the groundwater.
   b. Should the requirement of 2 feet of water above the highest pipe subject any joint at the lower end of the test section to a differential head of greater than 11.5 feet another method of testing shall be employed.
3. Stormwater conveyance pipes shall be tested at 10 psig.

C. Infiltration Testing

1. Infiltration tests will be allowed only when the water table gauges indicated that the groundwater level to be 2 feet or more above the highest pipe of the section being tested.
2. Infiltration test shall be made by measuring the quantity of water leaking into a section of pipeline.

3. Measurement of the infiltration shall be by means of a calibrated weir constructed at the outlet of the section being tested.

D. Allowable Leakage for Non-Pressure Pipelines

The allowable leakage (exfiltration or infiltration) for non- pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per 1000 feet of pipe:

TYPE OF PIPE	ALLOWABLE LEAKAGE
HDPE	0

Regardless of the above allowable leakage any spurting leaks detected shall be permanently stopped.

E. Air Testing

For the acceptance of air testing in lieu of hydrostatic testing (exfiltration or infiltration), the hydrostatic and air tests shall be performed on at least three sections of pipeline for each type of pipe being used. The Engineer shall select the sections for the corroborative tests. If these duel tested sections indicate the same results, that is, acceptance under both tests, air testing will be allowed in lieu of hydrostatic testing to meet the project requirements.

Air testing for acceptance shall not be performed until the backfilling has been completed.

Low pressure air tests shall conform to ASTM C 828 except as specified herein and shall not be limited to type or size of pipe.

Air testing of exposed (non-buried) fiberglass, PVC or other plastic or non-metal piping is prohibited.

All sections of pipelines shall be cleaned and flushed prior to testing.

The air test shall be based on the average holding pressure of 3 psi gauge, a drop from 3.5 to 2.5 psi, within the period of time allowed for the size of pipe and the length of the test section. The time allowed for the 1 psi drop in pressure, measured in seconds, will be computed by the Engineer and will be based on the limits of ASTM C 828.

a. When groundwater is present the average test pressure of 3 psig shall be above any back pressure due to the groundwater level.

b. The maximum pressure allowed under any condition in air testing shall be 10 psig. The maximum groundwater level for air testing is 13 feet above the top of the pipe.

7. The equipment required for air testing shall be furnished by the Contractor and shall include the necessary compressor, valves and gauges to allow for the monitoring of the pressure, release of pressure and a separable test gauge.

a. The test gauge shall be sized to allow for the measuring of the one psig loss allowed during the test period and shall be on a separate line to the test section.

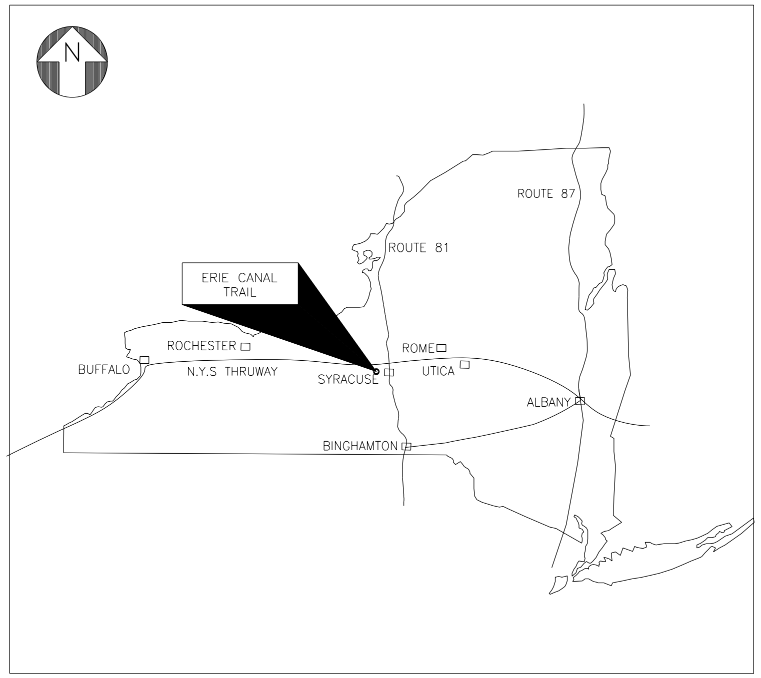
END OF SECTION

Erie Canalway Bike Trail Design Details

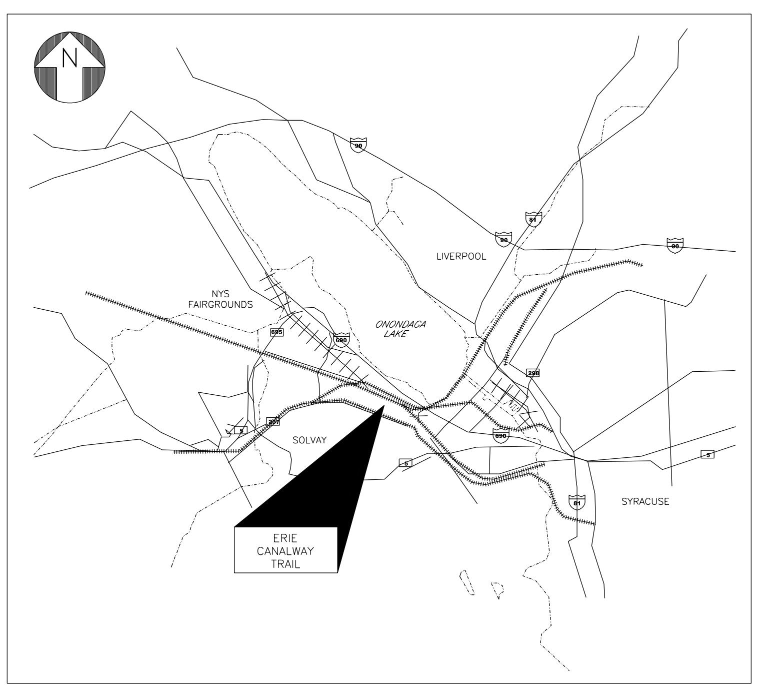
ERIE CANALWAY TRAIL
TOWN OF CAMILLUS, TOWN OF GEDDES, VILLAGE OF SOLVAY
ONONDAGA COUNTY

Prepared For:

HONEYWELL



THE STATE OF NEW YORK
NOT TO SCALE



SITE LOCATION MAP
NOT TO SCALE

DRAWING INDEX

DRAWING TITLE	DRAWING NO.
TITLE SHEET AND DRAWING INDEX	TI-01
GENERAL NOTES	GN-01 THRU GN-02
LEGEND & ABBREVIATIONS	LG-01
TYPICAL SECTIONS	TS-01 THRU TS-09
TABLES AND DETAILS	DT-01 THRU DT-09
KEY PLAN	KP-01
GENERAL PLAN	GP-01 THRU GP-18
DETAILED PLANS	DP-01 THRU DP-10
PROFILES	PR-01 THRU PR-10

DRAWING IS HALF-SIZE IF PLOTTED 11x17

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

	DATE
DRAWN BY SLC	
CHECKED BY AM	
APPROVED BY MRP	
PROJECT MGR. MB	

SEAL: STATE OF NEW YORK — No. 060905-1 — LICENSED PROFESSIONAL ENGINEER
[illegible]

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB

WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
TITLE SHEET AND
DRAWING INDEX

SCALE
AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. TI-01
REV. 0

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

GENERAL NOTES

THE WORDS "SHALL", "SHOULD", AND "WAY", AS USED IN THE CONTRACT DOCUMENTS, HAVE THE FOLLOWING MEANINGS:

SHALL - A MANDATORY CONDITION IN THE DESIGN, APPLICATION OR LOCATION OF DEVICES REQUIREMENTS HAVING "SHALL"STIPULATIONS ARE MANDATORY. NO DISCRETION IN FOLLOWING THEM IS ALLOWED.
SHOULD - AN ADVISORY CONDITION, WHERE "SHOULD" IS USED IN RELATION TO A PROVISION, THAT PROVISION IS RECOMMENDED, AND NORMALLY IS TO BE ALLOWED, BUT IS NOT MANDATORY. DEVIATION FROM SUCH PROVISIONS IS PERMISSIBLE IF, AND TO THE EXTENT, THERE IS JUSTIFIABLE CAUSE TO DO SO.
WAY - A PERMISSIVE CONDITION. NO REQUIREMENT FOR DESIGN OR APPLICATION IS INTENDED.

THE COST OF WATER USED FOR COMPACTION OF SELECT STRUCTURE FILL ITEMS SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 203.21.

TRAIL EMBANKMENT MATERIAL, AND/OR SELECT STRUCTURE FILL, ITEM 203.21, SHALL BE PLACED SIMULTANEOUSLY, IN CONTRACT, ON BOTH SIDES OF THE VERTICAL PAYMENT LINE. SHEETING OR OTHER MEANS SHALL NOT BE USED TO SEPARATE THE MATERIALS.

THE INSTALLATION OF SELECT STRUCTURE FILL, ITEM 203.21, AS SHOWN ON THE STRUCTURE PLANS, SHALL BE DONE IMMEDIATELY FOLLOWING THE INSTALLATION OF THE PREFABRICATED STRUCTURE.

SHOULD THE CONTRACTOR ELECT TO LAY BACK A PORTION OF THE EXISTING EARTH ADJACENT TO AN EXCAVATION PARTIALLY SURROUNDED BY A COFFERDAM, ANY REQUIRED EXTENSIONS OF THE COFFERDAM NECESSARY TO KEEP WATER FROM ENTERING THE EXCAVATION SHALL BE FURNISHED AND PLACED AT NO ADDITIONAL COST.

THE PROPOSED TRAIL WILL BE CLOSED TO ALL TRAFFIC DURING CONSTRUCTION.

THE CONTRACTOR IS TO VISIT THE SITE BEFORE BIDDING, TO FAMILIARIZE THEMSELVES WITH THE FIELD CONDITIONS AND TO JUDGE FOR THEMSELVES THE EXTENT AND NATURE OF THE WORK TO BE DONE UNDER THIS CONTRACT. NO EXTRA COMPENSATION WILL BE ALLOWED THEM BECAUSE OF THEIR FAILURE TO INCLUDE IN THEIR BID ALL ITEMS AND MATERIALS WHICH THEY ARE REQUIRED TO FURNISH IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

DESIGN SPECIFICATIONS

CURRENT NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, FOR DESIGN PURPOSES THE COMPRESSIVE STRENGTH OF CONCRETE FOR SUBSTRUCTURES AT TWENTY-EIGHT (28) DAYS IS F'C = 21 Mpa.

MATERIAL AND CONSTRUCTION SPECIFICATIONS

STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS, METRIC UNITS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, OFFICE OF ENGINEERING WITH CURRENT ADDITIONS AND MODIFICATIONS.

ALL BAR REINFORCEMENT SHALL BE ASTM AG15M GRADE 420.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AS INDICATED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS BEFORE THEY ARE FORWARDED TO THE ENGINEER FOR REVIEW AND CONSIDERATION.

CONSTRUCTION JOINTS OTHER THAN THOSE INDICATED ON THE PLANS WILL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION OF THE ENGINEER.

THE COST OF ALL JOINT MATERIAL SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL SITE WORK MUST SATISFY REQUIREMENTS OF THE WILLIS-SEMET IRM CONSENT ORDER (APRIL 2002) AND THE WASTEBED 13/HARBOR BROOK CONSENT ORDER (DECEMBER 2003).

RESTRICTIONS

CONSTRUCTION ACTIVITIES ON THE MATHEWS AVE SEGMENT (STATION 21+50 TO 50+92) SHALL BE COORDINATED WITH HONEYWELL AND O'BRIEN AND GERE PRIOR TO THE START OF WORK.

MISCELLANEOUS PAVING

FOR MISCELLANEOUS PAVEMENT AREAS USE ITEM 608.020102. THE HOT MIX ASPHALT MIXTURE USED SHALL BE DESIGNED FOR A 20 YEAR (ESTIMATED TRAFFIC) LEVEL OF < 0.3 MILLION 80 Kn ESALS. THE PC BINDER USED IN THIS MIX SHALL BE A CONVENTIONAL PC64-22.

SURVEY

HORIZONAL DATUM: STATE PLANE COORDINATE SYSTEM BASED ON NORTH AMERICAN DATUM OF 1983 (NAD 83)

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

SAWCUT

ITEM 627.50140008, CUTTING PAVEMENT IS INTENDED FOR AREAS WHERE PAVEMENT RECONSTRUCTION MEETS EXISTING PAVEMENTS THAT WILL REMAIN AFTER THE COMPLETION OF THIS PROJECT AND AREAS WHERE THE CONTRACTOR WILL CREATE A STAGE/PHASE LINE BETWEEN A WZTC WORK ZONE AND LIVE TRAFFIC. NO QUANTITIES WILL BE MEASURED OR PAID FOR SAWCUTS USED TO COMPLETE UTILITY TRENCHING OR OTHER INCIDENTAL SUBSURFACE RECONSTRUCTION (THIS WORK SHALL BE PAID UNDER VARIOUS ITEMS OF THE CONTRACT). THIS DOES NOT ELIMINATE THE ENGINEER'S RIGHT TO REQUIRE CLEAN TRENCHING CUT LIMITS WHERE TRAFFIC MAY BE TEMPORARILY PLACED OVER THESE AREAS AFTER TRENCH RECONSTRUCTION AND PRIOR TO FINAL PAVING. IF THE CONTRACTOR IMPLEMENTS THESE SCHEMES, THEN SAW CUTTING SHALL BE ACCOUNTED FOR IN THEIR BID.

SITE PROTECTION NOTES

CONTRACTOR SHALL PRESERVE AND MAINTAIN ALL EXISTING FACILITIES INCLUDING SIDEWALKS, SURVEY MONUMENTS, LIGHTING, CURBING AND PAVEMENT WITHIN THE PROJECT LIMITS.

CONTRACTOR SHALL REMOVE, OR PROPERLY CONTAINERIZE UNNECESSARY CONSTRUCTION DEBRIS AT THE END OF EACH WORK DAY.

NOTIFY DIG SAFELY NEW YORK TWO (2) WORKING DAYS PRIOR TO DIGGING, DRILLING OR BLASTING, CALL 811.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES A SAFE AND ADEQUATE INGRESS AND EGRESS TO AND FROM ALL PRIVATE AND PUBLIC PLACES OF BUSINESS. COST FOR THIS WORK IS INCLUDED UNDER ITEM 619.01 BASIC WORK ZONE TRAFFIC CONTROL.

THE CONTRACTOR SHALL BE PERMITTED TO REMOVE SUCH PORTIONS OF EXISTING FENCING AS MAY BE REQUIRED FOR THEIR OPERATIONS DURING WORKING HOURS, PROVIDING THAT THE PUBLIC IS CONTINUOUSLY SAFEGUARDED BY OTHER SATISFACTORY MEANS DURING THESE OPERATIONS. IN ALL SUCH CASES THE FENCE MUST BE RESTORED AT THE END OF EACH WORK DAY.

WARNING SIGNS READING "DANGER" "KEEP OUT" SHALL BE MOUNTED ON THE FENCE AS REQUIRED BY THE ENGINEER, AT NO MORE THAN 60 FEET INTERVALS. SIGN WILL BE 16" HIGH X 24" WIDE. THE LOWER PORTION OF THE SIGN SHALL BE WHITE WITH 5" BLACK LETTERS. THE UPPER PORTION OF THE SIGN SHALL BE PREDOMINANTLY RED WITH 5"WHITE LETTERING. THE LETTERING SHALL BE ENCLOSED BY AN APPROXIMATELY ELLIPTICAL, WHITE RING AND THE ENTIRE SIGN BORDERED IN BLACK.

SITE PROTECTION NOTES (CONT.)

TEMPORARY FENCING MAY BE USED WHERE EXISTING FENCING HAS BEEN REMOVED PRIOR TO THE INSTALLATION OF PERMANENT FENCING. FENCE SHALL INCLUDE STEEL OR WOOD TOP RAIL. PAID FOR UNDER ITEM 619.01.

TEMPORARY FENCING SHALL NOT BE LESS THAN 5 FEET IN HEIGHT, MOUNTED ON STEEL ANGLE POST, WOOD POST OR OTHER SATISFACTORY MEANS OF SUPPORT SPACED AT INTERVALS OF NOT MORE THAN 10 FEET.

THE CONTRACTOR SHALL FURNISH, ERECT, RELOCATE, MAINTAIN AND REMOVE ALL TEMPORARY FENCE AND WARNING SIGNS REQUIRED.

THE CONTRACTOR SHALL COORDINATE WITH ANY AND ALL CONTRACTORS PERFORMING WORK ON THIS OR IMMEDIATELY ADJACENT TO THIS JOB SITE.

THE CONTRACTOR SHALL AT THEIR OWN EXPENSE, RESTORE LAWNS, DRIVEWAYS, CULVERTS, FENCES, GUIDERAILS, SIGNS AND OTHER PUBLIC AND PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISRUPTED.

EXCAVATED SPOILS NOT DESIGNED FOR USE ON SITE SHALL BE REMOVED AT THE END OF EACH WORK DAY.

ALL BACKFILL MATERIAL STORED ON SITE SHALL BE COVERED TO PREVENT DUST AND MOISTURE INCREASE.

ALL TRUCKS ENTERING AND LEAVING THE SITE SHALL BE COVERED BY LAW TO REDUCE DUST AND ODOR. ALL MATERIALS (HAZARDOUS) SHALL BE LOCKED IN APPROPRIATE STORAGE UNITS.

THE CONTRACTOR SHALL NOTIFY HONEYWELL TWO WORKING DAYS PRIOR TO PERFORMING ANY WORK THAT IMPACTS HONEYWELL'S UTILITIES.

CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE AT ALL TIMES. AT THE END OF THE WORK DAY ALL EQUIPMENT AND MATERIALS SHALL BE STORED IN A DESIGNATED STAGING AREA AS COORDINATED WITH HONEYWELL. ALL SOIL, DUST AND MUD SHALL BE REMOVED FROM THE PROJECT AREA AND OUTSIDE THE PROJECT AREA. AT THE END OF THE DAY, TIRES OF CONSTRUCTION VEHICLES SHALL BE CLEANED OF SOIL AND MUD BEFORE BEING ALLOWED ON PUBLIC STREETS. ANY SOIL OR MUD DEPOSITED ON PUBLIC STREETS BY CONSTRUCTION VEHICLES SHALL BE REMOVED IMMEDIATELY.

SIGNS

WHEN A NEW SIGN IS INSTALLED TO REPLACE AN EXISTING SIGN, THE EXISTING SIGN SHALL BE IMMEDIATELY REMOVED UPON COMPLETION OF THE NEW SIGN INSTALLATION.

GROUND-MOUNTED SIGN PANELS INSTALLED OR RELOCATED UNDER THIS CONTRACT SHALL MEET THE FOLLOWING MOUNTING HEIGHT CRITERIA WHICH MEET OR EXCEED THE REQUIREMENTS SHOWN ON STANDARD SHEETS 645-03 AND 645-10:

THE VERTICAL DISTANCE FROM THE EDGE OF TRAVEL LANE TO BOTTOM OF ALL PRIMARY SIGN PANELS SHALL BE 7'-0" MINIMUM.

THE VERTICAL DISTANCE FROM THE EDGE OF TRAVEL LANE TO BOTTOM OF ALL SECONDARY (SUPPLEMENTARY) SIGN PANELS SHALL BE 6"-0"MINIMUM. IN ADDITION, THE 7'-0" MINIMUM GROUND CLEARANCE REQUIREMENT FOR ALL POST TYPES NOTED ON STANDARD SHEET 645-03 AND SHOWN ON STANDARD SHEET 645-10 STILL APPLIES. THE CONTRACTOR SHALL TAKE THE ABOVE REQUIREMENTS INTO ACCOUNT WHEN BIDDING ALL AFFECTED SIGN POST ITEMS.

RECONSTRUCTION NOTES

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT, DUE TO THE NATURE OF RECONSTRUCTION PROJECTS, THE EXACT EXTENT OF RECONSTRUCTION WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF WORK. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTION AND OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO CONSTRUCTION DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH FIELD CONDITIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE OWNER, WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE OWNER, THE DAMAGED MATERIALS SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.

WHENEVER ITEMS IN THE CONTRACT REQUIRE MATERIALS TO BE REMOVED AND DISPOSED OF, THE COST OF SUPPLYING A DISPOSAL AREA AND TRANSPORTATION TO THAT AREA SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THOSE ITEMS.

THE COST OF FURNISHING, INSTALLING, MAINTAINING, REMOVING AND DISPOSING OF ALL PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE APPROPRIATE ITEMS OF THE CONTRACT.

DIMENSIONS SHOWN ARE BASED ON AVAILABLE RECORDS AND LIMITED FIELD MEASUREMENT. CONTRACTOR IS TO VERIFY.

CONTAMINATED SOILS

THE CONTRACTOR SHALL BE PREPARED TO HANDLE CONTAMINATED SOILS/NON-HAZARDOUS WASTE AS STATED IN ITEM 205.0201 SEGREGATION AND STORAGE OF CONTAMINATED MATERIALS, ENGINEERING INSTRUCTION 07-034 AND ENGINEERING INSTRUCTION 07-035. AS SUCH, THE CONTRACTOR SHALL PREPARE A COMMUNITY AIR MONITORING PLAN (CAMP) WHICH INCLUDES INFORMATION DESCRIBING OPERATIONS TO BE USED TO EXCAVATE, FIELD IDENTIFY, MOVE, DISPOSE OF SOIL AND WHICH ADDRESSES PERSONNEL SAFETY AND ENVIRONMENTALCONSIDERATIONS.

SOILS AND SOLID WASTE THAT ARE VISIBLY CONTAMINATED (E.G. STAINING, ODORS) SHALL BE SCREENED, BY AN INDEPENDENT FIRM HIRED BY THE CONTRACTOR, VIA FIELD VAPOR MONITORING EQUIPMENT AND BY VISUAL AND OLFACTORY MEANS AS STATED IN ITEM 205.03 FIELD ORGANIC VAPOR MONITORING ENGINEERING INSTRUCTION 07-034 AND ENGINEERING INSTRUCTION 07-035. SOILS DEEMED CONTAMINATED SHALL BE SEPARATED FROM OTHER SPOIL MATERIAL FOR REGULATORY CLASSIFICATION TO DETERMINE THE PROPER HANDLING, TRANSPORTATION, TREATMENT AND DISPOSAL METHODS AND REQUIREMENTS. IF VISIBLY CONTAMINATED MATERIALS ARE ENCOUNTERED THE NYSDEC SHALL BE CONTACTED.

ALL APPLICABLE COSTS ASSOCIATED WITH BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING SHALL BE INCLUDED IN ITEM 205.050101: DISPOSAL PLAN, SAMPLING PLAN, SAMPLING, ANALYSIS (TESTING), TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL OR MATERIAL, COMPLETING OTHER RELATED ACTIVITY IN ACCORDANCE WITH THE ACCEPTED DISPOSAL PLAN.
HONEYWELL SHALL BE CONTACTED PRIOR TO ANY OFF-SITE DISPOSAL OF MATERIAL.

THE ITEMS DESCRIBED HEREIN ARE INTENDED TO COMPENSATE THE CONTRACTOR FOR THE SPECIAL HANDLING AND ADDITIONAL EFFORTS ABOVE WHAT WOULD HAVE BEEN REQUIRED FOR THE SAME WORK IN NON-CONTAMINATED SOIL. SOIL EXCAVATION IS NOT INCLUDED.

EXISTING DRAINAGE FACILITIES

THE CONTRACTOR SHALL BECOME ACQUAINTED WITH THE DRAINAGE CHARACTERISTICS OF THE AREA IN ORDER TO PROGRESS WORK EFFICIENTLY WITH FULL KNOWLEDGE OF THE POTENTIAL DRAINAGE PROBLEMS.

THE CONTRACTOR MUST ACQUAINT THEMSELVES WITH DRAINAGE CHARACTERISTICS OF THE AREA SO THAT THEY WILL PROGRESS THEIR WORK EFFICIENTLY WITH FULL KNOWLEDGE OF THE POTENTIAL DRAINAGE PROBLEMS.

THERE WILL BE NO PAYMENT MADE FOR THE INSTALLATION OF TEMPORARY SHEETING REQUIRED ON THIS PROJECT, THE CONTRACTOR SHALL INCLUDE ANY COSTS FOR THIS WORK IN THE PRICE BID FOR ITEM 206.0201 TRENCH AND CULVERT EXCAVATION.

ALL EXCAVATION AND SHEETING SHALL COMPLY WITH ALL PROVISIONS OF THE FEDERAL REGULATIONS AS PROVIDED FOR IN "FEDERAL STANDARD 29-CFR-1926 SUBPART P EXCAVATIONS".

ALL EXISTING DRAINAGE SYSTEMS, INCLUDING DITCHES AND CULVERTS, WITHIN THE CONTRACT LIMITS SHALL BE CLEANED AND KEPT CLEAN AND FREE FLOWING FOR THE DURATION OF THE CONTRACT. THIS WORK SHALL BE PAID FOR UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL.
PAYMENT LINES NOT SHOWN ON THE PLANS SHALL BE DETERMINED BY THE ENGINEER IN CHARGE.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
1	ISSUED FOR BID	03/29/19	SLC	MRP	

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APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL

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(315) 451-9560

JOB

WBS

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
GENERAL NOTES

SCALE
AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO.
GN-01

REV.
0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

UTILITIES

THE APPROXIMATE LOCATION OF THE UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION BEFORE COMMENCING WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES ENCOUNTERED IN THIS WORK. WHERE NECESSARY THE CONTRACTOR SHALL PROVIDE TIMBER, OR OTHER APPROVED MATERIALS, AND SECURELY BRACE AND PROTECT THESE UTILITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS IN THE CONTRACT.

THE FOLLOWING UTILITIES MAY BE ENCOUNTERED IN THE FIELD:
- ELECTRIC - NATIONAL GRID, SOLVAY ELECTRIC
- TELEPHONE - VERIZON
- CABLE TV - SPECTRUM
- GAS- NATIONAL GRID
- WATER - OCWA
- SANITARY - ONONDAGA COUNTY
- FORCE MAIN - HONEYWELL

THE DEGREE OF ACCURACY FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS IS QUALITY LEVEL C. RECORD INFORMATION PROVIDED BY UTILITY OWNER WAS PLOTTED ON THE CONTRACT PLANS. DEPTHS TO UTILITIES HAVE NOT BEEN FIELD VERIFIED.

THE CONTRACTOR SHALL NOTIFY "DIG SAFELY NEW YORK" AT 1-800-962-7962 PRIOR TO COMMENCING EXCAVATION OR DRIVING ANY POSTS. IN ADDITION, THE CONTRACTOR SHALL CONTACT HONEYWELL PRIOR TO COMMENCING EXCAVATION OR DRIVING ANY POSTS AS HONEYWELL HAS SEVERAL BURIED UTILITIES ON-SITE WHOSE LOCATIONS ARE TO BE COORDINATED WITH HONEYWELL.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES ENCOUNTERED IN THE WORK, WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE TIMBER, PLANK, OR OTHER APPROVED MATERIALS AND SECURELY BRACE AND PROTECT THESE UTILITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS IN THE CONTRACT.

THE CONTRACTOR SHALL COOPERATE IN EVERY WAY WITH THE UTILITY OWNER AND WILL SCHEDULE HIS WORK IN SUCH A WAY AS TO COMPLY WITH THE SHUT-DOWN TIMES AND ANY OTHER REQUIREMENTS OF THE UTILITY OWNER, NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY COSTS INCURRED DUE TO COMPLYING WITH UTILITY OWNER'S REQUIREMENTS. SUCH COSTS WILL BE INCLUDED IN THE PRICE BID FOR ITEMS IN THIS CONTRACT.

BENCHING

EARTH BENCHING MAY BE ALLOWED WHERE SLOPES ARE STEEPER THAN 1 ON 3. MAXIMUM RISE SHALL BE 4 FT PER BENCH. EMBANKMENT SHALL BE BROUGHT UP BY STAGE WITH THE BENCHING AND COMPACTED PARALLEL TO THE BENCHES. SLOPE PROTECTION-PIPE DRAINS ARE NOT ADVISED. ANY MODIFICATIONS IN THE DESIGN SHALL BE BASED ON THE WRITTEN APPROVAL OF THE ENGINEER IN CHARGE.

THE QUANTITY OF BENCHING TO BE PAID FOR SHALL BE DETERMINED BY USING A FIXED VOLUME OF 53 CUBIC FEET OF BENCH MULTIPLIED BY THE MEASURED LENGTH OF THE BENCH REGARDLESS OF THE WIDTH OF THE BENCH. PAYMENT SHALL BE MADE UNDER THE APPROPRIATE ITEMS FOR EXCAVATION AND EMBANKMENT.

CONTRACT STATIONING

THE CONTRACT STATIONING IS BASED ON PROPOSED CENTERLINE OF IMPROVEMENTS.

TRAIL DEVELOPMENT

UPON COMPLETION AND ACCEPTANCE OF THIS CONTRACT, THE TRAIL SHALL BE MAINTAINED BY HONEYWELL.

TRAIL CONSTRUCTION

ALL EXISTING VEGETATION WITHIN THE FOOTPRINT OF THE TRAIL AND SIDE SLOPES SHALL BE REMOVED. ALL TREES AND SHRUBS ON EITHER SIDE OF THE CENTERLINE OF THE TRAIL, SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. ALL TREES WITHIN THE LIMITS OF WORK WHICH ARE HAZARDOUS OR IN OTHERWISE UNHEALTHY CONDITION SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. ALL REMAINING TREES AND SHRUBS SHALL BE PROTECTED IN ACCORDANCE WITH THE SPECIFICATIONS.

ALL SPOILS AND CLEARING AND GRUBBING MATERIALS AS A RESULT OF THE PROPOSED IMPROVEMENTS SHALL BE MANAGED ONSITE. THE STORAGE AND STAGING OF THESE MATERIALS IS TO BE COORDINATED WITH HONEYWELL IN ADVANCE OF PROJECT CONSTRUCTION AND SHALL BE IN COMPLIANCE WITH THE PROJECT'S SOIL MANAGEMENT PLAN.

SITE ACCESS

THE OWNER HAS ESTABLISHED ACCESS TO THE SITE FROM BRIDGE STREET, GERELOCK ROAD AND WARNERS ROAD. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE ACCESS NEEDS WITH HONEYWELL AND OTHER CONTRACTORS PERFORMING WORK ON THE SITE.

SPILL PREVENTION

POTENTIAL IMPACTS TO WETLANDS CAN BE ELIMINATED THROUGH THE INCORPORATION OF BEST MANAGEMENT PRACTICES DURING CONSTRUCTION. THESE WILL INCLUDE APPROPRIATE CONSTRUCTION, MANAGEMENT, AND HANDLING PROCEDURES FOR REFUELING STATION AND/OR CHEMICAL STORAGE AREAS (IF APPLICABLE), PROCEDURES TO HANDLE, STORE, AND DISPOSE OF ALL WASTE CONSTRUCTION DEBRIS AND MATERIALS, AND THE SETUP AND MAINTENANCE OF EMERGENCY RESPONSE STATIONS FOR THE STORAGE OF ABSORBENT MATERIALS, PADS, AND BOOMS IN THE EVENT OF PETROLEUM AND/OR CHEMICAL SPILLS. IN THE EVENT THAT A RELEASE OF PETROLEUM OR HAZARDOUS MATERIALS DOES OCCUR, THE NYSDEC OIL SPILL OR HAZARDOUS MATERIAL SPILL (24 HOUR HOTLINE) AT 1-800-457-7362 WILL BE IMMEDIATELY NOTIFIED FOR DIRECTION OF IMMEDIATE CONTAINMENT PROCEDURES.

PROJECT HEALTH AND SAFETY PLAN

THE CONTRACTOR IS REQUIRED TO ADOPT THE HEALTH AND SAFETY PLAN PREPARED BY HONEYWELL CORPORATION FOR WORK TO BE PERFORMED ON THE PROJECT. A COPY OF THE HEALTH AND SAFETY PLAN WILL BE MADE AVAILABLE TO THE SUCCESSFUL CONTRACTOR.

SOIL EROSION AND SEDIMENT CONTROL

THE CONTRACTOR SHALL EMPLOY EFFECTIVE EROSION AND SEDIMENT CONTROL PRACTICES DURING CONSTRUCTION, AS SET FORTH IN THE NYSDOT'S AND NYSDEC'S STATEWIDE STORMWATER AND EROSION CONTROL SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS AND CONSTRUCTION GUIDANCE PROCEDURES. AN EROSION AND SEDIMENT CONTROL PLAN WILL BE DEVELOPED FOR THIS PROJECT.

ALL AREAS OF SOIL DISTURBANCES RESULTING FROM THIS PROJECT SHALL BE SEEDED WITH AN APPROPRIATE NATIVE PERENNIAL SEED MIX AND MULCHED WITH STRAW WITHIN 7 DAYS OF FINAL GRADING. SEED AND MULCH SHALL BE MAINTAINED UNTIL A SUITABLE COVER IS ESTABLISHED. ANY DISTURBED AREA LEFT EXPOSED FOR GREATER THAN 7 DAYS SHALL RECEIVE TEMPORARY SEED AND MULCH, ITEM 209.1003.

INLET PROTECTION SHALL BE INSTALLED AROUND EXISTING STORM DRAIN INLETS WITH CONTRIBUTING DISTURBED AREAS UNLESS EXISTING GRATE ELEVATIONS ARE ABOVE ROUGH GRADE. IN AREAS WHERE PERMANENT PAVEMENT IS TO REMAIN, DROP INLET PROTECTION IS TO BE INSTALLED AS PER ITEM 209.1703.

INSPECTION, PERIODIC CLEANING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONDUCTED BY THE CONTRACTOR ON A WEEKLY AND POST-RAINFALL BASIS. MAINTENANCE REPAIRS SHALL BE CONDUCTED WITHIN 24-HOURS.

ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED AND OPERATIONAL PRIOR TO UPGRADIENT EARTHWORK OPERATIONS. PRACTICES SHALL REMAIN OPERATIONAL UNTIL STABILIZATION OF CONTRIBUTING AREA.

CONTRACTOR RESPONSIBLE FOR DUST SUPPRESSION TO PREVENT OFF-SITE DUST MIGRATION AS ORDERED BY THE ENGINEER.

CONTRACTOR SHALL NOT ALLOW VEHICLE SEDIMENT TRACKING ONTO PUBLIC ROADWAYS.

CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE CLEAN WATER ACT. ANY PENALTIES OR FINES ASSOCIATED WITH EROSION AND SEDIMENT CONTROL OR STORMWATER MANAGEMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL INSTALL ADDITIONAL PRACTICES AS NECESSARY TO PREVENT OFF-SITE SEDIMENT MIGRATION OR WATER QUALITY VIOLATIONS.

A STABILIZED CONSTRUCTION ENTRANCE AND GRAVEL WASH AREAS SHALL BE USED AT ALL POINTS OF INGRESS TO AND EGRESS FROM THE SITE.

SEDIMENT FILTER LOGS SHALL BE INSTALLED AND MAINTAINED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION AREAS THROUGHOUT THE DURATION OF CONSTRUCTION.

ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF ANY STREAMS OR WATERWAYS BY SILT, SEDIMENTS, FUEL SOLVENTS, LUBRICANTS, EPOXY COATINGS, CONCRETE LEACHATE, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION AND CONSTRUCTION PROCEEDINGS.

DURING CONSTRUCTION, NO WET OR FRESH CONCRETE SHALL BE ALLOWED TO ESCAPE INTO ANY WATERS, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES BE ALLOWED TO ENTER ANY WATERS.

ALL DRAINAGE DITCHES AND/OR PIPES DISTURBED BY CONSTRUCTION ON OR ADJACENT TO THIS SITE SHALL BE CLEANED AND FUNCTIONING PROPERLY AT COMPLETION OF GRADING AND CONSTRUCTION.

DURING DEWATERING OPERATIONS, SETTLING BASIN OR FILTRATION SYSTEM SHALL BE REQUIRED UNLESS THE PUMP DISCHARGE IS AS CLEAN AND FREE OF SEDIMENT AS THE RECEIVING WATER. THE CONTRACTOR SHALL PROVIDE SEDIMENT BASINS, TEMPORARY SEDIMENT TANKS, OR FILTRATION SYSTEMS FOR ALL DEWATERING OPERATIONS IN ACCORDANCE WITH THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

THE COST OF INSTALLING, CLEANING, AND REMOVING TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL DEVICES SHALL BE INCLUDED UNDER THE CONTRACT.

CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO SIGN AND CERTIFY SWPPP PRIOR TO COMMENCING ANY EARTHWORK. THE CONTRACTOR SHALL DESIGNATE TO THE ENGINEER AN EROSION AND SEDIMENT CONTROL SUPERVISOR WITH ADEQUATE TRAINING, EXPERIENCE, AND AUTHORITY TO IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES, AS PER THE REQUIREMENTS OF THE SWPPP AND ALL ASSOCIATED FEDERAL AND STATE LAWS AND REGULATIONS. THIS INDIVIDUAL WILL BE RESPONSIBLE FOR MONITORING IMPENDING WEATHER CONDITIONS THAT MAY HAVE AN AFFECT ON DAILY CONSTRUCTION OPERATIONS AND THE NEED TO PROVIDE THE REQUIRED EROSION AND SEDIMENT CONTROLS.

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1	ISSUED FOR BID	03/29/19	SLC	MRP	

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APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: STATE OF NEW YORK, MARK R. PARSONS, No. 093015-1, LICENSED PROFESSIONAL ENGINEER

PARSONS

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SYRACUSE, NY 13212
(315) 451-9560

JOB

WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL NOTES

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. GN-02

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

ALIGNMENT

ABBR.	DESCRIPTION
AH	AHEAD
AZ	AZIMUTH
BK	BACK
b	BASELINE
BRG	BEARING
c	CENTERLINE
CS	CURVE TO SPIRAL
e	SUPERELEVATION RATE (CROSS SLOPE)
EQ	EQUALITY
EXT	EXTERNAL
G1	GRADE 1
G2	GRADE 2
HCL	HORIZONTAL CONTROL LINE
HSD	HEADLIGHT SIGHT DISTANCE
L	LENGTH OF CIRCULAR CURVE
LS	LENGTH OF SPIRAL
LVC	LENGTH OF VERTICAL CURVE
E	CENTER CORRECTION OF VERTICAL CURVE
f	MAIN LINE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
POE	POINT OF ENDING
PRC	POINT OF REVERSE CURVATURE
POL	POINT ON LINE
PSD	PASSING SIGHT DISTANCE
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS
SC	SPIRAL TO CURVE
SSD	STOPPING SIGHT DISTANCE
ST	SPIRAL TO TANGENT
STA	STATION
T	TANGENT LENGTH
TGL	THEORETICAL GRADE LINE
TP	TURNING POINT
TS	TANGENT TO SPIRAL
VC	VERTICAL CURVE

TOPOGRAPHY (DRAINAGE)

ABBR.	DESCRIPTION
BB	BOTTOM OF BANK (STREAM)
BC	BOTTOM OF CURB
BO	BOTTOM OF OPENING
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CIP	CAST IRON PIPE
c STRM	CENTERLINE OF STREAM
CMP	CORRUGATED METAL PIPE
CP	CONCRETE PIPE
CSP	CORRUGATED STEEL PIPE
CULV	CULVERT
DIA	DIAMETER
DMH	DRAINAGE MANHOLE
DS	DRAINAGE STRUCTURE PIPE
D'XING	DITCH CROSSING
EHW	EXTREME HIGH WATER
EL	ELEVATION
ELEV	ELEVATION
ELW	EXTREME LOW WATER
ES	END SECTION
FRP	FIBERGLASS REINFORCED PLASTIC
HDPE	HIGH-DENSITY POLYETHYLENE
HW	HEADWALL
INV	INVERT
MH	MANHOLE
MHW	MEAN HIGH WATER
OHW	ORDINARY HIGH WATER
OLW	ORDINARY LOW WATER
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SICPP	SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE
TB	TOP OF BANK (STREAM)
TC	TOP OF CURB
TG	TOP OF GRATE
VCP	VITRIFIED CLAY PIPE

TOPOGRAPHY (MISCELLANEOUS)

ABBR.	DESCRIPTION
ABUT	ABUTMENT
AOBE	AS ORDERED BY ENGINEER
ASPH	ASPHALT
BDY	BOUNDARY
BLDG	BUILDING
BM	BENCH MARK
CC	CENTER TO CENTER
CONC	CONCRETE
CONST	CONSTRUCTION
CR	COUNTY ROAD
D	DEED DISTANCE
DM	DIRECT MEASUREMENT
DWY	DRIVEWAY
EP	EDGE OF PAVEMENT
EOP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
FEE	FEE ACQUISITION
FEE WO/A	FEE ACQUISITION WITHOUT ACCESS
FP	FENCE POST
FD	FOUNDATION
FL	FENCE LINE
GAR	GARAGE
GR	GRAVEL
HO	HOUSE
HP	HIGH POINT
HWY	HIGHWAY
IP	IRON PIN OR IRON PIPE
LP	LOW POINT
MB	MAILBOX
MON	MONUMENT
N&W	NAIL AND WASHER
OG	ORIGINAL GROUND
O/H	OVERHEAD
P	PARCEL
PAV'T	PAVEMENT
PE	PERMANENT EASEMENT
PED POLE	PEDESTRIAN POLE
P	PROPERTY LINE
POR	PORCH
RR	RAILROAD
RTE	ROUTE
ROW	RIGHT OF WAY
RW	RETAINING WALL
SH	STATE HIGHWAY
SHLDR	SHOULDER
SPK	SPIKE
ST	STREET
STK	STAKE
STY	STORY
SW	SIDEWALK
TE	TEMPORARY EASEMENT
TO	TEMPORARY OCCUPANCY
U/G	UNDERGROUND
WB	WASTEBED
WW	WING WALL

UTILITIES

ABBR.	DESCRIPTION
CND	CONDUIT
CO	CLEANOUT
CS	COLLECTION SUMP
CTV	CABLE TELEVISION
DNAPL	DENSE NON-AQUEOUS PHASE LIQUID
E	ELECTRIC
ECB	ELECTRIC CONTROL BOX
EMH	ELECTRIC MANHOLE
FM	FORCEMAIN
G	GAS
GP	GUY POLE
GSB	GAS SERVICE BOX (HOUSE LINE)
GV	GAS VALVE (MAIN LINE)
HH	HAND HOLE
HYD	HYDRANT
LP	LIGHT POLE
LPG	LOW PRESSURE GAS
PP	POWER POLE
PZ	PIEZOMETER
RW	RECOVERY WELL
SA	SANITARY SEWER
SMH	SANITARY MANHOLE
ST	STORM SEWER
T	TELEPHONE
TCB	TRAFFIC CONTROL BOX
TELBOX	TELEPHONE BOX
TEL P	TELEPHONE POLE
TMH	TELEPHONE MANHOLE
TS	TRANSITION SUMP
VV	VALVE VAULT
W	WATER
WSB	WATER SERVICE BOX (HOUSE LINE)
WV	WATER VALVE (MAIN LINE)

SUBSURFACE EXPLORATION

ABBR.	DESCRIPTION
REPLACE ABBREVIATION "AB" WITH:	
AH	HAND AUGER
CP	CONE PENTROMETER
DA	2¼ INCHES CASED DRILL HOLE
DM	DRILLING MUD
DN	4 INCHES CASED DRILL HOLE
FH	HOLLOW FLIGHT AUGER
PA	POWER AUGER
PH	PROBE
PT	PERCOLATION TEST HOLE
RP	1 INCH SAMPLER (RETRACTABLE PLUG)
	TO BE DEFINED AT THE TIME OF EXPLORATION
SP	SEISMIC POINT
TP	TEST PIT
ABBREVIATION "C" IN CATEGORIES: DA, DM, DN, AND FH WITH:	
B	BRIDGE
C	CUT
D	DAM
F	FILL
K	CULVERT
W	WALL
X	TO BE USED IF ONE OF THE ABOVE CANNOT BE DEFINED AT THE TIME THE EXPLORATION IS MADE

STANDARD SYMBOL (PLANS)	ITEM PAYMENT UNIT: ESTIMATE OF QUANTITIES SHEET	EQUIVALENT NOMENCLATURE: (SPECS/PROPOSAL)
"	-	INCHES
'	LF	LINEAR FEET
mi	MI	MILES
ft2	SF	SQUARE FEET
YD2	SY	SQUARE YARD
AC	AC	ACRES
YD3	CY	CUBIC YARD
GAL	GAL	GALLON
lb	LB	POUND
TON	TON	TON

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DRAWN BY: SLC — DATE
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APPROVED BY: MRP — DATE
PROJECT MGR.: MB — DATE

SEAL: STATE OF NEW YORK · MARK R. PRITCHARD · No. 090905-1 · LICENSED PROFESSIONAL ENGINEER

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JOB
WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
LEGEND AND ABBREVIATIONS

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

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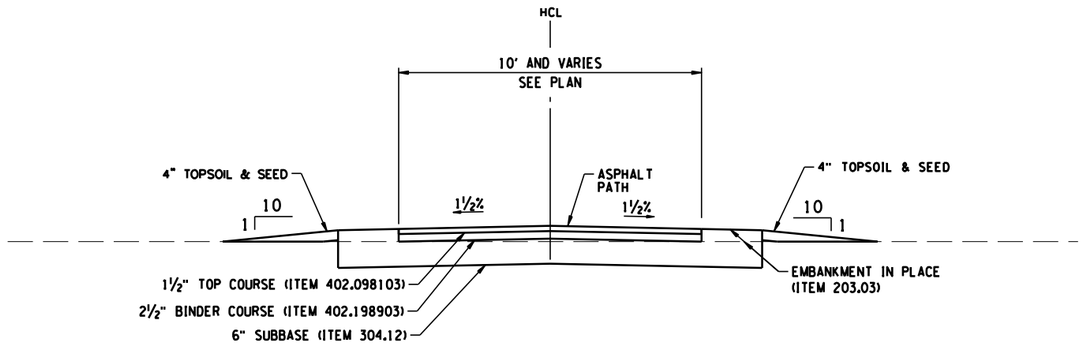
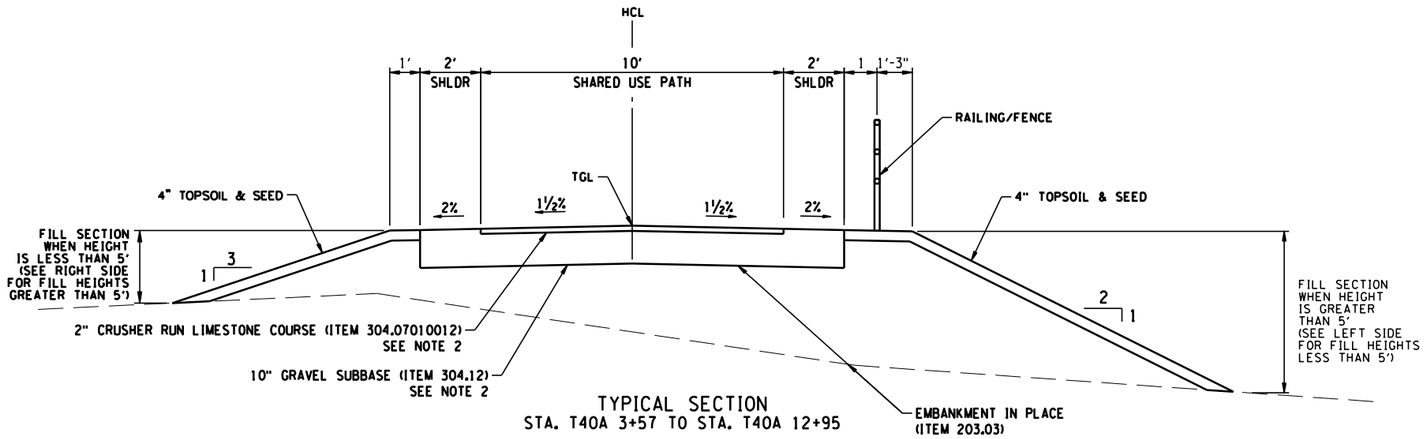
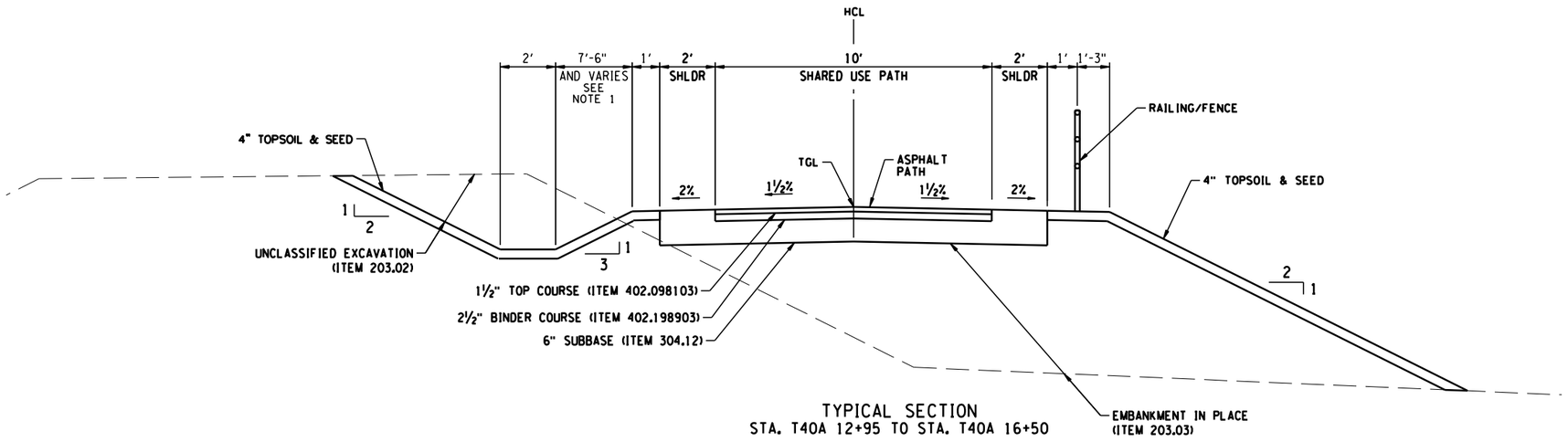
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



TYPICAL SECTION
STA. T40A 2+80 TO STA. T40A 3+57



TYPICAL SECTION
STA. T40A 3+57 TO STA. T40A 12+95



TYPICAL SECTION
STA. T40A 12+95 TO STA. T40A 16+50

NOTES:

1. NORMALLY 7'-6", BUT VARIES IN SPECIAL DITCH LOCATIONS. REFER TO PLANS FOR SPECIAL DITCH LOCATIONS AND ELEVATION CONTROL.
2. ASPHALT TRAIL SECTION TO BE UTILIZED IN LEU OF STONE DUST TRAIL SECTION WHERE THE PROFILE GRADE EXCEEDS 3%. SEE TABLE OF LOCATIONS ON DWG. NO. DT-07.

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SEAL

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JOB

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ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE NOT TO SCALE
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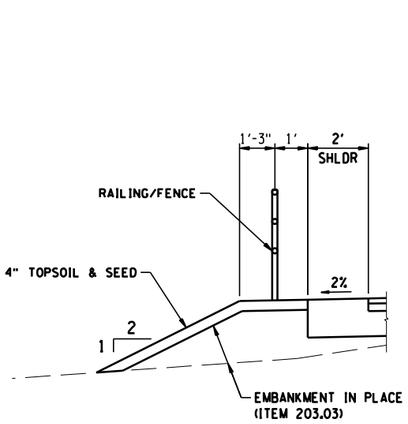
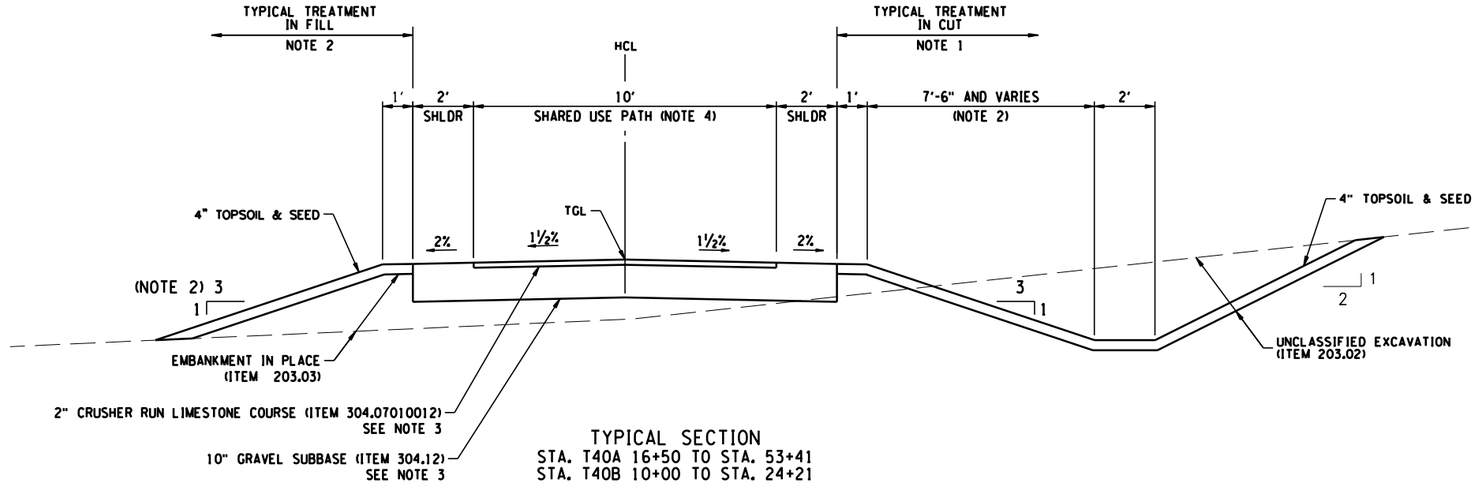


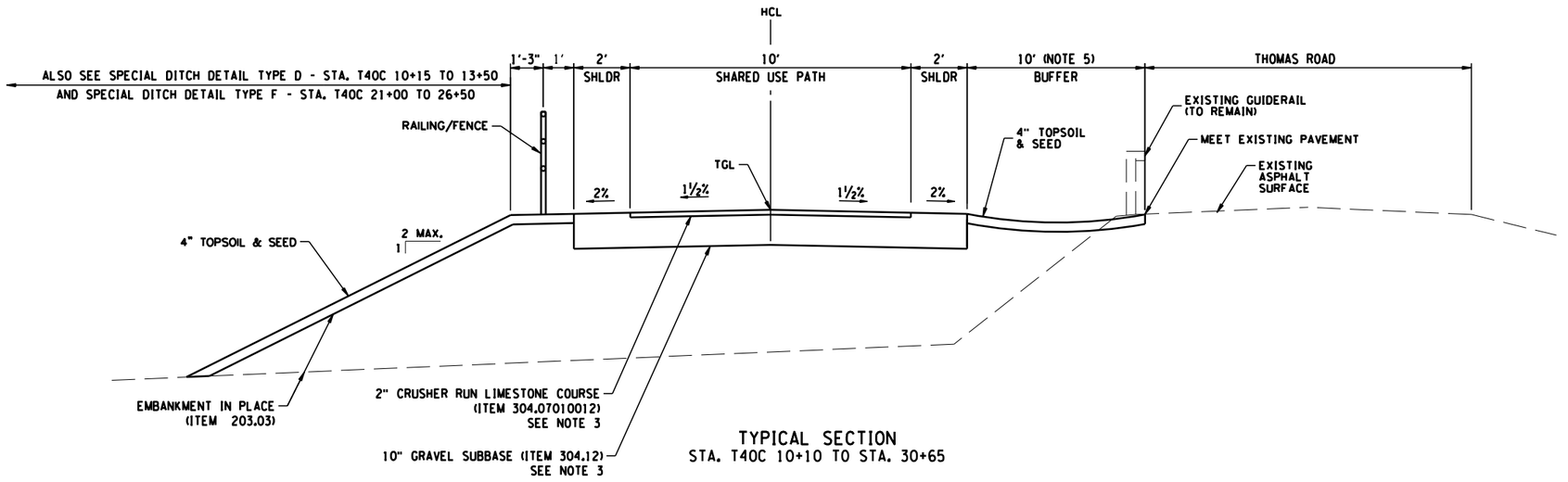
PARTIAL SECTION



TYPICAL SECTION
STA. T40A 16+50 TO STA. 53+41
STA. T40B 10+00 TO STA. 24+21

NOTES:

1. USE NORMAL DITCH SECTION WHERE NEW EDGE OF TRAIL SHOULDER IS LESS THAN 2'-6" ABOVE EXISTING GROUND. USE LEFT SIDE FILL SECTION WHERE NEW SHOULDER IS GREATER THAN 2'-6" ABOVE GROUND. ALSO REFER TO SPECIAL DITCH LOCATIONS AS SHOWN ON GENERAL PLANS.
2. USE 3:1 FILL SLOPE WHEN FILL HEIGHT IS LESS THAN 5 FEET OR AS SHOWN ON PLANS. FOR FILL HEIGHTS GREATER THAN 5 FEET, USE 2:1 SLOPE WITH PROTECTIVE FENCE (SEE PARTIAL SECTION).
3. ASPHALT TRAIL SECTION TO BE UTILIZED IN LEU OF STONE DUST TRAIL SECTION WHERE THE PROFILE GRADE EXCEEDS 3%. SEE TABLE OF LOCATIONS ON DWG. NO. DT-07.
4. NORMAL TRAIL WIDTH IS 10 FEET, BUT VARIES AT SPLITTER ISLAND LOCATIONS. REFER TO GENERAL PLANS FOR SPLITTER ISLAND LOCATIONS.
5. VARIES FROM 6 FEET TO 12 FEET +/- BETWEEN STA. T40A 29+62 TO STA. T40A 30+00 (SEE GENERAL PLAN) AND BETWEEN T40C 30+00 TO STA. T40C 30+65, USE TYPICAL 3:1 FILL SLOPE SECTION.



TYPICAL SECTION
STA. T40C 10+10 TO STA. 30+65

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB

WBS

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

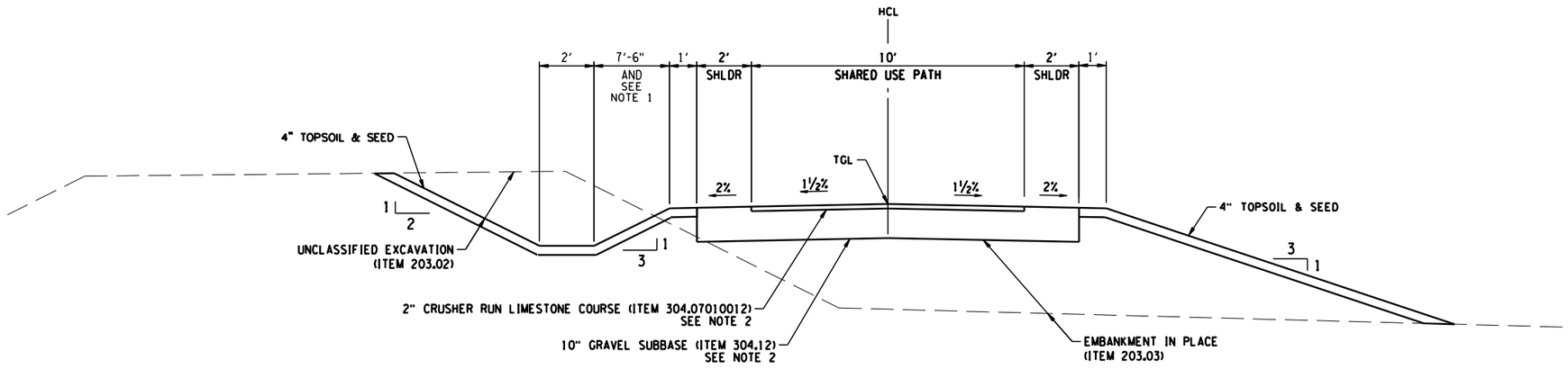
ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. TS-02

REV. 0

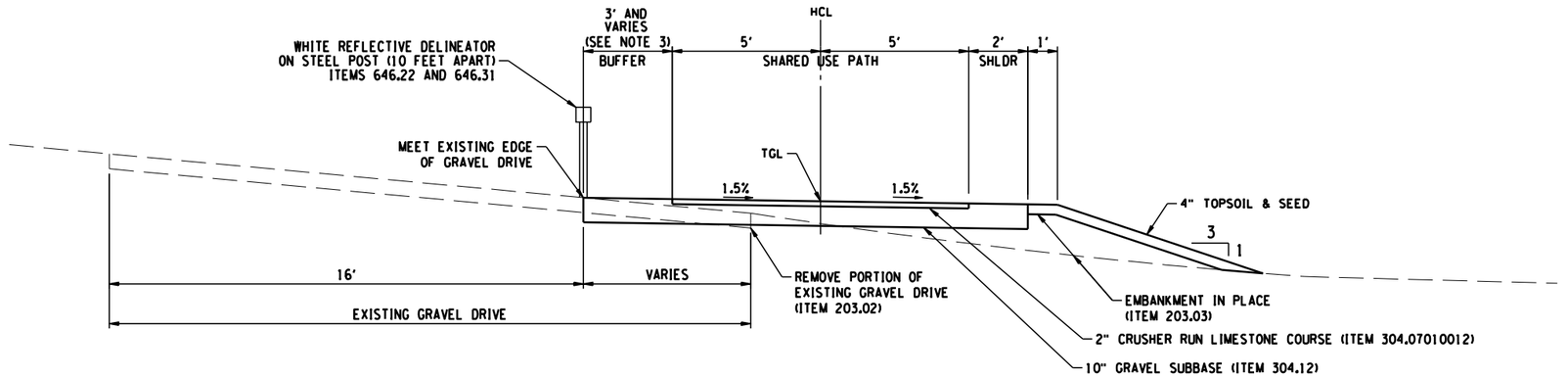
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



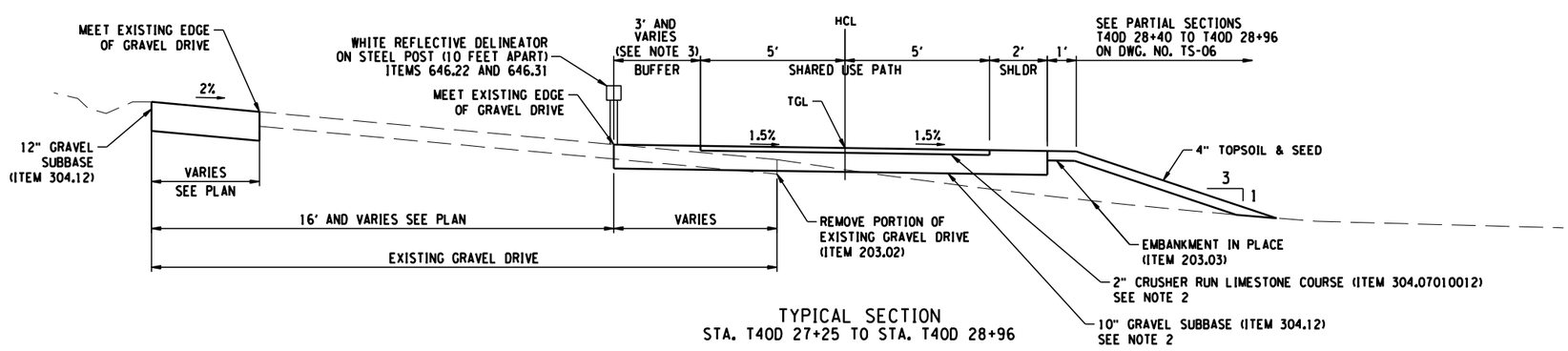
TYPICAL SECTION
STA. T40D 10+00 TO STA. T40D 26+35

NOTES:

1. NORMALLY 7'-6", BUT VARIES IN SPECIAL DITCH LOCATIONS. REFER TO PLANS FOR SPECIAL DITCH LOCATIONS AND ELEVATION CONTROL.
2. ASPHALT TRAIL SECTION TO BE UTILIZED IN LEU OF STONE DUST TRAIL SECTION WHERE THE PROFILE GRADE EXCEEDS 3%. SEE TABLE OF LOCATIONS ON DWG. NO. DT-07.
3. WIDTH VARIES FROM 12 FEET TO 3 FEET BETWEEN STA. T40D 26+35 AND 27+18, AND VARIES FROM 3 FEET TO 7 FEET BETWEEN STA. T40D 28+71 AND 28+97.



TYPICAL SECTION
STA. T40D 26+35 TO STA. T40D 27+25



TYPICAL SECTION
STA. T40D 27+25 TO STA. T40D 28+96

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

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PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

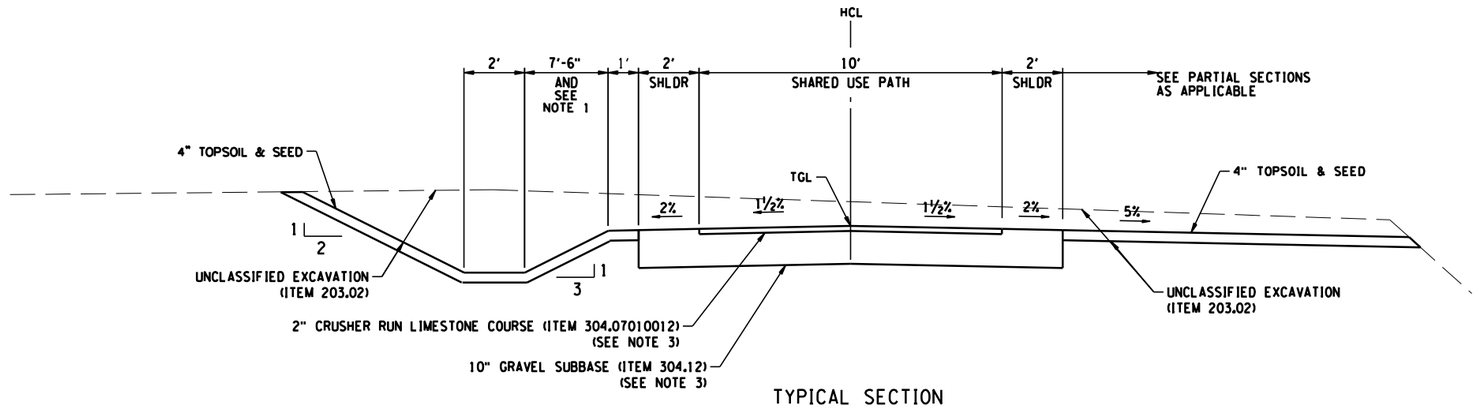
ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. TS-03

REV. 0

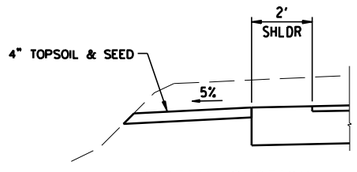
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



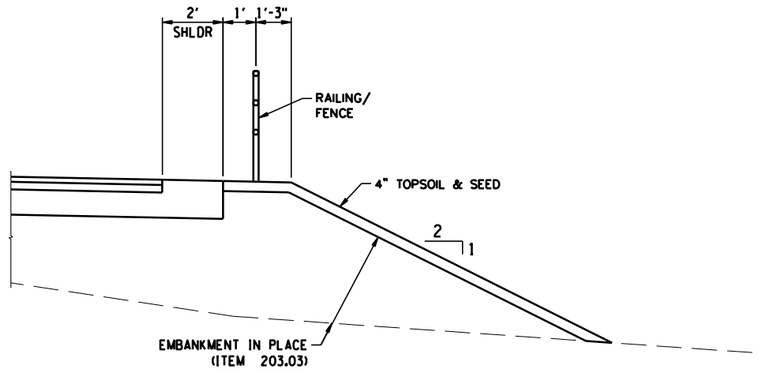
TYPICAL SECTION
STA. T40D 28+96 TO STA. T40D 30+00

NOTES:

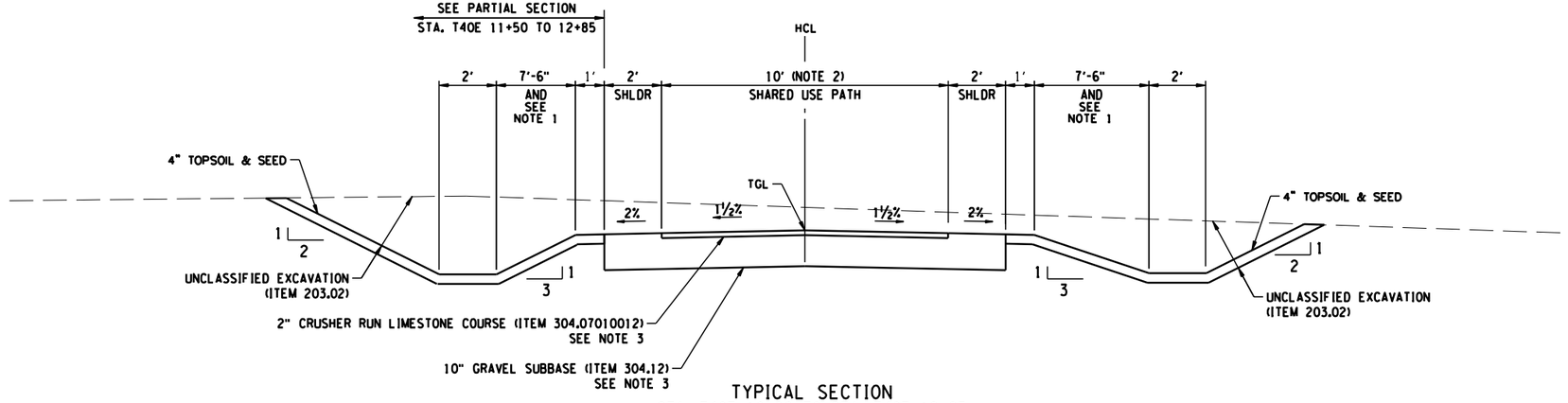
1. NORMALLY 7'-6", BUT VARIES IN SPECIAL DITCH LOCATIONS. REFER TO PLANS FOR SPECIAL DITCH LOCATIONS AND ELEVATION CONTROL.
2. NORMAL TRAIL WIDTH IS 10 FEET, BUT VARIES AT SPLITTER ISLAND LOCATIONS. REFER TO GENERAL PLANS FOR SPLITTER ISLAND LOCATIONS.
3. ASPHALT TRAIL SECTION TO BE UTILIZED IN LEU OF STONE DUST TRAIL SECTION WHERE THE PROFILE GRADE EXCEEDS 3%. SEE TABLE OF LOCATIONS ON DWG. NO. DT-07.



PARTIAL SECTION
STA. T40E 11+50 TO STA. 12+85



PARTIAL SECTION
STA. T40D 29+10 TO STA. 30+00



TYPICAL SECTION
STA. T40E 10+00 TO STA. T40E 12+85
STA. T40E 18+40 TO STA. T40E 21+10

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

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PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

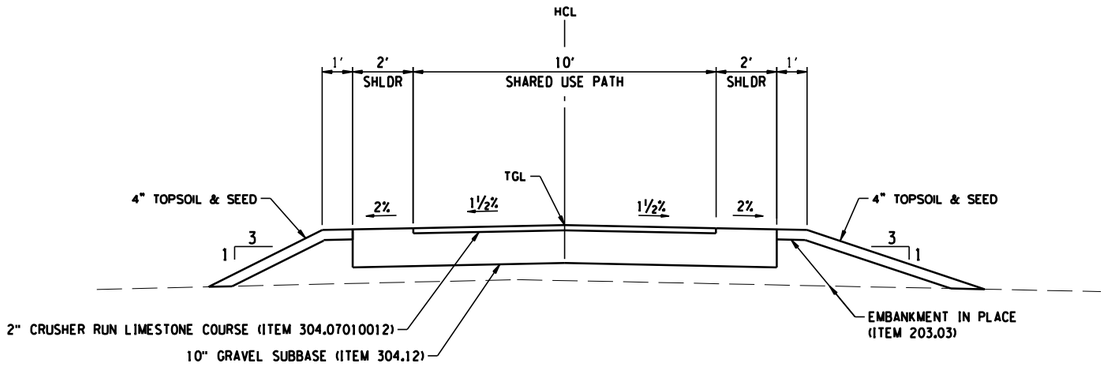
DRAWING TITLE
ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

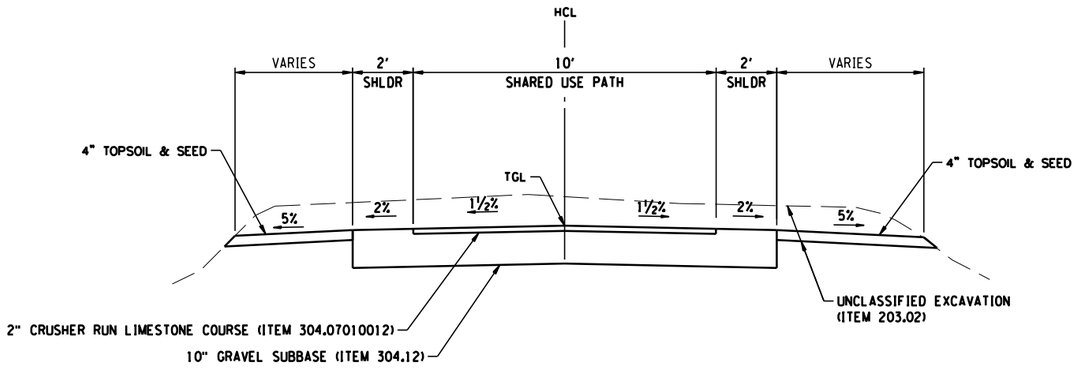
DRAWING NO. TS-04

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



TYPICAL SECTION
STA. T40E 12+85 TO STA. T40E 17+50



TYPICAL SECTION
STA. T40E 17+50 TO STA. T40E 18+40

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

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PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

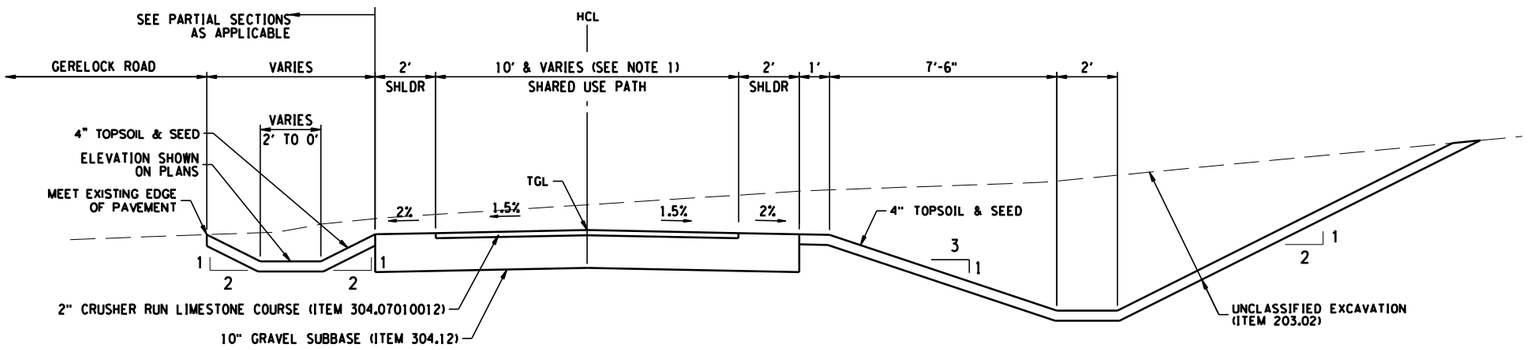
DRAWING NO. TS-05

REV. 0

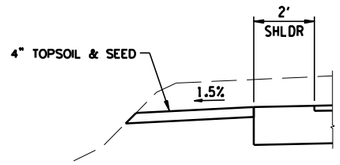
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

NOTES:

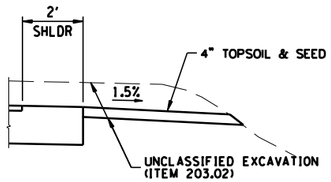
1. NORMAL TRAIL WIDTH IS 10 FEET, BUT VARIES AT SPLITTER ISLAND LOCATIONS. REFER TO GENERAL PLANS FOR SPLITTER ISLAND LOCATIONS.



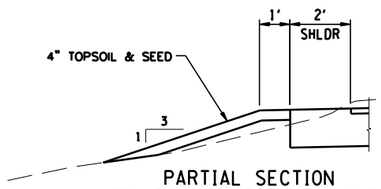
TYPICAL SECTION
STA. T40F 9+65 TO STA. 10+67



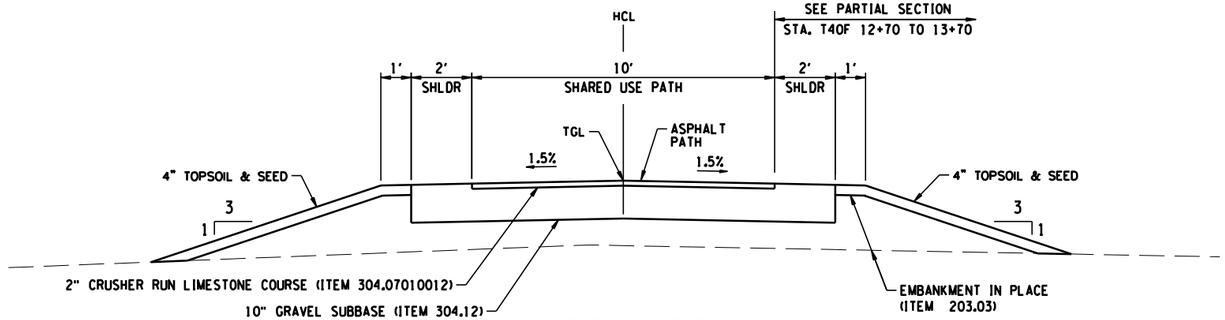
PARTIAL SECTION
STA. T40F 10+67 TO STA. 12+25



PARTIAL SECTION
STA. T40D 28+40 TO STA. 28+96
STA. T40F 12+70 TO STA. 13+70



PARTIAL SECTION
STA. T40F 12+25 TO STA. 12+70



TYPICAL SECTION
STA. T40F 12+70 TO STA. T40F 15+25

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

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PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

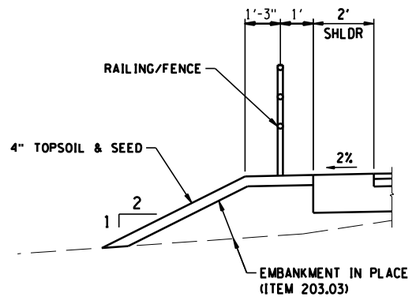
ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

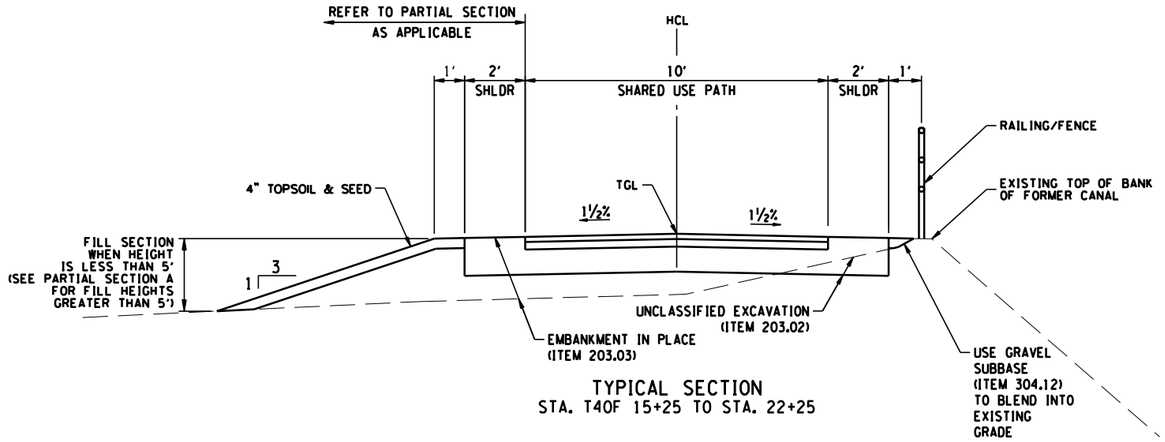
DRAWING NO. TS-06

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



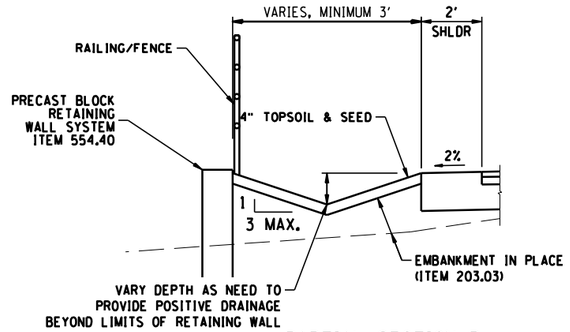
PARTIAL SECTION A
FOR FILL HEIGHT
GREATER THAN 5 FEET



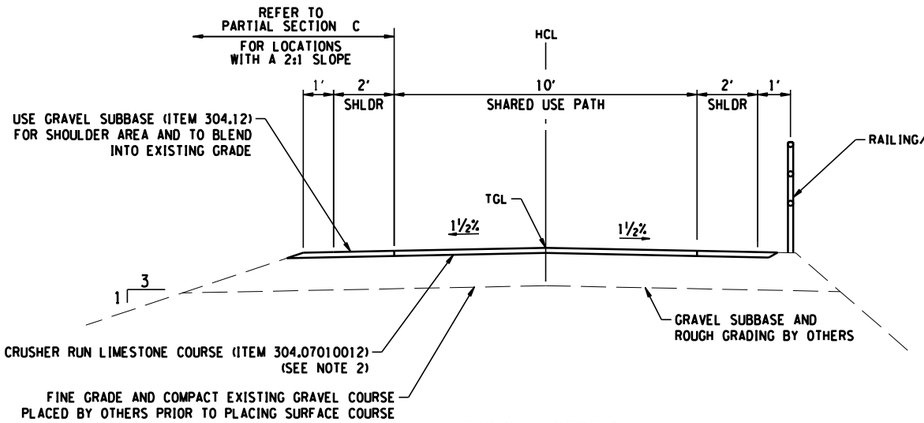
TYPICAL SECTION
STA. T40F 15+25 TO STA. 22+25

NOTES:

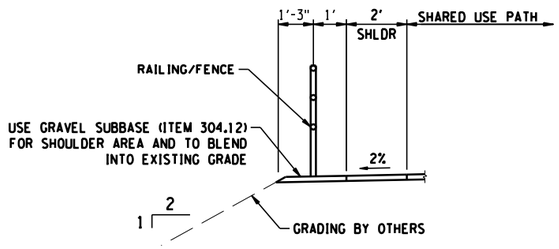
1. NORMAL TRAIL WIDTH IS 10 FEET, BUT VARIES AT SPLITTER ISLAND LOCATIONS. REFER TO GENERAL PLANS FOR SPLITTER ISLAND LOCATIONS.
2. ASPHALT TRAIL SECTION TO BE UTILIZED IN LEU OF STONE DUST TRAIL SECTION WHERE THE PROFILE GRADE EXCEEDS 3%. SEE TABLE OF LOCATIONS ON DWG. NO. DT-07.



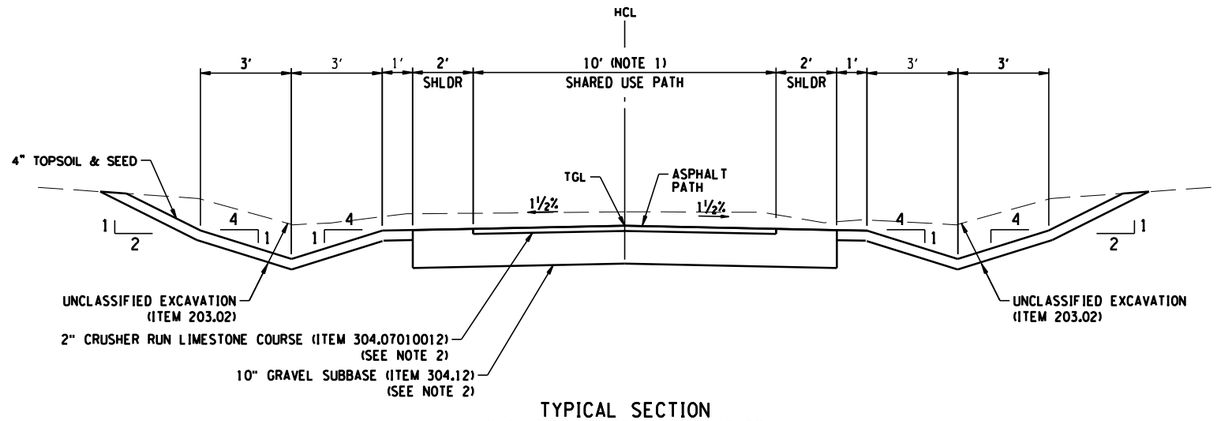
PARTIAL SECTION B
STA. T40F 20+20 TO 22+00



TYPICAL SECTION
STA. T40F 22+25 TO STA. 48+00



PARTIAL SECTION C



TYPICAL SECTION
STA. T40F 48+00 TO STA. 50+09

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL

PARSONS
OFFICE
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SYRACUSE, NY 13212
(315) 451-9560

JOB

WBS

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

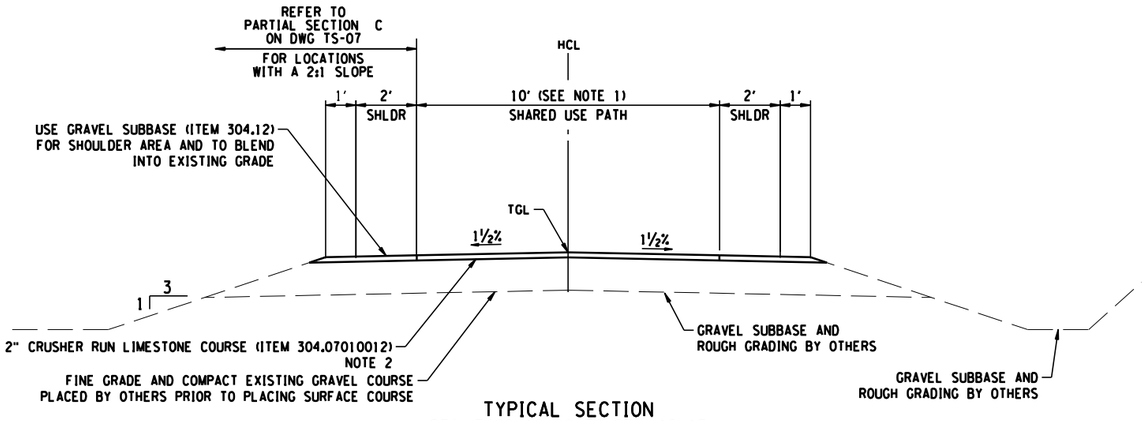
ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

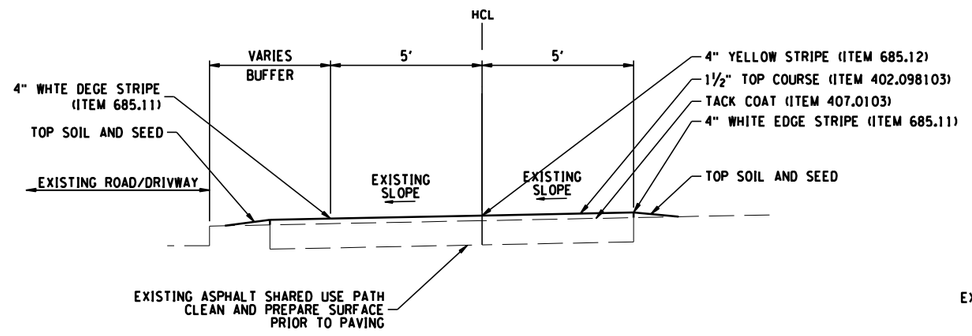
DRAWING NO. TS-07

REV. 0

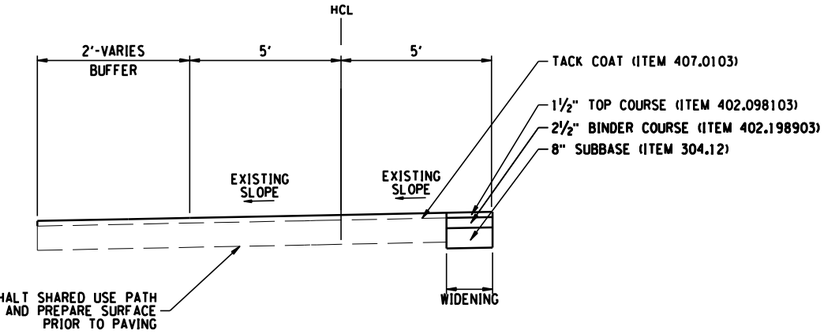
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



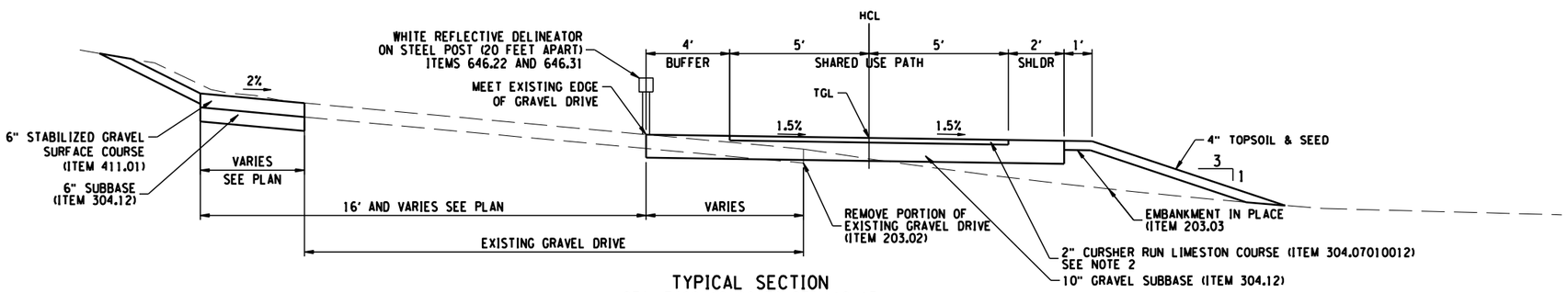
TYPICAL SECTION
STA. T40G 10+00 TO STA. 19+15



TYPICAL SECTION
STA. T40H 21+92 TO STA. 25+21



TYPICAL SECTION
STA. T40H 21+58 TO STA. 21+92



TYPICAL SECTION
STA. T40G 18+00 TO STA. 19+15

NOTES:

1. NORMAL TRAIL WIDTH IS 10 FEET, BUT VARIES AT SPLITTER ISLAND LOCATIONS. REFER TO GENERAL PLANS FOR SPLITTER ISLAND LOCATIONS.
2. ASPHALT TRAIL SECTION TO BE UTILIZED IN LEU OF STONE DUST TRAIL SECTION WHERE THE PROFILE GRADE EXCEEDS 3%. SEE TABLE OF LOCATIONS ON DWG. NO. DT-07.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL

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PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

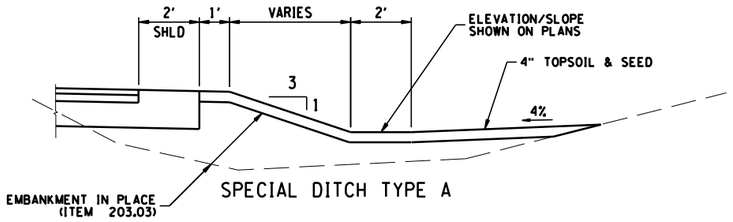
ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

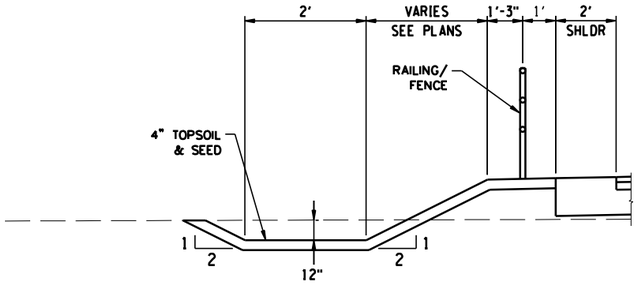
DRAWING NO. TS-08

REV. 0

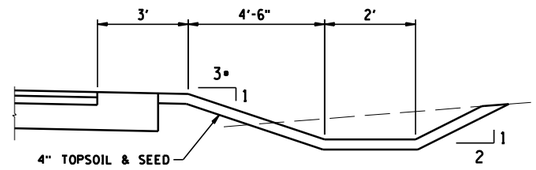
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



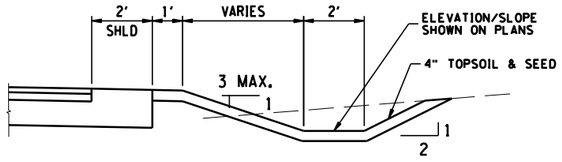
SPECIAL DITCH TYPE A



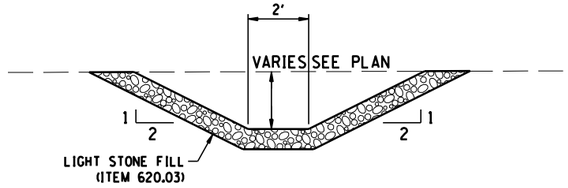
SPECIAL DITCH TYPE E



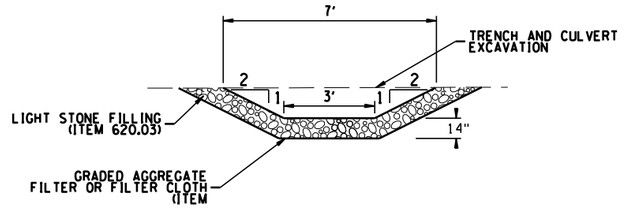
SPECIAL DITCH TYPE I



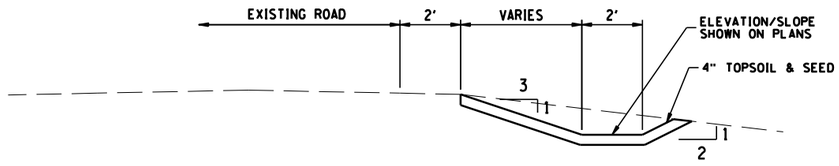
SPECIAL DITCH TYPE B



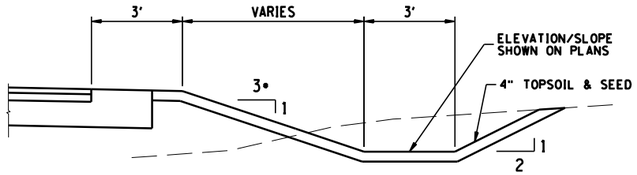
SPECIAL DITCH TYPE F



SPECIAL DITCH TYPE J

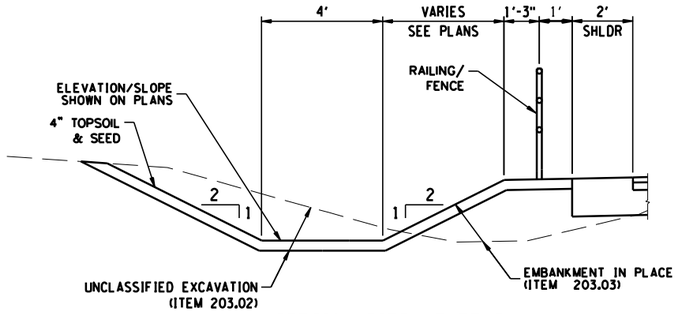


SPECIAL DITCH TYPE C

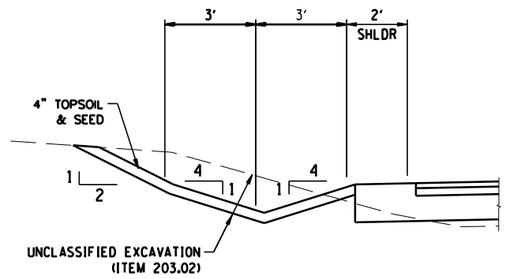


• - NORMAL 3:1 SLOPE EXCEPT AT THE FOLLOWING LOCATIONS:
T40E 23+50 TO 23+65, USE 2:1

SPECIAL DITCH TYPE G



SPECIAL DITCH TYPE D



SPECIAL DITCH TYPE H

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

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PARSONS
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(315) 451-9560

JOB

WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

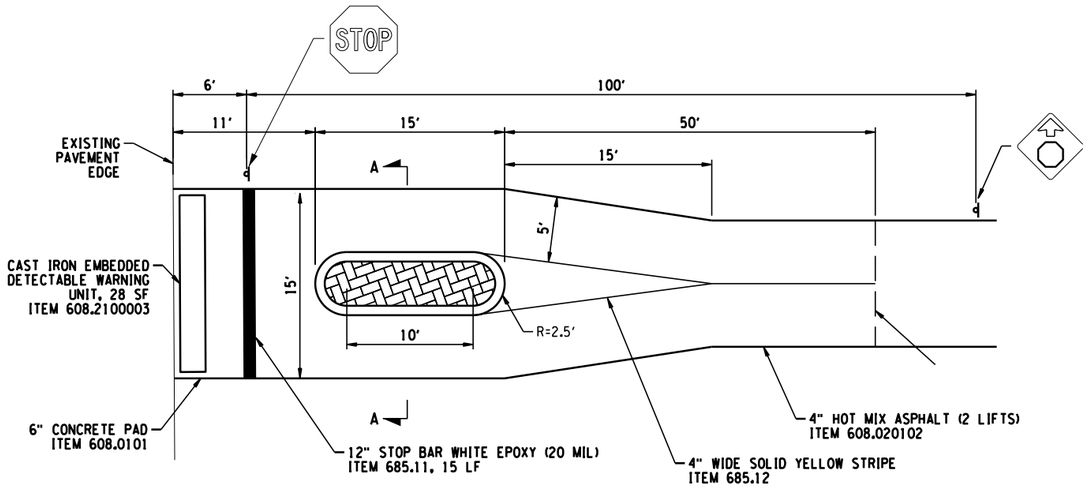
DRAWING TITLE
ERIE CANALWAY TRAIL
TYPICAL SECTIONS

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. TS-09

REV. 0

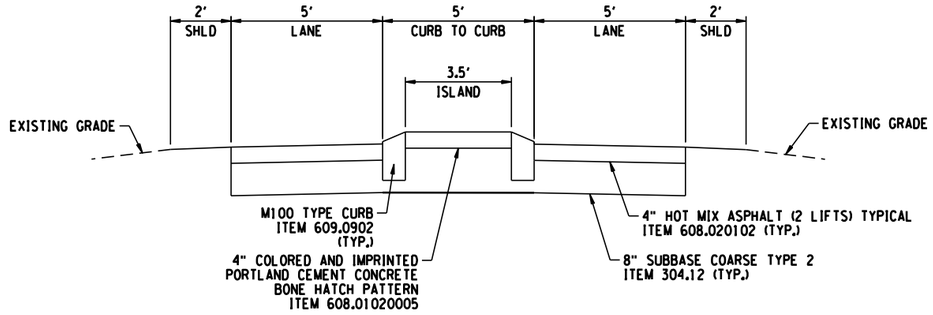
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



NOTES:

1. VARIES AT CURVES INSTALLATION, SEE GENERAL PLANS.

TRAIL SPLITTER ISLAND
TYPICAL PLAN

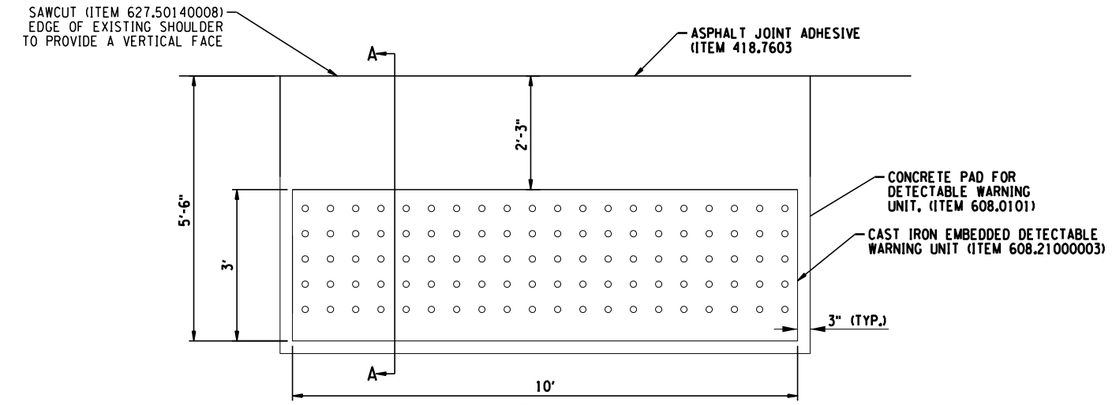


SECTION A-A

TRAIL SPLITTER ISLAND DETAIL
NTS

NOTES:

1. TYPICAL SPLITTER ISLAND DIMENSIONS ARE ALTERED WHERE ON A SKEW. REFER TO PLAN SHEETS.



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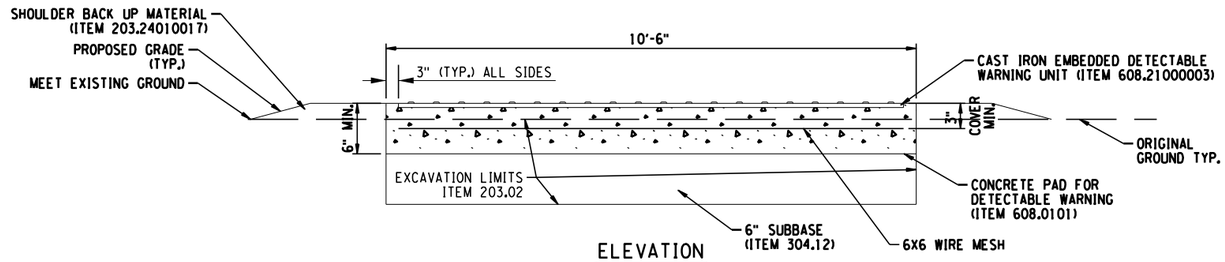

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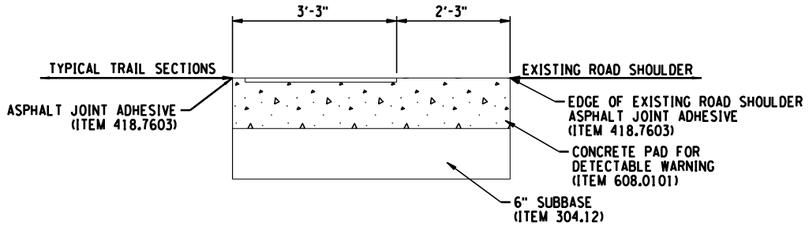

SECTION A-A

CAST IRON DETECTABLE WARNING UNIT DETAIL
NTS

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
1	ISSUED FOR BID	03/29/19	SLC	MPR	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

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PROJECT TITLE

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DRAWING TITLE

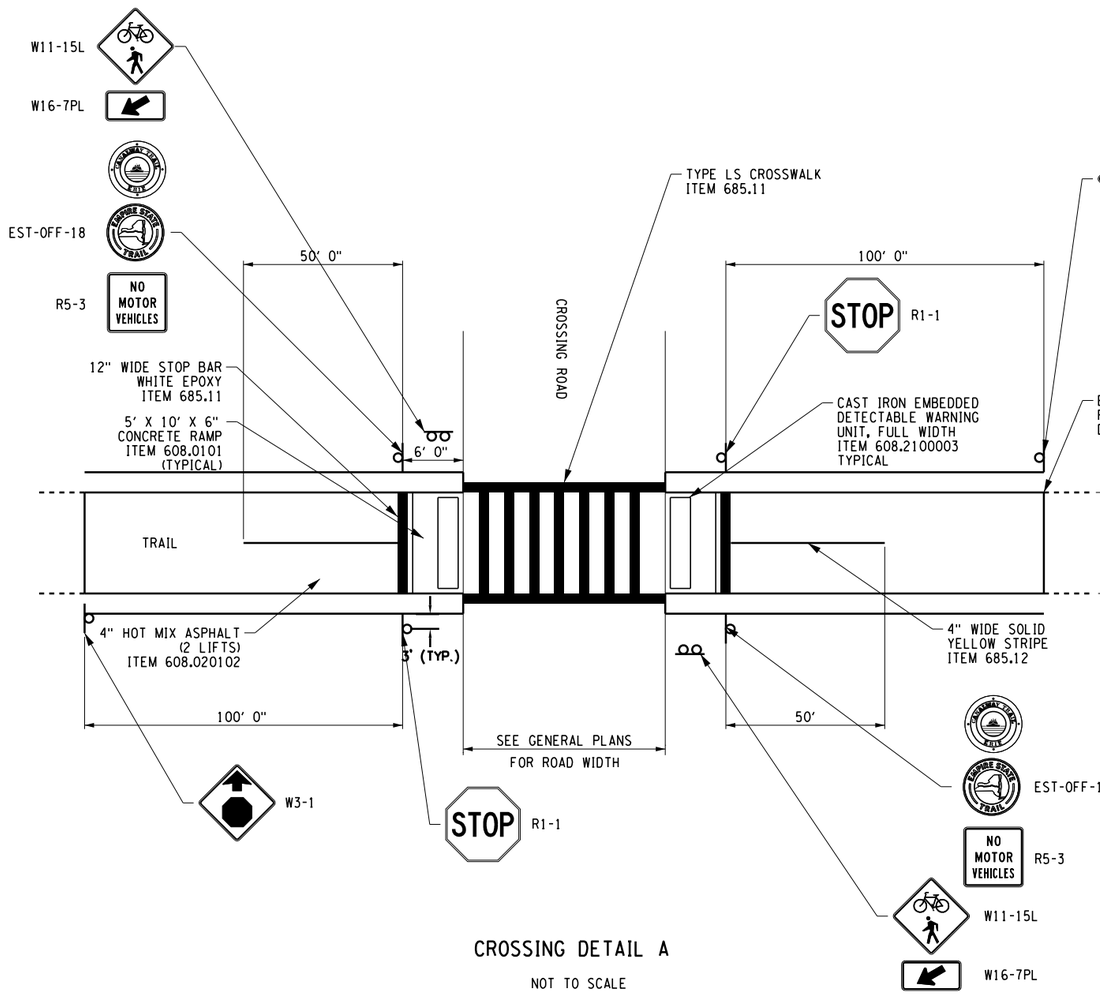
ERIE CANALWAY TRAIL
DETAILS AND TABLES

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO. DT-01

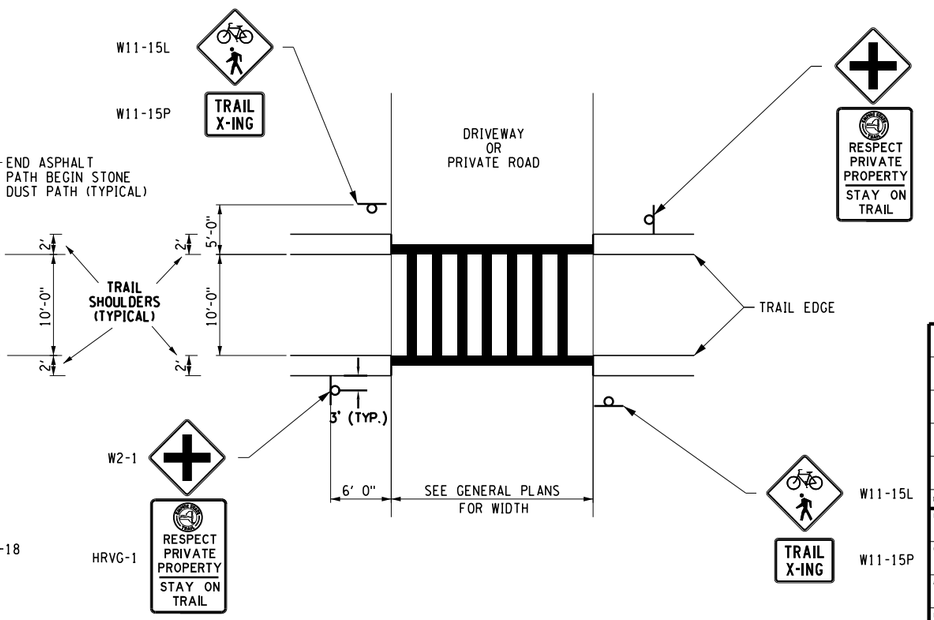
REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



CROSSING DETAIL A

NOT TO SCALE



CROSSING DETAIL B

NOT TO SCALE

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
1	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL

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PROJECT TITLE

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ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

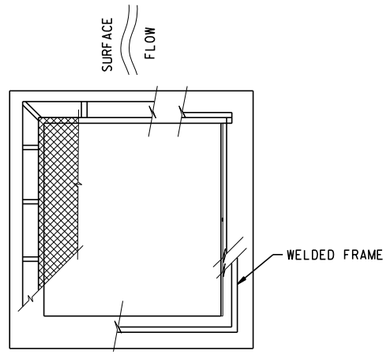
ERIE CANALWAY TRAIL
DETAILS AND TABLES

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

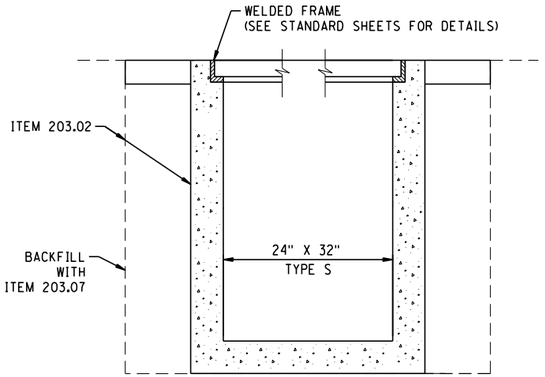
DRAWING NO.: DT-02

REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

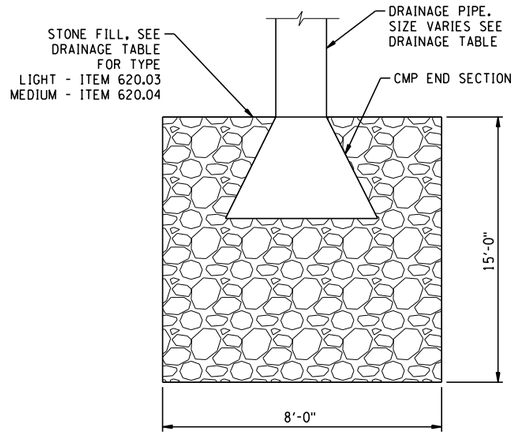


PLAN



SECTION

TYPES S RECTANGULAR DRAINAGE STRUCTURE
N.T.S.



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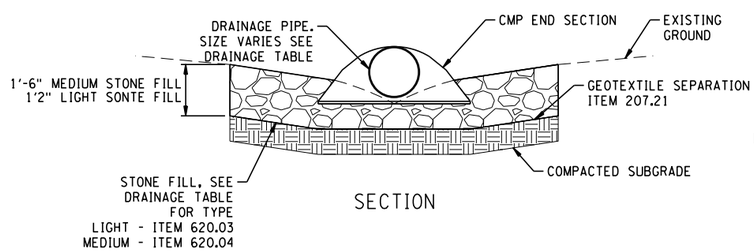

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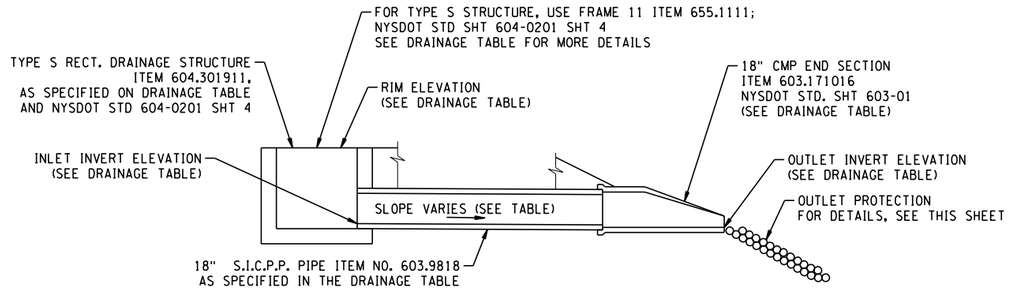
OUTLET PROTECTION DETAIL
N.T.S.



DRAINAGE STRUCTURE DETAIL
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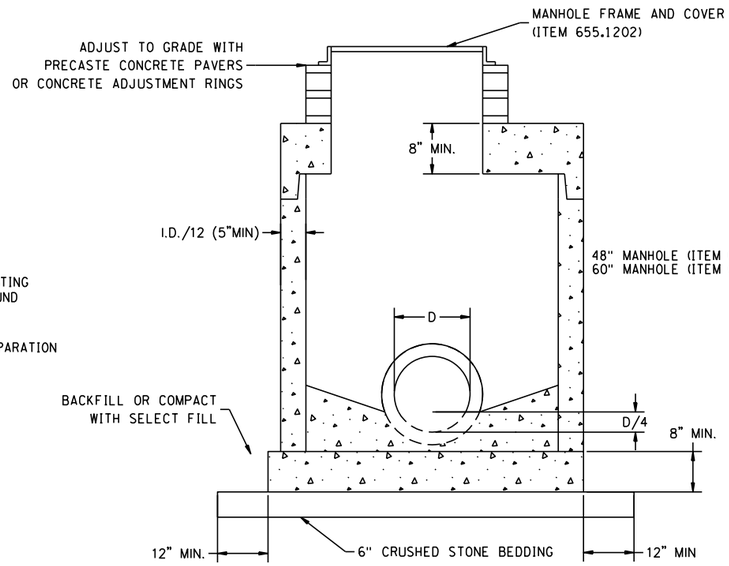
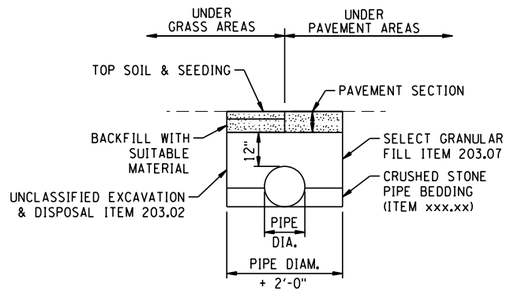


PRECAST ROUND MANHOLE
WITH TOP SLAB DETAIL
N.T.S.



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DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL: MARK R. PARSONS, 090905-1, LICENSED PROFESSIONAL ENGINEER, STATE OF NEW YORK

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PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAILS AND TABLES

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. DT-03

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

DRAINAGE TABLE

STRUCTURE NO.	LOCATION FROM	LOCATION TO	STRUCTURE TYPE	RIM ELEVATION	INVERT ELEVATION AT STRUCTURE	OUTLET LOCATION	PIPE INVERT AT OUTLET	PIPE SLOPE (%)	PIPE MATERIAL	PIPE SIZE (IN)	PIPE LENGTH (FT)	STRUCTURE LENGTH (LF)	STONE PROTECTION	NOTES
DR-01	T10A 3+42, 3' LT		EXISTING DROP INLET	410.5	EXISTING	EXISTING PIPE			N/A			N/A	N/A	SEE NOTE 1
DR-02	T10A 10+27, 24' RT	T10A 10+37.5, 25' LT	CULVERT	N/A	410.40	END SECTION	409.70	1.40	SIPP	18	50	N/A	LIGHT	
DR-03	T10A 11+60, 15' RT	T10A 11+45, 34' RT	CULVERT EXTENSION	N/A	411.23	END SECTION	411.00	1.10	SIPP	12	21	N/A	LIGHT	
DR-04	T10A 16+50, RT	T10A 16+00, RT	STONE SLOPE PROTECTION	N/A	N/A	BASE OF SLOPE	N/A	N/A	N/A	N/A	N/A	N/A	LIGHT	SEE NOTE 2
DR-05	T10A 17+25, 15.5' RT	T10A 17+25, 17.5' LT	CULVERT	N/A	450.00	END SECTION	449.67	1.00	SIPP	18	33	N/A	LIGHT	
DR-06	T10A 21+35, 15.5' RT	T10A 21+35, 16.5' LT	CULVERT	N/A	453.70	END SECTION	453.28	1.31	SIPP	24	32	N/A	MEDIUM	SPECIAL DITCH AT OUTLET
DR-07	T10A 25+93, 23' RT	T10A 26+09, 27' LT	CULVERT	N/A	465.80	END SECTION	460.20	10.77	SIPP	36	52	N/A	MEDIUM	
DR-08	T10A 34+21.5, 23.5' RT	T10A 34+52, 30' LT	CULVERT	N/A	462.00	END SECTION	456.00	9.68	RCP	18	62	N/A	LIGHT	
DR-09	T10A 36+89, 22' RT	T10A 37+14, 22' LT	CULVERT	N/A	458.00	END SECTION	455.00	5.88	SIPP	24	51	N/A	MEDIUM	
DR-10	T10A 42+58.3, 20.5' RT	T10A 43+00, 22.5' LT	CULVERT	N/A	461.00	END SECTION	459.00	3.45	SIPP	18	58	N/A	LIGHT	
DR-11	T10A 46+56.5, 22' RT	T10A 46+56.5, 26' LT	CULVERT	N/A	462.00	END SECTION	459.00	6.25	SIPP	24	48	N/A	MEDIUM	
DR-12	T10A 51+21, 15.5' RT	T10A 51+35, 27' LT	CULVERT	N/A	466.00	END SECTION	460.00	12.77	SIPP	18	47	N/A	LIGHT	
DR-13	T10B 10+16, 15.5' RT	T10B 10+16, 15.5' LT	CULVERT	N/A	471.00	END SECTION	470.58	1.25	SIPP	18	33.5	N/A	LIGHT	
DR-14	T10B 24+00, 18' RT	T10B 24+00, 18' LT	CULVERT	N/A	482.50	END SECTION	482.13	1.00	SIPP	18	37	N/A	LIGHT	
DR-15A	T10B 24+11, 19' LT	T10C 10+15, 14' LT	CULVERT	N/A	482.00	60" MH (DR-15B)	481.37	1.12	SIPP	24	56	N/A	N/A	
DR-15B	T10C 10+15, 14' LT	T10C 10+40, 23' LT	60" MANHOLE	485.50	481.37	END SECTION	481.10	1.12	SIPP	24	24	4.13	MEDIUM	
DR-16	T10C 12+50, 10' RT	T10C 12+50, 17' LT	DROP INLET	480.25	477.25	END SECTION	477.00	0.93	SIPP	18	27	3.00	LIGHT	
DR-17	T10C 15+50, 10' RT	T10C 15+50, 21' LT	DROP INLET	472.00	467.50	END SECTION	467.19	1.00	SIPP	18	31	4.50	LIGHT	
DR-18	T10C 18+35, 10' RT	T10C 18+35, 19' LT	DROP INLET	469.20	465.50	END SECTION	465.21	1.00	SIPP	18	29	3.70	LIGHT	
DR-19	T10C 19+50, 24' LT	T10C 19+80, 10' RT	END SECTION	469.80	463.00	DROP INLET	460.00	6.00	SIPP	36	50	9.80	LIGHT	SEE NOTE 3
DR-20	T10C 26+00, 10' RT	T10C 27+00, 16' LT	DROP INLET	462.30	459.30	END SECTION	456.70	2.55	SIPP	18	102	5.60	LIGHT	
DR-21	T10C 30+15, 19' LT	T10C 30+60, 26' RT	CULVERT	N/A	441.40	END SECTION	437.00	7.10	SIPP	18	62	N/A	LIGHT	
DR-22	T10D 15+35, 15.5' LT	T10C 15+35, 17.5' RT	CULVERT	N/A	431.20	END SECTION	430.70	1.52	SIPP	18	33	N/A	LIGHT	SPECIAL DITCH AT OUTLET
DR-23	T10D 25+69, 15.5' LT	T10D 25+69, 16.5' RT	CULVERT	N/A	411.25	END SECTION	410.93	1.00	SIPP	18	32	N/A	LIGHT	SPECIAL DITCH AT OUTLET
DR-24	T10D 29+15, 27' RT	T10D 29+44, 1' RT	EXISTING CULVERT EXTENTION	N/A	396.24	END SECTION	395.90	1.00	RCP	48	34	N/A	LIGHT	
DR-25	T10D 29+62, 15.5' LT	T10D 29+54, 16.5' RT	CULVERT	N/A	400.50	END SECTION	400.18	1.00	SIPP	18	32	N/A	LIGHT	
DR-26	T10E 20+94, 17.5' LT	T10E 21+11, 18' RT	CULVERT	N/A	397.50	END SECTION	397.00	1.19	SIPP	18	42	N/A	LIGHT	
DR-27	T10E 21+13, 20' RT	T10E 21+75, 20.5' RT	CULVERT	N/A	396.80	END SECTION	396.21	1.07	SIPP	24	55	N/A	LIGHT	
DR-28	T10E 22+75, 11' LT	T10E 21+75, 20' RT	CULVERT	N/A	396.20	END SECTION	393.00	10.32	SIPP	18	31	N/A	LIGHT	
DR-29A	T10F 9+74, 19' RT	T10F 9+63, 10' RT	END SECTION	401.00	398.50	48" MANHOLE	396.30	16.92	SIPP	18	13	4.70	LIGHT	SEE NOTE 4
DR-29A	T10F 10+25, 19' RT	T10F 9+63, 10' RT	END SECTION	N/A	399.50	48" MANHOLE	397.50	3.13	SIPP	18	64	N/A	N/A	
DR-30	T10F 9+83, 133' RT	T10F 9+79, 80' RT	CULVERT	N/A	403.30	END SECTION	401.00	3.38	SIPP	18	68	N/A	LIGHT	
DR-31	T10F 10+88, 95' RT	T10F 10+85, 80' RT	CULVERT	N/A	405.00	END SECTION	404.80	1.11	SIPP	12	18	N/A	N/A	
DR-32	T10F 12+05, 16.5' RT	T10F 11+74, 16.5' RT	CULVERT	N/A	404.88	END SECTION	404.05	2.68	SIPP	18	31	N/A	N/A	
DR-33	T10F 50+04, 20' RT	T10F 49+68, 20' LT	CULVERT	N/A	392.02	END SECTION	391.50	1.00	SIPP	19	52	N/A	LIGHT	
DR-34	T10G 10+25, 15.5' RT	T10G 10+25, 17.5' LT	CULVERT	N/A	392.50	END SECTION	392.17	1.00	SIPP	18	33	N/A	LIGHT	SPECIAL DITCH AT OUTLET

NOTE 1: REMOVE EXISTING GRATE, INSTALL NEW TOP SLAB AND MANHOLE FRAME AND COVER. ADJUST TO FINAL TRAIL GRADE.
NOTE 2: PROVIDE STONE SLOPE PROTECTION CHANNEL FROM END OF DITCH TO 10 FEET BEYOND BASE OF EMBANKMENT. SEE DETAIL, DWG. DT-04
NOTE 3: CONSTRUCT NEW DROP INLET ON EXISTING 36" PIPE. REMOVE AND DISPOSE OF UPSTREAM PORTION OF EXISTING PIPE.
NOTE 4: CONSTRUCT MANHOLE ON EXISTING PIPE AND EXTEND NEW PIPE TO NEW INLET.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
1	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY: SLC — DATE
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APPROVED BY: MRP — DATE
PROJECT MGR.: MB — DATE

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PROJECT TITLE
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ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAILS AND TABLES

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: DT-04
REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

ITEM 607.65020010 - SPLIT RAIL FENCE

DESCRIPTION
CONTRACTOR SHALL FURNISH AND INSTALL SPLIT RAIL FENCING, INCLUDING POSTS, RAILS AND COMPONENT PARTS, IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND DIRECTIONS OF THE ENGINEER.

MATERIALS
THE FENCE SHALL BE MADE OF CEDAR, POPLAR, OR LOCUST. BOTH POSTS AND RAILS SHALL BE SPLIT, NOT ROUND.

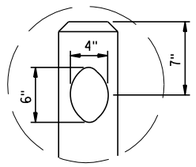
CONSTRUCTION DETAILS
ALL POSTS SHALL BE VERTICALLY AND TO THE REQUIRED GRADE AND ALIGNMENT.

FENCE SHALL GENERALLY FOLLOW THE CONTOUR OF THE GROUND. GRADING SHALL BE PERFORMED WHERE NECESSARY TO PROVIDE A NEAT APPEARANCE.

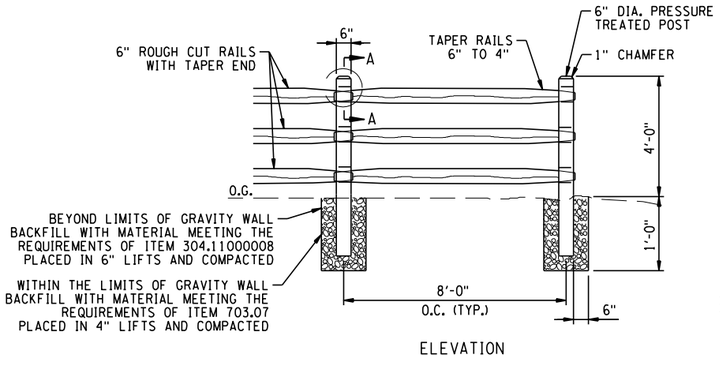
POSTS SHALL BE SPACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

METHOD OF MEASUREMENT
SPLIT RAIL FENCE WILL BE MEASURED AS THE NUMBER OF FEET, ALONG THE TOP OF THE FENCE, WHICH ARE SATISFACTORILY INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

BASIS OF PAYMENT
THE UNIT PRICE BID PER FOOT OF SPLIT RAIL FENCE SHALL INCLUDE THE COST OF FURNISHING ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK INCLUDING EXCAVATION, BACK FILLING, AND REGRADING.



SECTION A-A



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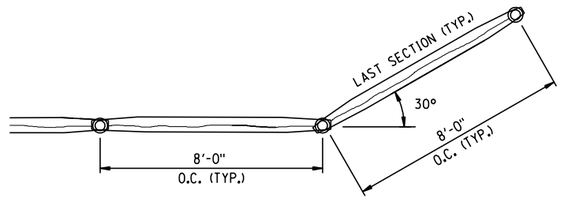
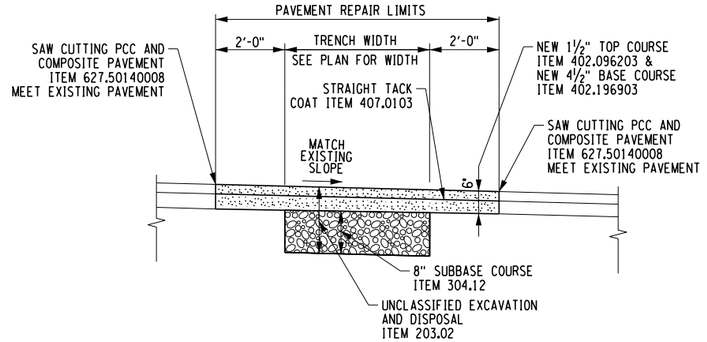
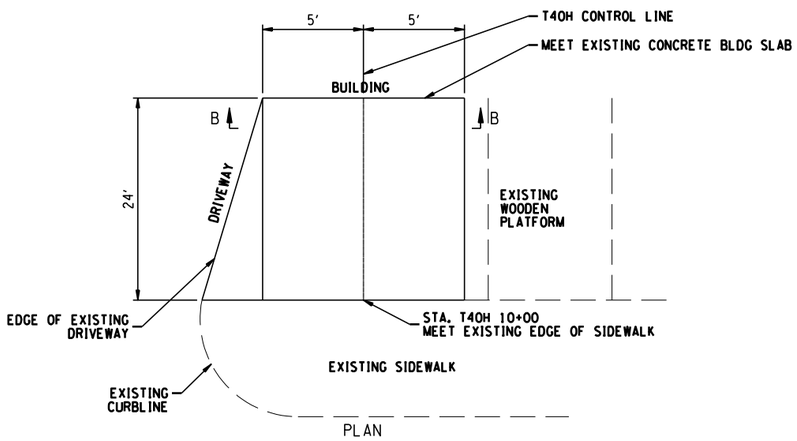


PLAN

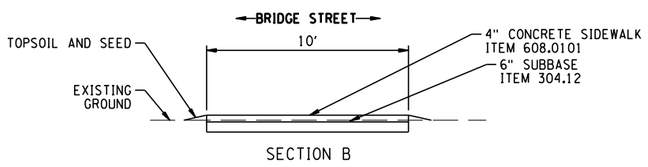
SPLIT RAIL FENCE DETAIL
NTS



PAVEMENT REPAIR DETAIL
N.T.S.

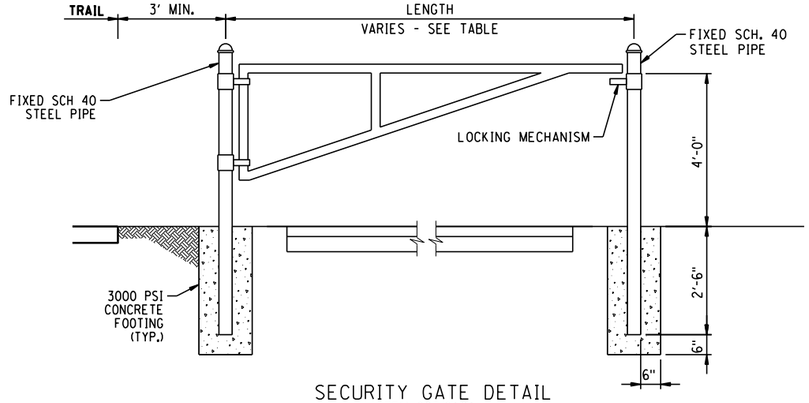


PLAN



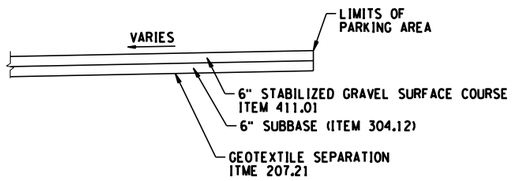
SECTION B

CONCRETE SIDEWALK DETAIL



SECURITY GATE DETAIL
ITEM 607.9101
NTS

SECURITY GATE TABLE		
ITEM NO. 607.9101		
LOCATION	LENGTH (FT)	SHEET
ACCESS ROAD TO BORROW AREA (T40A 53+60, 15' LT)	40.0	GP-05
ACCESS ROAD TO BORROW AREA (T40A 53+60, 15' RT)	40.0	GP-05
DRIVEWAY TO LCP SITE (T40G 18+79, LT	20.0	GP-17 (DP-10)



STABILIZED STONE PARKING LOT DETAIL

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
1	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY: SLC — DATE:
CHECKED BY: AM — DATE:
APPROVED BY: MRP — DATE:
PROJECT MGR.: MB — DATE:

SEAL: STATE OF NEW YORK — MARK R. PAPPAS — NO. 060808 — LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB:
WBS:

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAILS AND TABLES

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO.: DT-05
REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2020 1:36 PM PLOTTED BY: RUSSO, JILL

T40A CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40A-1 POB	T40A 2+80.05	1116331.252	904269.08	—	—	---
CURVE T40A-1 PC	T40A 3+33.92	1116354.15	904317.85	75.00'	46.42'	35°27'46" RT
CURVE T40A-1 PT	T40A 3+80.34	1116360.04	904363.15			
CURVE T40A-2 PC	T40A 4+38.14	1116349.69	904420.01	75.00'	34.17'	26°06'11" LT
CURVE T40A-2 PT	T40A 4+72.31	1116351.31	904453.85			
CURVE T40A-3 PC	T40A 8+96.02	1116466.59	904861.57	80.00'	20.00'	14°19'18" LT
CURVE T40A-3 PT	T40A 9+16.02	1116474.37	904879.94			
CURVE T40A-4 PC	T40A 9+81.36	1116507.15	904936.47	80.00'	12.37'	8°51'44" RT
CURVE T40A-4 PT	T40A 9+93.74	1116512.50	904947.61			
CURVE T40A-5 PC	T40A 1+50.26	1116569.23	905093.50	100.00'	145.62'	83°25'59" RT
CURVE T40A-5 PT	T40A 1+95.88	1116522.68	905218.18			
CURVE T40A-6 PC	T40A 1+84.39	1116267.51	905352.80	150.00'	213.71'	81°37'50" LT
CURVE T40A-6 PT	T40A 1+98.10	1116196.06	905535.40			
CURVE T40A-7 PC	T40A 1+44.54	1116211.52	905579.20	100.00'	68.56'	39°16'50" RT
CURVE T40A-7 PRC	T40A 1+13.10	1116211.29	905646.43			
CURVE T40A-8 PRC	T40A 1+13.10	1116211.29	905646.43	100.00'	68.63'	39°19'26" LT
CURVE T40A-8 PT	T40A 1+81.74	1116211.09	905713.72			
CURVE T40A-9 PC	T40A 2+59.29	1116236.96	905786.83	100.00'	36.25'	20°46'12" RT
CURVE T40A-9 PRC	T40A 2+95.54	1116242.66	905822.43			
CURVE T40A-10 PRC	T40A 2+95.54	1116242.66	905822.43	100.00'	37.53'	21°30'05" LT
CURVE T40A-10 PT	T40A 2+33.07	1116248.80	905859.23			
CURVE T40A-11 PC	T40A 2+61.69	1116362.37	906167.60	200.00'	117.08'	33°32'25" LT
CURVE T40A-11 PRC	T40A 2+78.77	1116431.82	906259.79			
CURVE T40A-12 PRC	T40A 2+78.77	1116431.82	906259.79	150.00'	73.00'	27°53'03" RT
CURVE T40A-12 PT	T40A 2+51.77	1116478.10	906315.31			
CURVE T40A-13 PC	T40A 2+83.30	1116579.14	906523.63	100.00'	66.35'	38°00'55" RT
CURVE T40A-13 PRC	T40A 2+49.65	1116586.93	906588.30			
CURVE T40A-14 PRC	T40A 2+49.65	1116586.93	906588.30	100.00'	86.52'	49°34'20" LT
CURVE T40A-14 PT	T40A 3+36.17	1116605.29	906670.11			
CURVE T40A-15 PC	T40A 3+48.09	1116673.31	906758.98	100.00'	34.39'	19°42'17" RT
CURVE T40A-15 PT	T40A 3+82.48	1116689.16	906789.31			
CURVE T40A-16 PC	T40A 3+18.20	1116730.49	906918.60	100.00'	3.97'	2°16'24" RT
CURVE T40A-16 PT	T40A 3+22.17	1116731.62	906922.40			
CURVE T40A-17 PC	T40A 3+06.17	1116860.59	907388.89	200.00'	34.53'	9°53'31" LT
CURVE T40A-17 PT	T40A 3+40.70	1116872.61	907421.22			
CURVE T40A-18 PC	T40A 4+28.33	1117124.16	907952.28	100.00'	4.29'	2°27'27" RT
CURVE T40A-18 PT	T40A 4+32.61	1117125.91	907956.20			
CURVE T40A-19 PC	T40A 4+57.58	1117252.31	908255.58	100.00'	49.20'	28°11'27" LT
CURVE T40A-19 PRC	T40A 4+06.79	1117281.61	908294.49			
CURVE T40A-20 PRC	T40A 4+06.79	1117281.61	908294.49	100.00'	47.12'	26°59'42" RT
CURVE T40A-20 PT	T40A 4+53.90	1117310.08	908331.48			
CURVE T40A-21 PC	T40A 5+35.74	1117425.09	908588.79	40.00'	73.69'	105°33'27" RT
CURVE T40A-21 PT	T40A 5+09.44	1117394.51	908644.67			
CURVE T40A-22 PC	T40A 5+13.42	1117291.67	908660.09	40.00'	27.33'	39°09'07" LT
CURVE T40A-22 POE	T40A 5+40.76	1117268.02	908672.71			

T40B CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40B-1 POB	T40B 10+00.00	1119473.17	921367.02	—	—	---
CURVE T40B-1 PC	T40B 10+20.00	1117230.56	908713.85	100.00'	121.77'	69°46'15" RT
CURVE T40B-1 PT	T40B 11+41.77	1117119.01	908739.18			
CURVE T40B-2 PC	T40B 12+16.55	1117049.73	908711.06	100.00'	77.96'	44°40'01" LT
CURVE T40B-2 PT	T40B 12+94.51	1116973.73	908711.38			
CURVE T40B-3 PC	T40B 15+83.96	1116706.45	908822.50	100.00'	59.19'	33°54'58" LT
CURVE T40B-3 PT	T40B 16+43.16	1116661.46	908859.63			
CURVE T40B-4 PC	T40B 20+08.57	1116459.73	909164.30	100.00'	2.56'	1°27'58" RT
CURVE T40B-4 PT	T40B 20+11.13	1116458.29	909166.42			
CURVE T40B-5 PC	T40B 21+54.11	1116376.32	909283.58	82.00'	90.76'	63°25'02" LT
CURVE T40B-5 PT	T40B 22+44.87	1116371.41	909369.64			
PI T40B-2 POE	T40B 32+53.17	1117921.93	922976.34	—	—	---

T40C CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40C-1 POB	T40C 10+10.48	1116475.03	909560.95	—	—	---
CURVE T40C-1 PC	T40C 10+51.54	1116494.59	909597.06	200.00'	146.56'	41°59'12" RT
CURVE T40C -1 PT	T40C 11+98.10	1116513.17	909739.16			
CURVE T40C-2 PC	T40C 18+51.22	1116360.20	910374.10	1404.00'	1111.55'	45°21'41" LT
CURVE T40C-2 PCC	T40C 29+62.77	1116532.11	911443.12			
CURVE T40C-3 PCC	T40C 29+62.77	1116532.11	911443.12	150.00'	102.83'	39°16'43"LT
CURVE T40C-3 POE	T40C 30+65.60	1116610.97	911505.95			

T40D CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40D-1 POB	T40D 10+00.00	1116610.97	911505.95	---	—	---
CURVE T40D-1 PC	T40D 10+90.19	1116696.29	911535.17	150.00'	69.07'	26°22'59" LT
CURVE T40D-1 PT	T40D 11+59.26	1116764.41	911541.98			
CURVE T40D-2 PC	T40D 14+04.46	1117007.54	911510.07	150.00'	21.61'	8°15'16" LT
CURVE T40D-2 PT	T40D 14+26.07	1117028.69	911505.73			
CURVE T40D-3 PC	T40D 15+42.79	1117141.03	911474.08	150.00'	142.18'	54°18'26" RT
CURVE T40D-3 PT	T40D 16+84.96	1117275.23	911501.19			
CURVE T40D-4 PC	T40D 18+91.49	1117436.69	911629.97	150.00'	101.82'	38°53'36" LT
CURVE T40D-4 PT	T40D 19+93.32	1117531.06	911662.70			
CURVE T40D-5 PC	T40D 21+22.27	1117660.01	911661.98	150.00'	38.57'	14°44'04" LT
CURVE T40D-5 PT	T40D 21+60.85	1117698.14	911656.84			
CURVE T40D-6 PC	T40D 22+61.41	1117795.25	911630.72	150.00'	28.87'	11°01'38" RT
CURVE T40D-6 PT	T40D 22+90.28	1117823.67	911625.94			
CURVE T40D-7 PC	T40D 25+22.31	1118055.13	911609.65	150.00'	23.99'	9°09'44" RT
CURVE T40D-7 PT	T40D 25+46.30	1118079.09	911609.89			
CURVE T40D-8 PC	T40D 27+18.60	1118250.71	911625.31	400.00'	82.78'	11°51'24" LT
CURVE T40D-8 PT	T40D 28+01.38	1118333.33	911624.17			
CURVE T40D-9 PC	T40D 28+71.03	1118402.50	911616.02	82.00'	128.78'	89°59'02" RT
CURVE T40D-9 PT	T40D 29+99.81	1118493.53	911687.84			
PI T40D-2 POE	T40B 29+99.82	1118493.53	911687.84	---	—	---

T40F CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40F-1 POB	T40E 9+60.45	1118407.38	913458.12	---	—	---
CURVE T40F-1 PC	T40E 10+32.73	1118377.66	913524.01	150.00'	17.86'	6°49'23" RT
CURVE T40F-1 PT	T40E 10+50.59	1118369.37	913539.82			
CURVE T40F-2 PC	T40E 11+42.48	1118321.91	913618.50	150.00'	20.94'	7°59'58" LT
CURVE T40F-2 PT	T40E 11+63.42	1118312.38	913637.13			
CURVE T40F-3 PC	T40E 15+82.93	1118147.79	914023.01	1500.00'	34.00'	1°17'55" RT
CURVE T40F-3 PT	T40E 16+16.94	1118134.10	914054.13			
CURVE T40F-4 PC	T40E 16+79.04	1118108.44	914110.69	1500.00'	41.95'	1°36'09" LT
CURVE T40F-4 PT	T40E 17+20.99	1118091.65	914149.13			
CURVE T40F-5 PC	T40E 20+30.55	1117971.71	914434.52	100.00'	7.90'	4°31'43" LT
CURVE T40F-5 PT	T40E 20+38.46	1117968.94	914441.92			
CURVE T40F-6 PC	T40E 20+74.39	1117957.68	914476.03	100.00'	11.85'	6°47'18" RT
CURVE T40F-6 PT	T40E 20+86.24	1117953.31	914487.04			
CURVE T40F-7 PC	T40E 21+56.24	1117923.67	914550.45	150.00'	6.69'	2°33'19" LT
CURVE T40F-7 PT	T40E 21+62.93	1117920.97	914556.57			
CURVE T40F-8 PC	T40E 29+43.16	1117622.39	915277.41	2500.00'	13.75'	0°18'55" RT
CURVE T40F-8 PT	T40E 29+56.91	1117617.09	915290.11			
CURVE T40F-9 PC	T40E 33+39.59	1117468.70	915642.84	1000.00'	29.74'	1°42'15" RT
CURVE T40F-9 PT	T40E 33+69.33	1117456.76	915670.08			
CURVE T40F-10 PC	T40E 35+10.28	1117398.27	915798.32	250.00'	24.57'	5°37'48" LT
CURVE T40F-10 PT	T40E 35+34.85	1117389.19	915821.14			
CURVE T40F-11 PC	T40E 35+78.45	1117375.07	915862.39	500.00'	34.26'	3°55'33" RT
CURVE T40F-11 PT	T40E 36+12.71	1117362.88	915894.40			
CURVE T40F-12 PC	T40E 37+16.60	1117322.59	915990.17	2000.00'	37.74'	1°04'53" RT
CURVE T40F-12 PT	T40E 37+54.35	1117307.63	916024.82			
CURVE T40F-13 PC	T40E 39+75.96	1117217.86	916227.43	2000.00'	48.93'	1°24'07" LT
CURVE T40F-13 PT	T40E 40+24.89	1117198.58	916272.41			
CURVE T40F-14 PC	T40E 44+26.57	1117044.91	916643.52	2000.00'	47.52'	1°21'41" RT
CURVE T40F-14 PT	T40E 44+74.09	1117026.20	916687.20			
CURVE T40F-15 PC	T40E 45+43.57	1116998.10	916750.75	2500.00'	12.90'	0°17'45" LT
CURVE T40F-15 PT	T40E 45+56.47	1116992.91	916762.57			
CURVE T40F-16 PC	T40E 47+44.44	1116917.78	916934.86	300.00'	3.93'	0°45'00" RT
CURVE T40F-16 PT	T40E 47+48.37	1116916.19	916938.45			
CURVE T40F-17 PC	T40E 48+62.60	1116869.16	917042.56	75.00'	9.11'	6°57'45" LT
CURVE T40F-17 PT	T40E 48+71.72	1116865.92	917051.07			
CURVE T40F-18 PC	T40E 48+97.69	1116858.18	917075.86	75.00'	18.70'	14°17'05" RT
CURVE T40F-18 PT	T40E 49+16.39	1116850.44	917092.84			
CURVE T40F-19 PC	T40E 49+65.03	1116824.93	917134.25	75.00'	41.39'	31°37'11" LT
CURVE T40F-19 PT	T40E 50+06.42	1116813.79	917173.57			
PI T40F-2 POE	T40E 50+09.26	1116813.79	917176.41	---	—	---

T40E CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40E-1 POB	T40E 10+35.59	1118493.53	911687.84	—	---	—
CURVE T40E-1 PC	T40E 19+44.04	1118600.09	912590.02	900.00'	196.99'	12°32'27" RT
CURVE T40E-1 PT	T40E 21+41.03	1118601.68	912786.61			
CURVE T40E-2 PC	T40E 21+90.64	1118596.67	912835.97	200.00'	17.11'	4°54'03" RT
CURVE T40E-2 PT	T40E 22+07.75	1118594.21	912852.89			
PI T40E-2	T40E 23+98.04	1118558.86	913039.87	—	---	—
PI T40E-3	T40E 24+18.54	1118553.53	913059.67	—	---	—
PI T40E-4	T40E 26+29.55	1118488.59	913260.43	—	---	—
PI T40E-5	T40E 26+49.57	1118481.48	913279.15	—	---	—
CURVE T40E-3 PC	T40E 27+60.46	1118435.56	913380.08	150.00'	15.97'	6°06'04" LT
CURVE T40E-3 PT	T40E 27+76.43	1118429.73	913394.94			
PI T40E-6 POE	T40E 27+97.56	1118423.07	913415.00	—	---	—

T40G CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40G-1 POB	T40E 10+00.00	1116813.79	917196.07	—	---	—
CURVE T40G-1 PC	T40E 10+86.69	1116813.79	917282.76	150.00'	59.55'	22°44'43" RT
CURVE T40G-1 PT	T40E 11+46.24	1116802.12	917340.75			
CURVE T40G-2 PC	T40E 12+89.46	1116746.75	917472.84	150.00'	67.49'	25°46'47" LT
CURVE T40G-2 PT	T40E 13+56.95	1116735.29	917538.78			
CURVE T40G-3 PC	T40E 14+25.07	1116738.90	917606.79	150.00'	63.06'	24°05'15" RT
CURVE T40G-3 PT	T40E 14+88.13	1116729.10	917668.62			
CURVE T40G-4 PC	T40E 16+14.45	1116683.72	917786.51	250.00'	69.76'	15°59'13" LT
CURVE T40G-4 PT	T40E 16+84.21	1116668.00	917854.25			
CURVE T40G-5 PC	T40E 17+49.97	1116662.20	917919.75	100.00'	22.47'	12°52'20" LT
CURVE T40G-5 PT	T40E 17+72.44	1116662.73	917942.16			
CURVE T40G-6 PC	T40E 18+85.74	1116678.12	918054.41	100.00'	2.74'	1°34'08" RT
CURVE T40G-6 PT	T40E 18+88.47	1116678.46	918057.13			
PI T40G-2 POE	T40E 19+15.13	1116681.35	918083.63	—	---	—

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
1	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY: SLC — DATE:
CHECKED BY: AM — DATE:
APPROVED BY: MRP — DATE:
PROJECT MGR.: MB — DATE:

SEAL: STATE OF NEW YORK · MARK R. PAPPAS · NO. 060905 · LICENSED PROFESSIONAL ENGINEER

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB:
WBS:

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAILS AND TABLES

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO.: DT-06
REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

T40H CONTROL LINE TABLE

ELEMENT	STATION	COORDINANTS NORTHING	COORDINANTS EASTING	RADIUS (FEET)	LENGTH (FEET)	DELTA (DEGREES)
PI T40G-1 POB	T40E 10+00.00	1119396.56	919024.44	—	—	---
CURVE T40G-1 PC	T40E 10+67.85	1119413.09	918958.63	75.00'	37.15'	28°22'42" RT
CURVE T40G-1 PT	T40E 11+05.00	1119430.51	918926.25			
CURVE T40G-2 PC	T40E 12+13.43	1119502.99	918845.61	165.00'	10.21'	3°32'40" LT
CURVE T40G-2 PT	T40E 12+23.63	1119509.58	918837.82			
CURVE T40G-3 PC	T40E 13+94.56	1119615.77	918703.87	165.00'	15.61'	5°25'16" RT
CURVE T40G-3 PT	T40E 14+10.17	1119626.03	918692.12			
CURVE T40G-4 PC	T40E 15+81.69	1119744.81	918568.38	165.00'	15.03'	5°13'11" RT
CURVE T40G-4 PT	T40E 15+96.73	1119755.70	918558.03			
CURVE T40G-5 PC	T40E 16+90.14	1119826.26	918496.80	165.00'	17.38'	6°02'07" LT
CURVE T40G-5 PT	T40E 17+07.52	1119838.76	918484.74			
CURVE T40G-6 PC	T40E 19+05.27	1119973.65	918340.15	15.00'	23.61'	90°11'03"
CURVE T40G-6 PT	T40E 19+28.88	1119994.89	918339.45			
PI T40G-2	T40E 20+53.88	1120086.02	918425.02	—	—	---
PI T40G-3	T40E 20+83.40	1120105.96	918403.26	—	—	---
PI T40G-4	T40E 20+99.35	1120117.59	918414.18	—	—	---
PI T40G-5	T40E 21+13.09	1120120.68	918427.57	—	—	---
CURVE T40G-7 PC	T40E 21+70.02	1120162.23	918466.49	15.00'	22.32'	85°16'11" RT
CURVE T40G-7 PT	T40E 21+92.35	1120163.74	918486.76			
PI T40G-6	T40E 22+07.28	1120154.46	918498.46	—	—	---
PI T40G-7	T40E 22+43.59	1120133.30	918527.97	—	—	---
PI T40G-8	T40E 22+48.26	1120130.58	918531.76	—	—	---
PI T40G-9	T40E 22+72.80	1120116.36	918551.76	—	—	---
PI T40G-10	T40E 23+01.90	1120100.08	918575.88	—	—	---
PI T40G-11	T40E 23+08.07	1120096.66	918581.02	—	—	---
PI T40G-12	T40E 24+02.41	1120046.17	918660.71	—	—	---
PI T40G-13	T40E 24+12.50	1120040.86	918669.29	—	—	---
PI T40G-14	T40E 24+25.33	1120034.50	918680.43	—	—	---
PI T40G-15	T40E 24+45.34	1120024.41	918697.71	—	—	---
PI T40G-16	T40E 24+75.68	1120008.72	918723.68	—	—	---
PI T40G-17	T40E 25+05.63	1119993.60	918749.54	—	—	---
PI T40G-18 POE	T40E 25+21.45	1119985.71	918763.24	—	—	---

ASHPHALT PAVEMENT TRAIL SEGMENTS

ALIGNMENT	BEGIN STA.	END STA.	LENGTH	COMMENT
T40A	2+83	3+57	74	SPLITTER ISLAND
T40A	9+00	25+00	1600	>3% GRADE
T40A	53+00	53+80	80	ACCESS ROAD CROSSING
T40B	10+00	10+50	50	ACCESS ROAD CROSSING
T40B	21+00	24+21	321	>3% GRADE, SPLITTER ISLAND
T40C	10+19	11+05	86	SPLITTER ISLAND
T40C	24+10	30+65	655	>3% GRADE
T40D	10+00	11+50	150	>3% GRADE
T40D	20+25	26+75	650	>3% GRADE
T40E	20+40	21+20	80	SPLITTER ISLAND
T40E	21+63	24+05	242	ADJACENT TO GERELOCK RD.
T40E	26+43	27+85	142	ADJACENT TO GERELOCK RD.
T40F	9+63	10+40	77	SPLITTER ISLAND
T40F	49+21	49+99	78	SPLITTER ISLAND
T40G	10+02	10+50	48	ROAD CROSSING
T40G	18+00	19+12	112	TRAIL JUNCTION

SPLIT RAIL FENCE, ITEM 607.65020010

ALIGNMENT	BEGIN STA.	END STA.	SIDE	LENGTH
T40A	9+35	11+15	LEFT	180
T40A	9+60	16+60	RIGHT	700
T40A	17+00	20+60	LEFT	360
T40A	33+90	36+60	LEFT	270
T40A	50+40	51+65	LEFT	125
T40B	13+40	16+15	RIGHT	275
T40B	18+40	21+90	RIGHT	350
T40B	19+90	21+40	LEFT	150
T40C	10+25	20+50	LEFT	1025
T40C	27+00	30+50	LEFT	350
T40D	16+15	17+65	RIGHT	150
T40D	28+75	29+75	RIGHT	100
T40E	23+00	23+75	RIGHT	75
T40E	26+45	27+75	RIGHT	130
T40F	15+50	47+65	RIGHT	3215
T40F	15+75	16+50	LEFT	75
T40F	20+10	28+40	LEFT	830
T40F	30+75	47+65	LEFT	1690
T40G	11+15	11+85	LEFT	70
T40G	13+40	14+85	LEFT	145
T40G	18+45	18+85	RIGHT	40

CHAIN LINK FENCE, ITEM 607.3002

ALIGNMENT	BEGIN STA.	END STA.	SIDE	LENGTH
T40C	11+00	16+00	LEFT	500

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
1	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY: SLC — DATE:
CHECKED BY: AM — DATE:
APPROVED BY: MRP — DATE:
PROJECT MGR.: MB — DATE:

SEAL: STATE OF NEW YORK — MARK R. PRITCHARD — No. 060908 — LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB:

WBS:

PROJECT TITLE: Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE: ERIE CANALWAY TRAIL DETAILS AND TABLES

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: DT-07

REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

SIGN TEXT DATA TABLE

DESIGNATION & COLOR	LOCATION (PLAN SHEET)	TEXT	ITEMS	SIZE (AREA)	TOTAL AREA
				POSTS	TOTAL POSTS
CUSTOM BLUE & YELLOW ON BROWN	1-01, 1-02, 6-02, 6-04, 12-01, 12-02, 13-01, 13-02, 16-04, 16-08, 17-01, 17-03, 17-04, 18-01, 18-02, 18-03, 18-04, 18-05, 18-06, 18-07, 18-08, 18-10, 18-12, 18-13, 18-14 [25]	ONONDAGA CREEK TRAIL	645.5101	18" DIA. (1.77 SF)	44.25 SF
			645.81	1 EA	25 EA
CUSTOM BLUE & YELLOW ON GREEN		ERIE CANAL TRAIL	645.5101	18" DIA. (1.77 SF)	44.25 SF
			---	---	---
D04-01L GREEN ON WHITE	1-05 [1]	P ← ARKING	645.5102	18" X 15" (1.88 SF)	1.88 SF
			645.81	1 EA	1 EA
W11-15P BLACK ON YELLOW	5-01, 5-02, 6-01, 6-05, 12-07, 12-08, 12-09, 13-07, 13-08, 16-03, 16-05, 16-07, 16-10 [13]	TRAIL X-ING	645.5102	24" X 18" (3.00 SF)	39.00 SF
			---	---	---
W11-15P BLACK ON YELLOW	6-03, 6-06 [2]	TRAIL X-ING	645.5102	18" X 12" (1.50 SF)	3.00 SF
			---	---	---
W16-09 BLACK ON YELLOW	5-01, 5-02, 6-01, 6-05, 12-07, 13-07, 16-03, 16-10 [8]	AHEAD	645.5102	24" X 12" (2.00 SF)	16.00 SF
			---	---	---
W03-01 BLACK AND RED ON YELLOW	1-04, 6-07, 6-09, 12-05, 12-06, 13-05, 13-06, 16-01, 16-09, 17-02, 18-09 [11]		645.5102	18" X 18" (2.25 SF)	24.75 SF
			645.81	1 EA	11 EA
W03-01 BLACK AND RED ON YELLOW	7-01 [1]		645.5102	30" X 30" (6.25 SF)	6.25 SF
			645.81	1 EA	1 EA
R01-01 RED ON WHITE	1-03, 6-08, 6-10, 12-03, 12-04, 13-03, 13-04, 16-02, 16-06, 17-04, 18-11 [11]	STOP	645.5102	18" X 18" (2.25 SF)	24.75 SF
			645.81	1 EA	11 EA
R01-01 RED ON WHITE	5-03, 5-04, 6-11, 6-12, 12-12, 13-11 [6]	STOP	645.5102	30" X 30" (6.25 SF)	37.50 SF
			645.81	1 EA	6 EA
R02-01 BLACK ON WHITE	7-02 [1]	SPEED LIMIT 30	645.5102	18" X 24" (3.00 SF)	3.00 SF
			645.81	1 EA	1 EA
R05-03 BLACK ON WHITE	1-02, 6-02, 6-04, 12-01, 12-02, 13-01, 13-02, 16-04, 16-08, 17-01 [10]	NO MOTOR VEHICLES	645.5102	24" X 24" (4.00 SF)	40.00 SF
			---	---	---
SUBTOTAL				645.5101	88.50 SF
				645.5102	196.13 SF
				645.81	56 EA

SIGN TEXT DATA TABLE

DESIGNATION & COLOR	LOCATION (PLAN SHEET)	TEXT	ITEMS	SIZE (AREA)	TOTAL AREA
				POSTS	TOTAL POSTS
M06-03 BLACK ON WHITE	1-01 [1]	↑	645.5102	21" X 15" (2.20 SF)	2.20 SF
			---	---	---
M06-01L BLACK ON WHITE	17-03, 18-03, 18-04, 18-06 [4]	←	645.5102	21" X 15" (2.20 SF)	8.80 SF
			---	---	---
M06-01R BLACK ON WHITE	12-13, 17-05, 18-02, 18-07, 18-13 [5]	→	645.5102	21" X 15" (2.20 SF)	11.00 SF
			---	---	---
M05-01L BLACK ON WHITE	18-12 [1]	↰	645.5102	21" X 15" (2.20 SF)	2.20 SF
			---	---	---
W11-15L BLACK ON YELLOW	5-01, 5-02, 6-01, 6-05, 12-07, 12-08, 12-09, 13-07, 13-08, 16-03, 16-05, 16-07, 16-10 [13]		645.5102	24" X 24" (4.00 SF)	52.00 SF
			645.81	1 EA	13 EA
W11-15L BLACK ON YELLOW	6-03, 6-06 [2]		645.5102	18" X 18" (2.25 SF)	4.5 SF
			645.81	1 EA	2 EA
CUSTOM BLACK ON YELLOW	18-05, 18-14 [2]	BICYCLISTS DISMOUNT HERE	645.5102	18" X 18" (2.25 SF)	4.5 SF
			---	---	---
D03-01 GREEN ON WHITE	13-11 [2]	HORAN RD	645.5102	37" X 8" (2.06 SF)	4.12 SF
			---	---	---
D03-01 GREEN ON WHITE	12-12, 13-11 [4]	GERELOCK RD	645.5102	46" X 8" (2.56 SF)	10.24 SF
			---	---	---
D03-01 GREEN ON WHITE	12-12 [2]	FRONTAGE RD	645.5102	46" X 8" (2.56 SF)	5.12 SF
			---	---	---
CUSTOM GREEN ON WHITE	12-10 [1]	← HORAN RD	645.5102	43" X 8" (2.40 SF)	2.40 SF
			645.81	1 EA	1 EA
CUSTOM GREEN ON WHITE	12-10 [1]	THOMAS RD →	645.5102	46" X 8" (2.56 SF)	2.56 SF
			---	---	---
SUBTOTAL				645.5101	0.00 SF
				645.5102	109.64 SF
				645.81	16 EA

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
1	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY: SLC — DATE:
CHECKED BY: AM — DATE:
APPROVED BY: MRP — DATE:
PROJECT MGR.: MB — DATE:

SEAL: STATE OF NEW YORK — MARK R. PRITCHARD — No. 060806-1 — LICENSED PROFESSIONAL ENGINEER

PARSONS
OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB:
WBS:

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAILS AND TABLES

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: DT-08 — REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2020 1:36 PM PLOTTED BY: RUSSO, JILL

SIGN TEXT DATA TABLE

DESIGNATION & COLOR	LOCATION (PLAN SHEET)	TEXT	ITEMS	SIZE (AREA)	TOTAL AREA
				POSTS	TOTAL POSTS
M06-03 BLUE ON WHITE	12-11 [1]		645.5102	21" X 15" (2.20 SF)	2.20 SF
			---	---	---
M06-01R BLUE ON WHITE	12-13 [1]		645.5102	21" X 15" (2.20 SF)	2.20 SF
			---	---	---
M04-05 BLACK ON WHITE	12-11 12-13 (2) [3]		645.5102	24" X 12" (2.00 SF)	6.00 SF
			---	---	---
M03-01 BLACK ON WHITE	12-13 [1]		645.5102	24" X 12" (2.00 SF)	2.00 SF
			---	---	---
M01-01 WHITE ON BLUE	12-11 12-13 [2]		645.5102	30" X 24" (5.00 SF)	10.00 SF
			645.81	1 EA	2 EA
M01-05NY WHITE ON BLACK	12-13 [1]		645.5102	30" X 24" (5.00 SF)	5.00 SF
			645.81	1 EA	1 EA
CUSTOM WHITE ON BLACK	5-05 5-06 [2]		645.5102	32" X 18" (4.00 SF)	8.00 SF
			645.81	1 EA	2 EA
SUBTOTAL			645.5101		0.00 SF
			645.5102		35.40 SF
			645.81		5 EA
TOTAL			645.5101		96.50 SF
			645.5102		341.17 SF
			645.81		77 EA

SIGN REMOVAL TABLE (ITEM 647.61)

LOCATION	DESCRIPTION
6-01	R01-01 "STOP" SIGN
6-02	R01-01 "STOP" SIGN
7-01	W03-01 "STOP AHEAD" SIGN
7-02	R02-01 "SPEED LIMIT" SIGN
12-01	M4-5 "TO", M1-1 "INTERSTATE 690", M6-1 ARROW
12-02	M4-5 "TO", M3-1 "NORTH", M1-05NY "NY 695", M6-1 ARROW
12-03	STREET NAME SIGNS WITH ARROWS (2)
12-04	M4-5 "TO", M1-1 "INTERSTATE 690", M6-3 ARROW
12-05	R01-01 "STOP" SIGN
12-06	D03-01 STREET NAME SIGNS (2)
13-01	R01-01 "STOP" SIGN
13-02	D03-01 STREET NAME SIGNS (2)
TOTAL	12 EA

UTILITY CONFLICTS AND RELOCATIONS

ALIGNMENT	STATION	OFFSET	SIDE	UTILITY	ITEM	COMMENT
T40A	3+05	6'	RIGHT	SUN PETROLEUM	MARKER	TO BE RELOCATED BY UTILITY (1)
T40C					WATER LINE	
T40C	12+27	1'	RIGHT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40C	14+62	1'	RIGHT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40C	16+96	1'	LEFT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40C	19+29	2'	RIGHT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40C	22+00	50'	LEFT	NIAGARA MOHAWK	NM-53 GUY ANCHORS	TO BE RELOCATED BY UTILITY (1)
T40C	23+12	3'	LEFT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40C	26+47	6'	LEFT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40C	28+59	15'	LEFT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40D	10+20	N/A	N/A		OVERHEAD WIRES	CONFIRM ADEQUATE VERTICAL CLEARANCE (2)
T40D	21+90	N/A	N/A		OVERHEAD WIRES	CONFIRM ADEQUATE VERTICAL CLEARANCE (2)
T40F	9+75 to 10+50	VARIES	RIGHT		U/G COMM LINE	
T40F	9+75 to 11+10	VARIES	RIGHT		U/G GAS	
T40F	9+75 to 11+10	VARIES	RIGHT		U/G COMMUNICATIONS	
T40F	9+97	6'	LEFT		WATER VALVE	CONTRACTOR TO ADJUST VALVE TO FINAL GRADE
T40F	10+10	8'	LEFT	VERIZON	UTILITY BOX	PROTECT EXISTING UTILITY (3)
T40F	10+73	9'	LEFT		HYDRANT	PROTECT EXISTING UTILITY (3)
T40F	10+79	33'	RIGHT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40F	10+93	42'	RIGHT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40F	11+10	60'	RIGHT		GUY WIRES	TO BE RELOCATED BY UTILITY (1)
T40F	11+15	1'	LEFT		UTILITY POLE	TO BE RELOCATED BY UTILITY (1)
T40F	28+00	7'	RIGHT	PRIVATE	MONITORING WELL	TO BE MODIFIED AND CAPPED TO FINAL GRADE BY OTHERS
T40F	28+05	5'	RIGHT	PRIVATE	MONITORING WELL	TO BE MODIFIED AND CAPPED TO FINAL GRADE BY OTHERS
T40F	39+05 & 39+10	5'	RIGHT		UTILITY POLE	
T40F	40+05	2'	LEFT		UTILITY POLE	
T40F	40+72 & 40+77	2'	LEFT		UTILITY POLE	
T40F	41+30	7'	RIGHT	PRIVATE	MONITORING WELL	TO BE MODIFIED AND CAPPED TO FINAL GRADE BY OTHERS
T40F	41+70	4'	RIGHT	PRIVATE	MONITORING WELL	TO BE MODIFIED AND CAPPED TO FINAL GRADE BY OTHERS
T40F	41+75	4'	RIGHT	PRIVATE	MONITORING WELL	TO BE MODIFIED AND CAPPED TO FINAL GRADE BY OTHERS
T40F	48+00	1'	RIGHT	PRIVATE	MONITORING WELL	TO BE MODIFIED AND CAPPED TO FINAL GRADE BY OTHERS
T40F		VARIES	LT & RT		DRY HYDRANT PIPE	TO REMAIN, CONTRACTOR TO PROTECT DURING CONSTRUCTION
T40G	10+40	6'	LEFT	SOLVAY ELECTRIC	GUY WIRES (S-20)	TO BE RELOCATED BY UTILITY (1)
T40G	12+49	N/A	LT & RT		SANITARY FORCE MAIN	TO REMAIN, CONTRACTOR TO PROTECT DURING CONSTRUCTION
T40G	12+50	N/A	LT & RT		OVERHEAD WIRES	CONFIRM ADEQUATE VERTICAL CLEARANCE (2)
T40G	13+10 to 13+50	VARIES	LEFT	NATIONAL GRID	GUY WIRES (NG-664)	TO BE RELOCATED BY UTILITY (1)
T40G	14+15	20'	LEFT		TELEPHONE BOX	PROTECT EXISTING UTILITY (3)
T40G	14+15 to 15+75				U/G TELEPHONE (ELECTRIC ??)	
T40G	15+10	N/A	LT & RT		OVERHEAD WIRES	CONFIRM ADEQUATE VERTICAL CLEARANCE (2)
T40G	15+25	19'	RIGHT		UTILITY POLE	EXISTING POLE TO BE BRACED OR REPLACED BY UTILITY COMPANY
T40G	15+40	N/A	LT & RT		OVERHEAD WIRES	CONFIRM ADEQUATE VERTICAL CLEARANCE (2)
T40G	15+55	5'	RIGHT		TELEPHONE BOX	TO BE RELOCATED BY UTILITY (1)
T40G	15+65	5'	RIGHT		TELEPHONE BOX	TO BE RELOCATED BY UTILITY (1)
T40G	16+70	5'	RIGHT		MONITORING WELL	TO BE MODIFIED AND CAPPED TO FINAL GRADE BY OTHERS
T40G	17+50	N/A	LT & RT		OVERHEAD WIRES	CONFIRM ADEQUATE VERTICAL CLEARANCE (2)
T40G					U/G ELECTRIC FEED TO REMEDIATION SITE??	
T40G						

NOTES:
1. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES AS NECESSARY TO SCHEDULE AND COORDINATE ANY NECESSARY RELOCATION OR MODIFICATION WORK.
2. UTILITY COMPANIES TO CONFIRM ADEQUATE OVERHEAD VERTICAL CLEARANCE. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES AS NECESSARY IF MODIFICATION IS REQUIRED.
3. CONTRACTOR TO PROTECT EXISTING UTILITY AND COORDINATE ADJACENT GRADING WITH UTILITY COMPANY.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY: SLC — DATE
CHECKED BY: AM — DATE
APPROVED BY: MRP — DATE
PROJECT MGR.: MB — DATE

SEAL: STATE OF NEW YORK — MARK R. PARSONS — No. 092905-1 — LICENSED PROFESSIONAL ENGINEER

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB
WBS

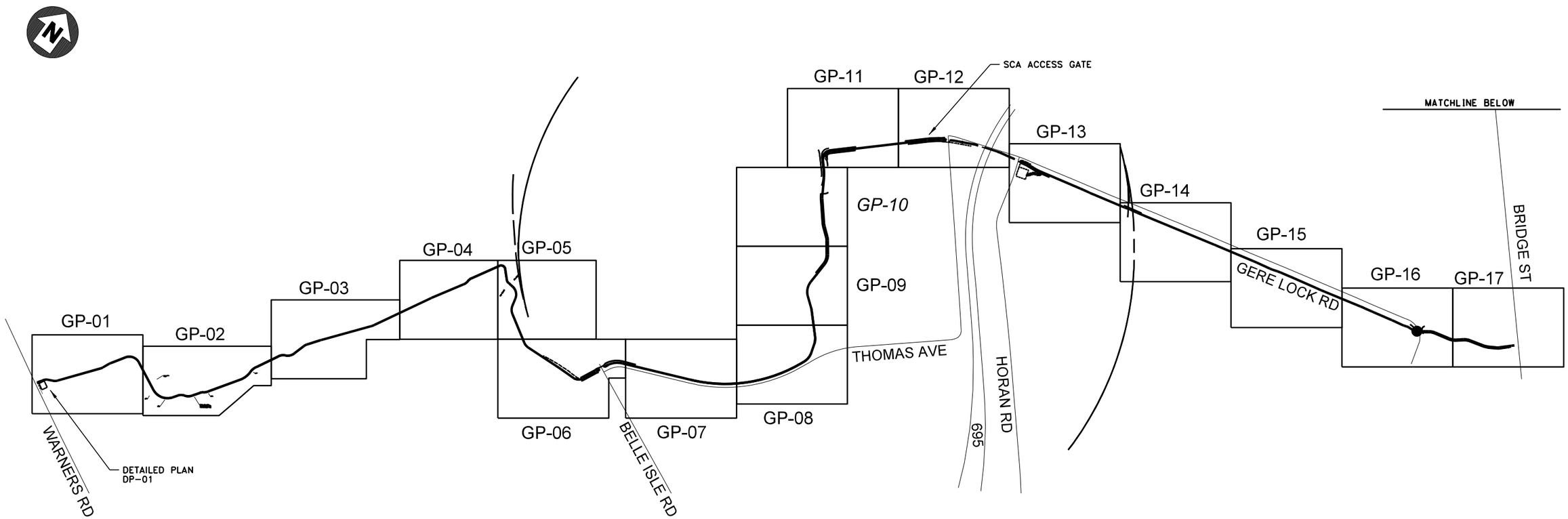
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAILS AND TABLES

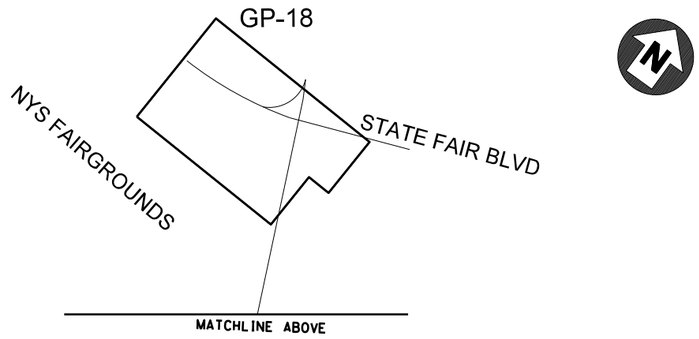
SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: DT-09
REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



ERIE CANALWAY TRAIL AREA



STATE FAIR BLVD AND BRIDGE ST AREA

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: MARK R. PARTRICK, STATE OF NEW YORK, No. 060906-1, LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

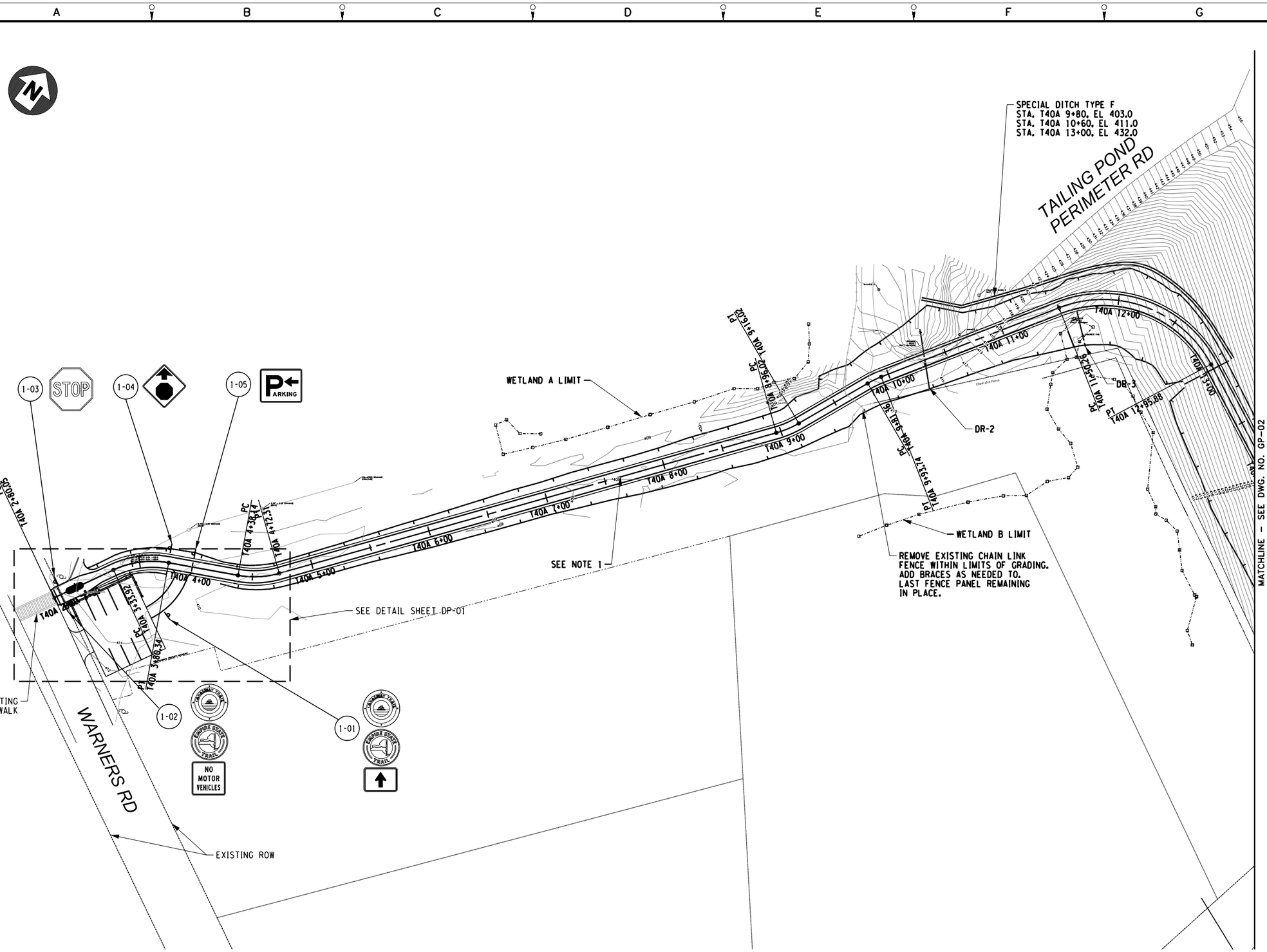
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
KEY PLAN

SCALE AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. KP-01
REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 30\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

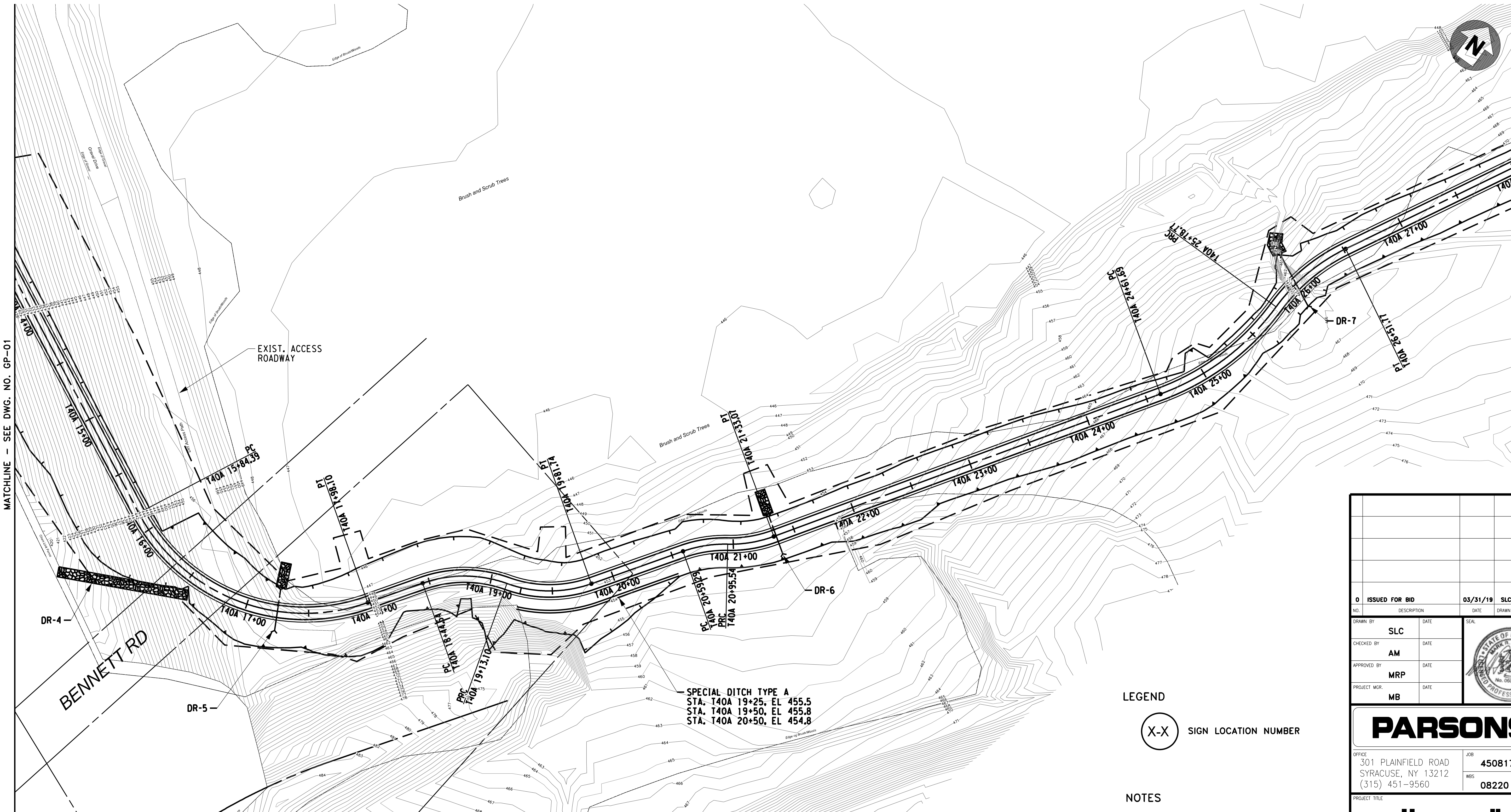
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-01 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2020 1:36 PM PLOTTED BY: RUSSO, JILL



40 20 0 40 80

SCALE: 1"=80'

LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY: SLC	DATE	SEAL: STATE OF NEW YORK, MARK R. PAWLICK, No. 060905-1, LICENSED PROFESSIONAL ENGINEER
CHECKED BY: AM	DATE	
APPROVED BY: MRP	DATE	
PROJECT MGR.: MB	DATE	

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560
JOB: 450817
WBS: 08220

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: GP-02 REV.: 0

LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.
3. ADJUST GRADING TO TRANSITION NORMAL DITCH AND EXISTING SWALE TO CULVERT INLET AREA (TYP.)

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL: STATE OF NEW YORK · MARK P. RUSSO · No. 060909 · LICENSED PROFESSIONAL ENGINEER

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

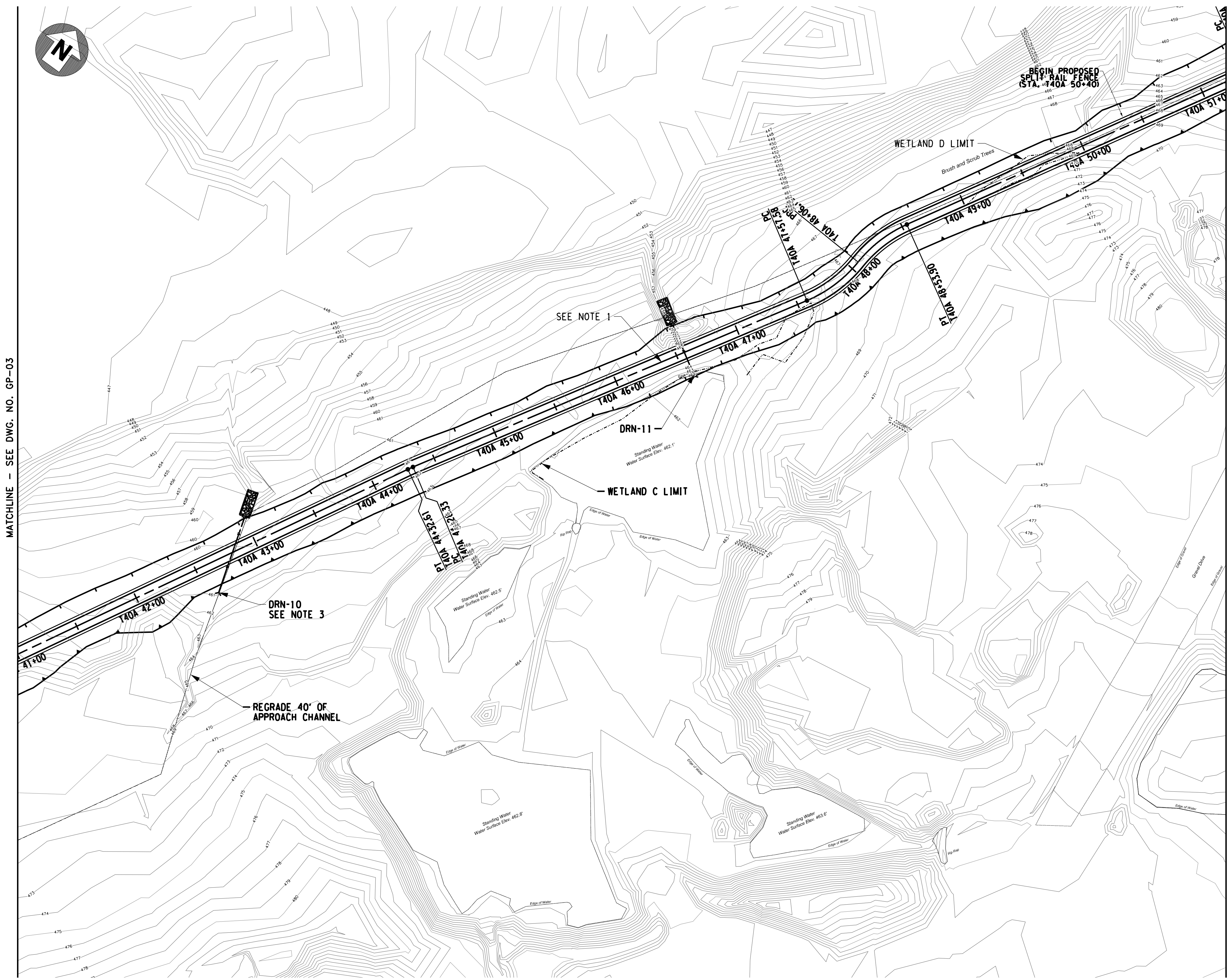
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-03 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2020 1:36 PM PLOTTED BY: RUSSO, JILL



40 20 0 40 80

SCALE: 1"=80'

LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.
3. ADJUST GRADING TO TRANSITION NORMAL DITCH TO CULVERT INLET AREA.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY: SLC	DATE	SEAL
CHECKED BY: AM	DATE	
APPROVED BY: MRP	DATE	
PROJECT MGR.: MB	DATE	

Seal: STATE OF NEW YORK · MARK R. PAWLICK · LICENSED PROFESSIONAL ENGINEER · No. 060905-1

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

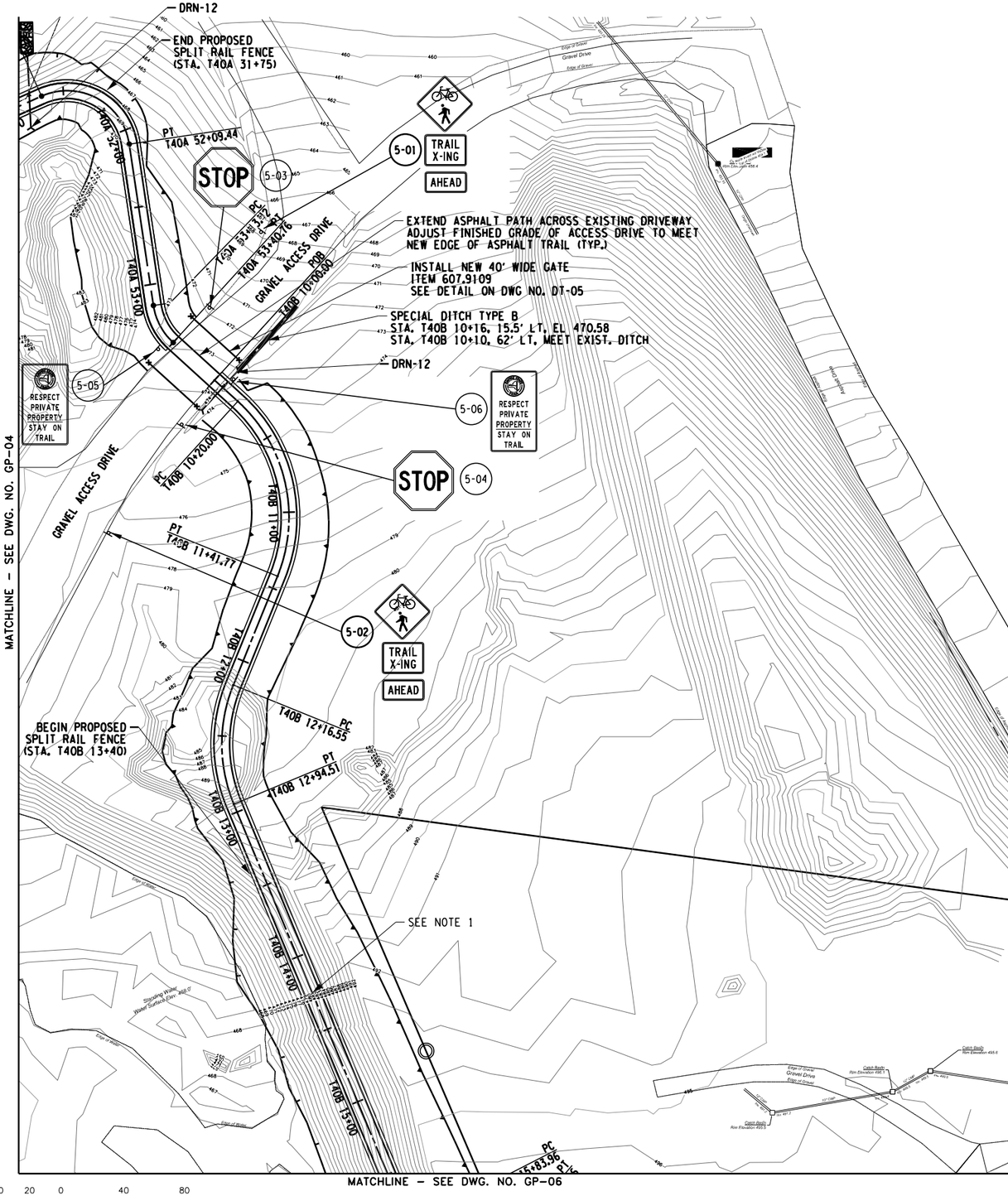
JOB 450817
WBS 08220

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-04 REV. 0



LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL: STATE OF NEW YORK · MARK R. PRITCHARD · No. 090205-1 · LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-05 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2020 11:36 PM PLOTTED BY: RUSSO, JILL

MATCHLINE – SEE DWG. NO. GP-05

MATCHLINE – SEE DWG. NO. GP-07

END PROPOSED SPLIT RAIL FENCE

REMOVE EXISTING CHAIN LINK FENCE WITHIN LIMITS OF GRADING, ADD BRACES AS NEEDED TO LAST FENCE PANEL REMAINING IN PLACE.

ADJUST GRADING ALONG TOE OF SLOPE AS NEEDED TO PROVIDE DRAINAGE

PROPOSED SPLIT RAIL FENCE

SEE NOTE 1

WETLAND DD LIMIT

WETLAND

PROPOSED SPLIT RAIL FENCE

REMOVE EXIST. CHAINLINK FENCE (SEE NOTE 2)

SPECIAL DITCH

BEGIN PROPOSED SPLIT RAIL FENCE

SEE DETAIL SHEET DP-02

16' TYPE LS CROSSWALK ITEM 685.11

BEGIN REPLACEMENT OF CHAINLINK FENCE STA. T40C 11+00

NO MOTOR VEHICLES

TRAIL X-ING

AHEAD

STOP

6-01 6-02 6-03 6-04 6-05 6-06 6-07 6-08 6-09 6-10 6-11

T40B 16+43.11
T40B 15+00
T40B 17+00
T40B 18+00
T40B 19+00
T40B 20+00
T40B 21+00
T40B 22+00
T40B 23+00
T40B 24+00
T40B 10+40.10
T40B 24+21.03
T40C 11+00
T40C 12+00
T40C 10+51.54
PC T40B 20+08.51
PT T40B 20+11.13
PC T40B 21+54.11
PT T40B 22+44.81
PT T40C 11+98.10

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.
3. CHAINLINK FENCE IS TO BE REMOVED BETWEEN THE WETLAND TO THE SOUTH AND THE PROPERTY LINE TO THE NORTH. LIMIT WORK AS NEEDED TO AVOID ENCROCHMENT BEYOND THE HONEYWELL PROPERTY LINE.

LEGEND

X-X SIGN LOCATION NUMBER

X-X SIGN REMOVAL LOCATION NUMBER

40 20 0 40 80
SCALE: 1"=80'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817

WBS 08220

PROJECT TITLE

Honeywell

ERIE CANALWAY TRAIL

ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

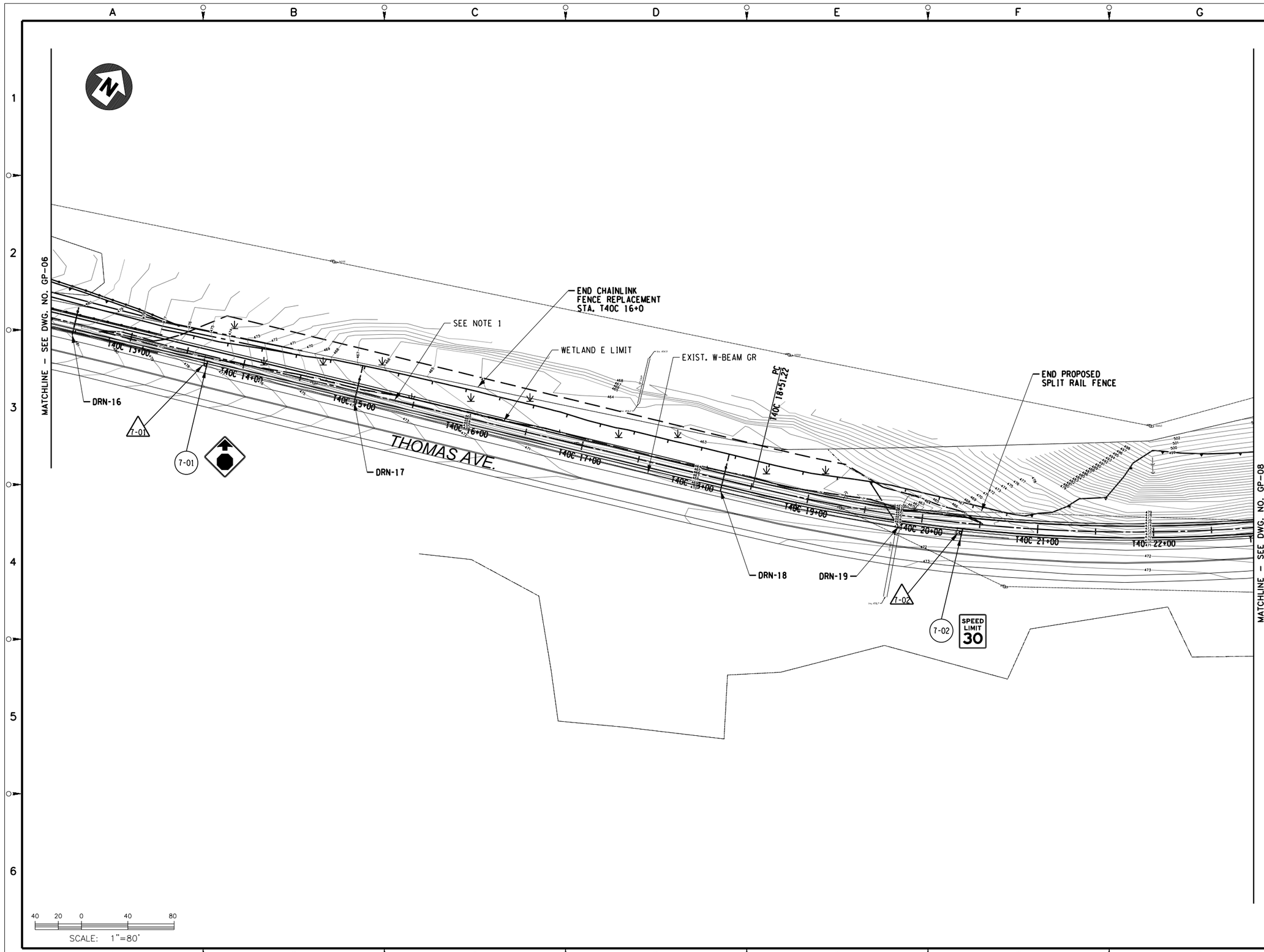
ERIE CANALWAY TRAIL GENERAL PLAN

SCALE AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-06

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 11:36 PM PLOTTED BY: RUSSO, JILL



40 20 0 40 80

SCALE: 1"=80'

LEGEND

X-X SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL: STATE OF NEW YORK · MARK R. PAPPAS · No. 060906-1 · LICENSED PROFESSIONAL ENGINEER

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

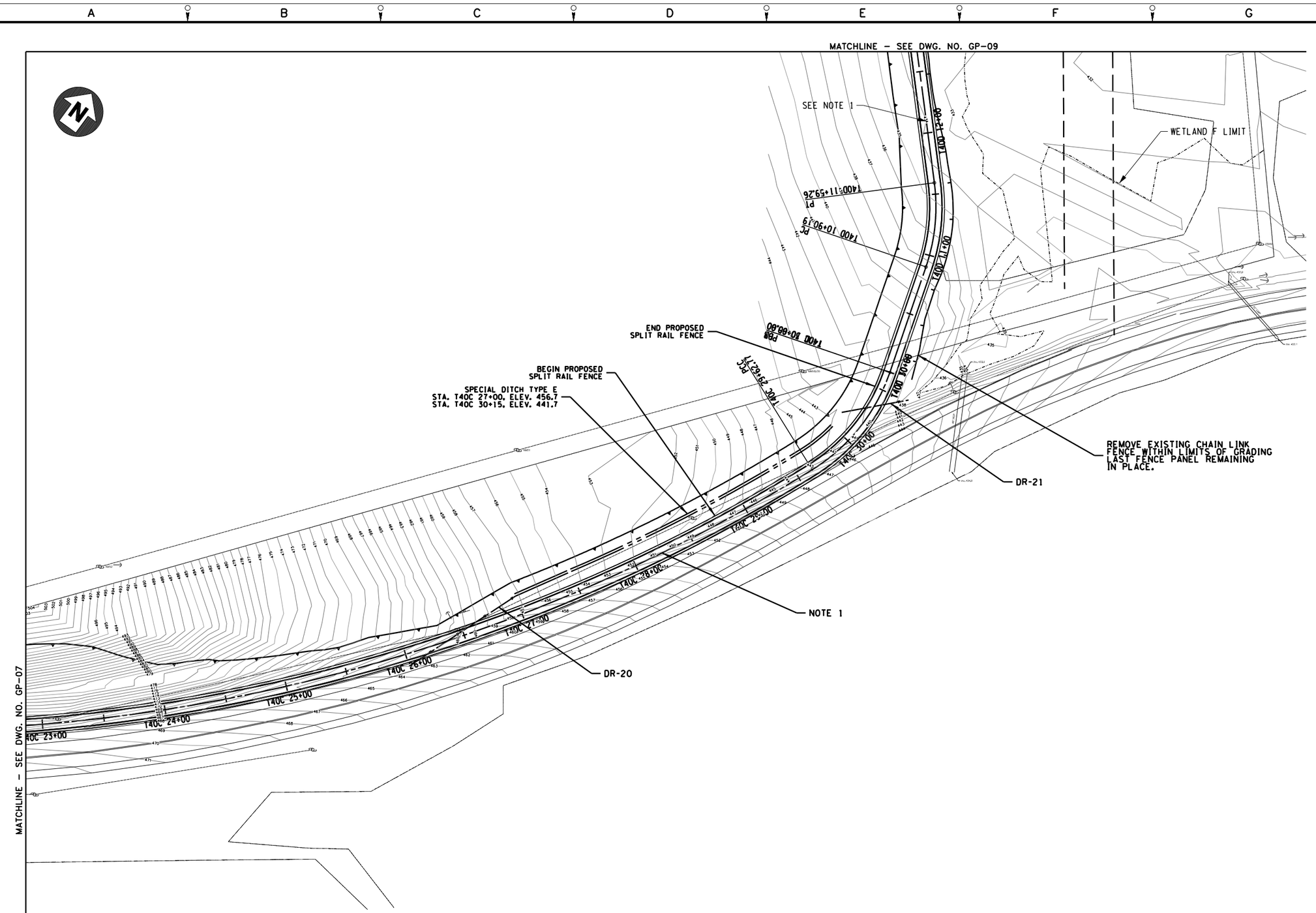
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-07 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: STATE OF NEW YORK · MARK R. PRYOR · No. 080905-1 · LICENSED PROFESSIONAL ENGINEER

PARSONS

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SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

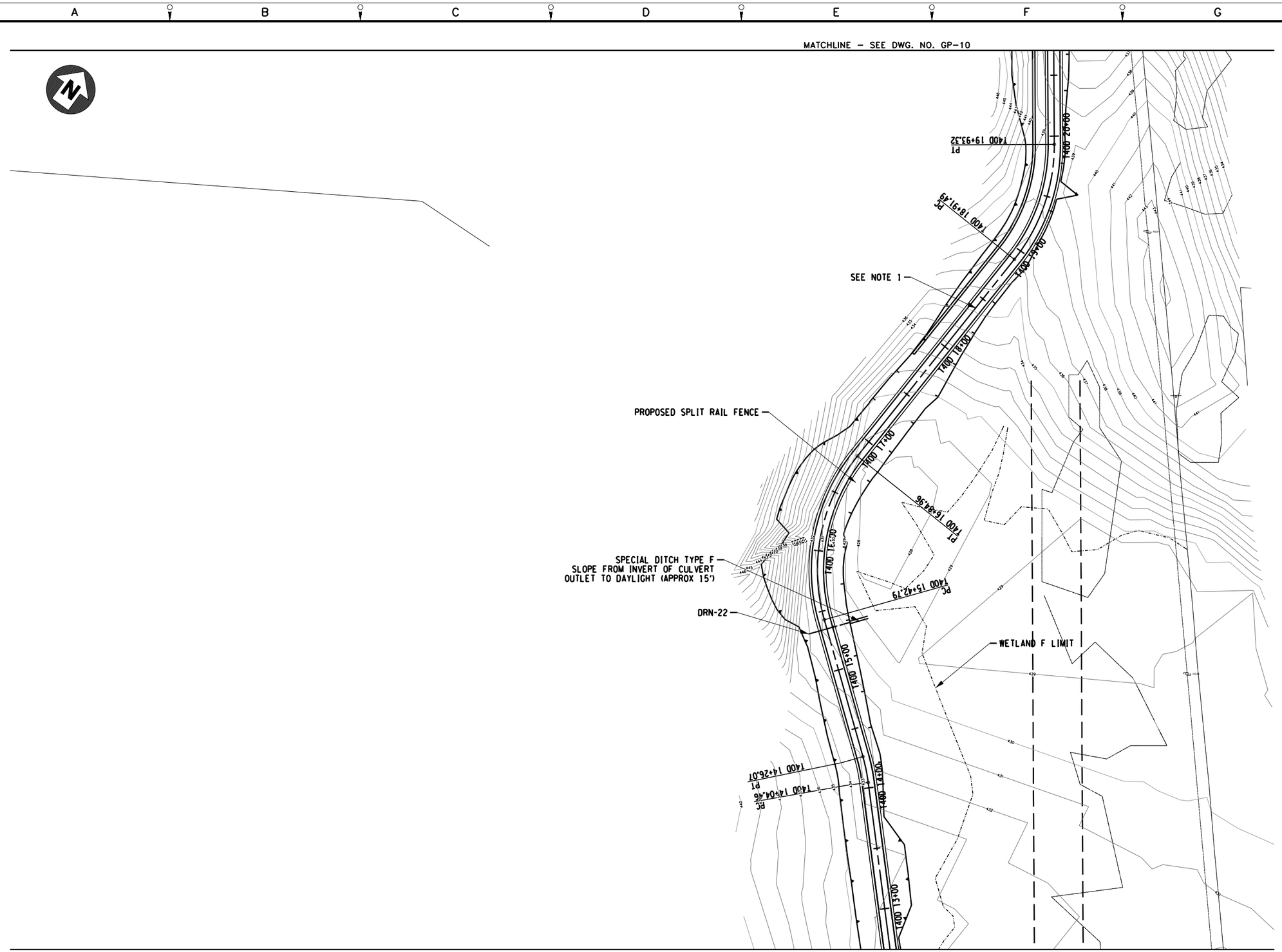
DRAWING TITLE

ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-08 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT–06 AND DT–07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT–09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL: MARK R. PARSONS, STATE OF NEW YORK, No. 060905-1, REGISTERED PROFESSIONAL ENGINEER

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451–9560

JOB 450817
WBS 08220

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

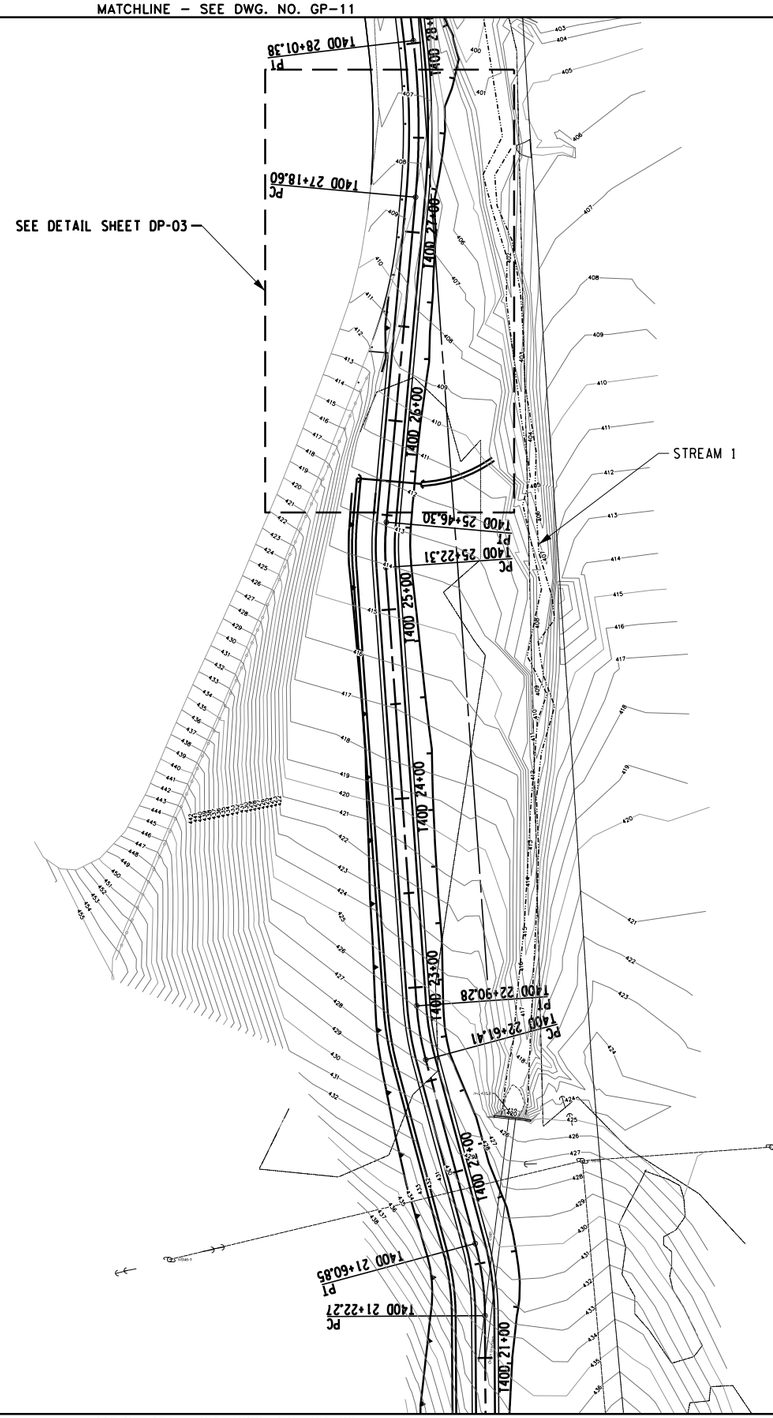
SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP–09 REV. 0

40 20 0 40 80
SCALE: 1"=80'

FILE NAME: P:\HONEYWELL –SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817–22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

MATCHLINE – SEE DWG. NO. GP-11



MATCHLINE – SEE DWG. NO. GP-09

40 20 0 40 80
SCALE: 1"=80'

LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL: STATE OF NEW YORK · MARK R. PAPPAS · 090705 · LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

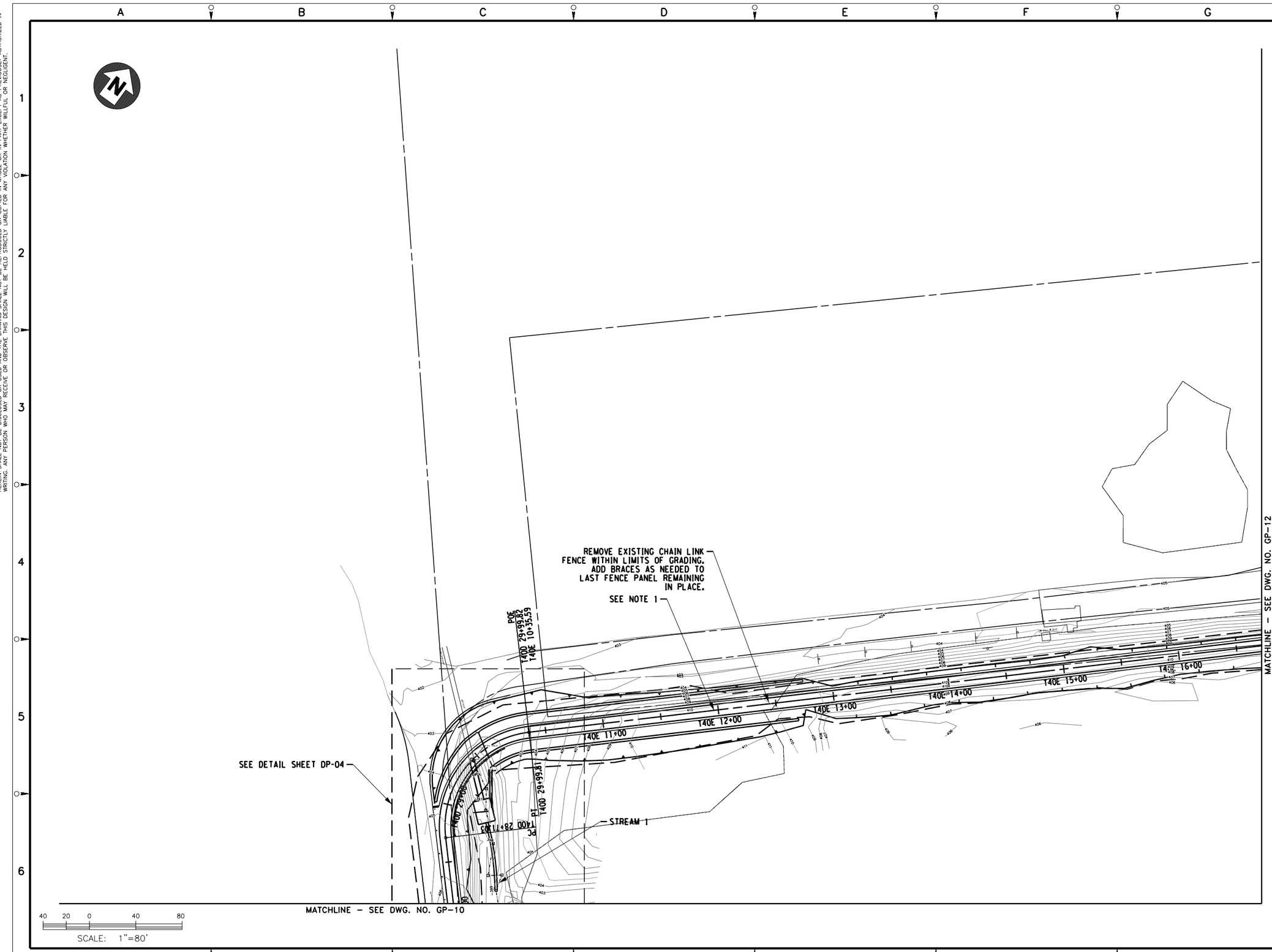
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-10 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL: STATE OF NEW YORK · MARK R. PARTRICK · No. 060906 · LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817

WBS 08220

PROJECT TITLE

Honeywell

ERIE CANALWAY TRAIL

ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

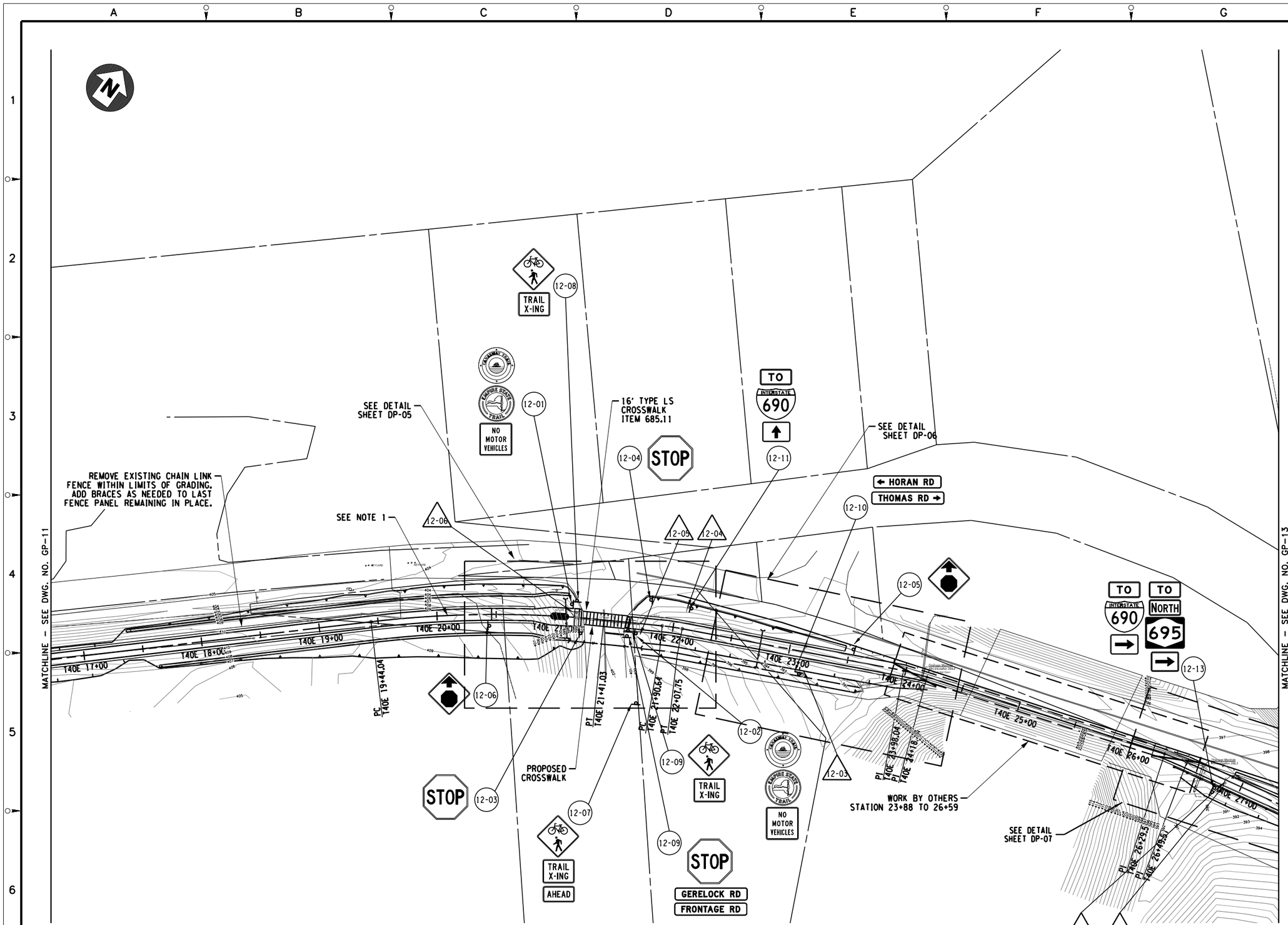
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-11

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



LEGEND

X-X SIGN LOCATION NUMBER

X-X SIGN REMOVAL LOCATION

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817

WBS 08220

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-12

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

MATCHLINE – SEE DWG. NO. GP-12

13-09 — 16' TYPE LS CROSSWALK ITEM 685.11 — NO MOTOR VEHICLES — STOP

13-04 — 13-02 — 13-05 — 13-01 — 13-06 — 13-03

PC 140F 2+60.46 — PT 140F 2+76.43 — POE 140F 2+91.56

POB 140F 9+60.45

PC 140F 10+32.73 — PT 140F 10+50.55

PC 140F 11+42.46 — PT 140F 11+63.42

EXIT. SIGN (TO REMAIN)

EXIT. SIGN (TO MAINTAIN) 140F 11+00

SEE DETAIL SHEET DP-08

S 67°50'16" E 178.94'

GERELOCK RD.

HORAN RD.

STOP

N 66°29'46" W 229.95'

N 23°30'04" E 115.40'

140F 12+00

140F 13+00

BEGIN PROPOSED SPLIT RAIL FENCE

S 66°00'25" E 312.30'

TOWN OF GEDDES

TOWN OF CAMILLUS

20" Cast Iron

EXIT. GATE (TO BE REMOVED)

PROPOSED PARKING AREA

13-07 — TRAIL X-ING AHEAD

13-08 — TRAIL X-ING

13-11 — STOP — HORAN RD — GERELOCK RD

13-10 — NO MOTOR VEHICLES

SPECIAL DITCH TYPE B
STA. T40F 12+25, EL 405.2
STA. T40F 12+75, EL 406.5
STA. T40F 13+75, EL 404.5

PROPOSED OBSERVATION AREA

N 23°30'04" E 118.80'

231.00'

SEE NOTE 1

140F 14+00

140F 15+00

PC 140F 14+75.04

PT 140F 14+20.99

S 66°15'30" E 393.66'

BEGIN PROPOSED SPLIT RAIL FENCE

PC 140F 15+12.93

PT 140F 16+16.54

140F 16+00

140F 17+00

140F 18+00

140F 19+00

N 66°29'56" W 668.78'

EX. WSE 395.4

PROPOSED SPLIT RAIL FENCE

WETLAND G LIMIT

MATCHLINE – SEE DWG. NO. GP-14

40 20 0 40 80

SCALE: 1"=80'

LEGEND

X-X — SIGN LOCATION NUMBER

X-X — SIGN REMOVAL LOCATION

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY: SLC — DATE
CHECKED BY: AM — DATE
APPROVED BY: MRP — DATE
PROJECT MGR.: MB — DATE

SEAL: STATE OF NEW YORK — MARK R. PARSONS — 220 — No. 060005-1 — LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 450817

WBS: 08220

PROJECT TITLE

Honeywell

ERIE CANALWAY TRAIL

ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: GP-13

REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

MATCHLINE – SEE DWG. NO. GP-13

PRECAST BLOCK RETAINING WALL SYSTEM
STA. T40F 20+20, 15' LT TO
STA. T40F 22+00, 12' LT

TOWN OF GEDDES
VILLAGE OF SOLVAY

PROPOSED SPLIT RAIL FENCE

SEE NOTE 1

END PROPOSED SPLIT RAIL FENCE

BEGIN PROPOSED SPLIT RAIL FENCE

PROPOSED SPLIT RAIL FENCE

ALL CLEARING AND GRADING BY OTHERS

OLD ERIE CANAL

Geddes Brook

GEDDES BROOK

WETLAND W6

WETLAND (TYP.)

WETLAND (TYP.)

Remains of Canal

MA-MW-09S
MA-MW-09D
MA-MW-10D
MA-MW-10S
MA-MW-07S
MA-MW-07D

NM 643
NM 644
NM 645
NM 647
NM 648

SOLVAY 44 NYT 133
SOLVAY 43 NYT 132
SOLVAY 42 NYT 131
SOLVAY 41 NYT 130
SOLVAY 40 NYT 129
SOLVAY 39 NYT 128
SOLVAY 38 NYT 127
SOLVAY 37 NYT 126

S26°51'25"W 214.95'
N 26°51'25" E 214.95'
S65°35'15"E 548.33'
S65°48'32"E 226.07'
N 66°01'01" W 1118.17'
S66°01'01"E 1118.17'

PC T40F 29+43.16
T40F 29+56.91

T40F 20+00
T40F 21+00
T40F 22+00
T40F 23+00
T40F 24+00
T40F 25+00
T40F 26+00
T40F 27+00
T40F 28+00
T40F 29+00
T40F 30+00
T40F 31+00

MATCHLINE – SEE DWG. NO. GP-15

SCALE: 1"=80'

LEGEND

X-X SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY: SLC — DATE:
CHECKED BY: AM — DATE:
APPROVED BY: MRP — DATE:
PROJECT MGR.: MB — DATE:

SEAL: STATE OF NEW YORK — ERIK R. KAPTHAN — No. 093905-1 — LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450817
WBS 08220

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

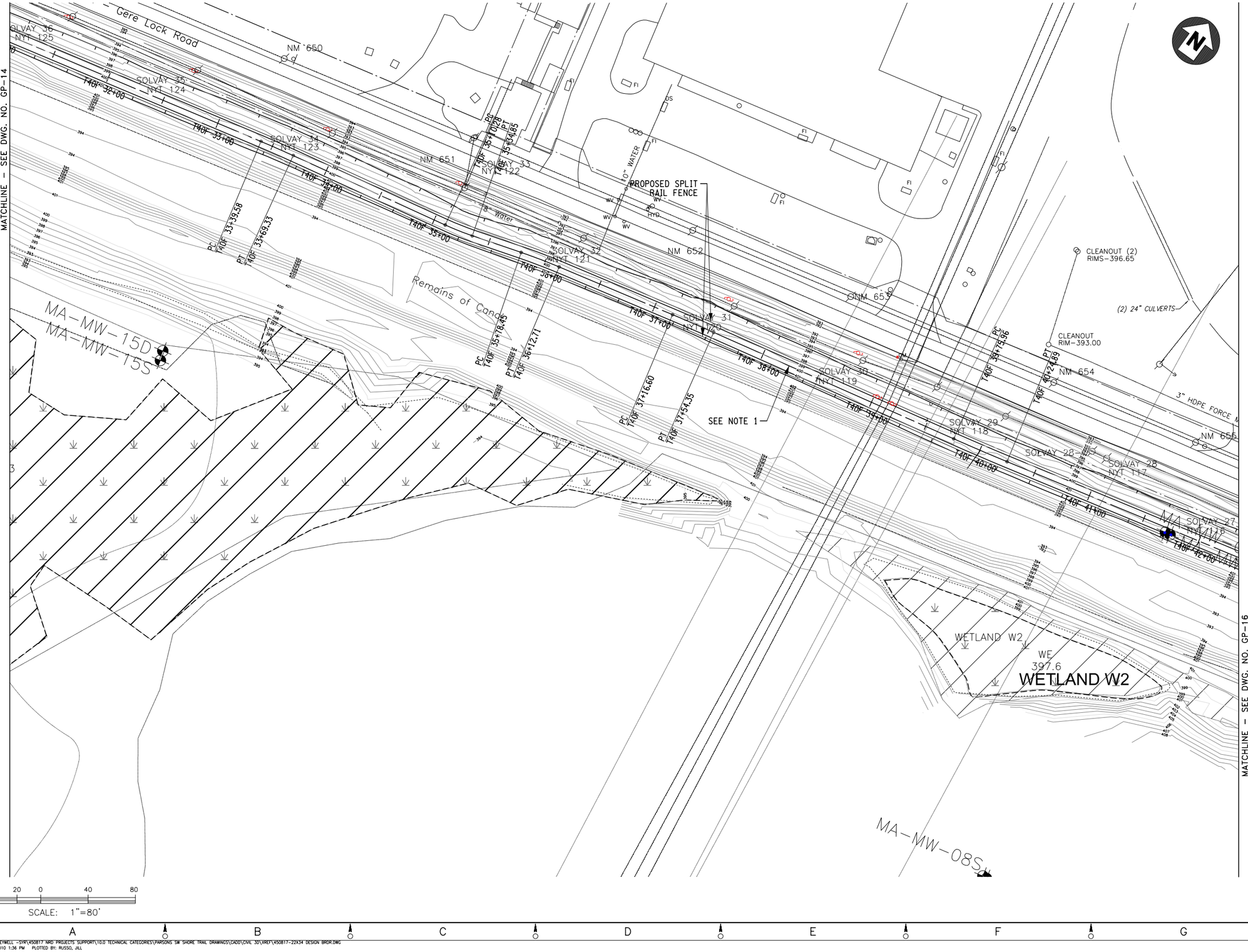
DRAWING TITLE

ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-14 — REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



LEGEND

(X-X) SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

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DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL

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(315) 451-9560

JOB 450817

WBS 08220

PROJECT TITLE

Honeywell

ERIE CANALWAY TRAIL

ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-15

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

MATCHLINE – SEE DWG. NO. GP-15

MATCHLINE – SEE DWG. NO. GP-17

PROPOSED SPLIT RAIL FENCE

END SPLIT RAIL FENCE LT/RT

SEE NOTE 1

REMOVE ABANDONED DRY HYDRANT SEE NOTE 2

NATIONAL GRID PERMANENT R.O.W.

50' PERMANENT R.O.W. TO ALLIED

50' TO NIAGARA MOHAWK POWER CORP.

SEE DETAIL SHEET DP-09

50'-11' TYPE LS CROSSWALK ITEM 685.11

Edge of Water

Edge of Water EX. WSE 396.0

STEEL PLATFORM

METAL BOX

CONCRETE WALL

12" STL PIPE DRY HYDRANT

CLEANOUT RIM-391.30

CLEANOUT RIM-392.30

CLEANOUT RIM-406.60

CLEANOUT RIM-405.20

12" Water

6" DWL CMP

18" CMP

6" PVC

7.2" Water

15" HDPE FORCE MAIN

CMP - CANAL PIPELINE

NATURAL GAS

Belle Isle Road

S23°28'57"W 220.52'

S66°29'56"E 947.90'

SOLVAY 26 NYT 115

SOLVAY 25 NYT 114

SOLVAY 24 NYT 113

SOLVAY 23 NYT 112

SOLVAY 22 NYT 111

SOLVAY 20 NYT 110

SOLVAY 18 NYT 108

SOLVAY 42-10 NYT 107

SOLVAY 42-8

SOLVAY 42-9

NM 656

NM 657

NM 658

659

660

661

MA-MW-04

MA-MW-05D

MA-MW-05S

W1

10

35 MAR

260.58'

T40F 43+00

T40F 44+00

T40F 45+00

T40F 46+00

T40F 47+00

T40F 48+00

T40F 49+00

T40G 1+00

T40G 12+00

T40G 13+00

T40F 44+26.56

T40F 44+74.09

T40F 47+44.44

T40F 47+48.37

T40F 48+62.69

T40F 48+71.12

T40F 49+31.69

T40F 49+46.69

T40F 49+65.03

T40F 49+86.44

T40G 0+06.44

T40G 0+08.69

T40G 1+46.24

T40G 1+46.69

PC 45°48'51" T40F 45+56.47

INV=389.42

INV=386.58

INV=389.20

0	ISSUED FOR BID		03/31/19	SLC	MRP	
NO.	DESCRIPTION		DATE	DRAWN	CHK'D	APPV'D

DRAWN BY: SLC	DATE
CHECKED BY: AM	DATE
APPROVED BY: MRP	DATE
PROJECT MGR.: MB	DATE

SEAL: STATE OF NEW YORK · MARK R. PARSONS · 221220 · No. 060005-1 · LICENSED PROFESSIONAL ENGINEER

PARSONS

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(315) 451-9560

JOB 450817

WBS 08220

PROJECT TITLE

Honeywell

ERIE CANALWAY TRAIL

ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL GENERAL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-16

REV. 0

LEGEND

X-X SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

16-01 MA-MW-05D STOP

16-02 STOP

16-03 TRAIL X-ING AHEAD

16-04 NO MOTOR VEHICLES

16-05 TRAIL X-ING

16-06 STOP

16-07 TRAIL X-ING

16-08 NO MOTOR VEHICLES

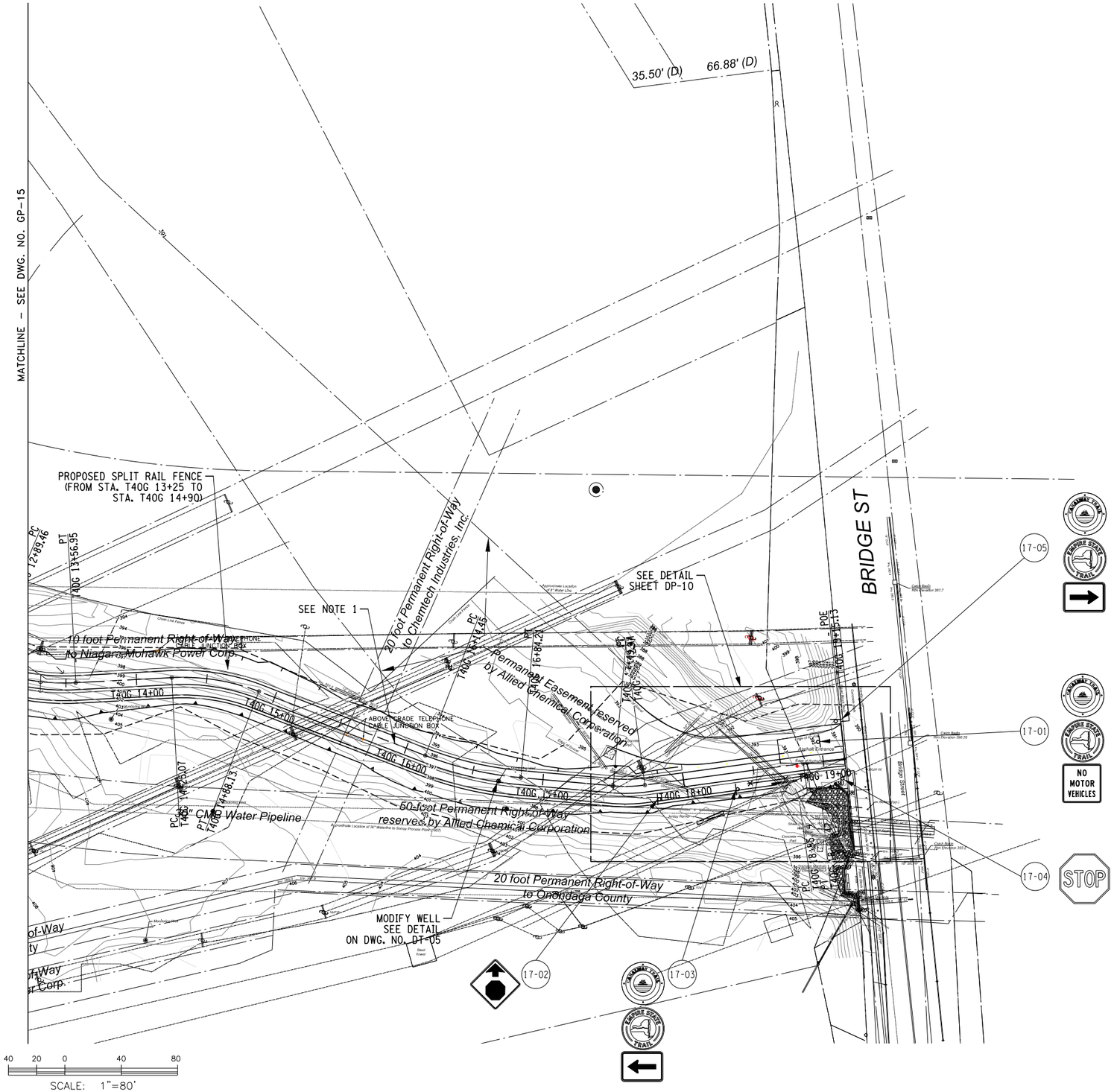
16-09

16-10 TRAIL X-ING AHEAD

40 20 0 40 80

SCALE: 1"=80'

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



LEGEND

X-X SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

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CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: STATE OF NEW YORK, MARK R. PARTYKA, No. 060906, LICENSED PROFESSIONAL ENGINEER

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(315) 451-9560

JOB 450817
WBS 08220

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. GP-17
REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

LEGEND

X-X SIGN LOCATION NUMBER

NOTES

1. REFER TO HORIZONTAL ALIGNMENT CONTROL TABLES ON DWG. NOS. DT-06 AND DT-07.
2. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

STATE FAIR BLVD

BRIDGE ST

2' WIDE BUFFER SOLID WHITE TYPE C HATCH, 24" WIDE

ASPHALT WIDENING SEE TYPICAL SECTION DWG TS-08

MEET EXISTING SIDEWALK AT STATION T40H 25+11

4" SOLID WHITE LINE

4" SOLID YELLOW LINE

EXISTING EDGE OF TURNING LANE

KIOSK AREA (BY OTHERS)

SOLID WHITE TYPE C HATCH 24" WIDE

EXISTING WHITE EDGE LINE EXTENDED FOR CONTROL PURPOSES

4' WIDE BUFFER SOLID WHITE TYPE C HATCH, 24" WIDE

REMOVE AND REPLACE, SEE DRAINAGE GRATE REPLACEMENT DETAIL ON DT-04

20' TYPE LS CROSSWALK ITEM 685.11

3' WIDE BUFFER SOLID WHITE TYPE C HATCH, 24" WIDE

BEGIN BUFFER TAPER STA. T40H 15+97

NOTE 1

END BUFFER TAPER STA. T40H 16+90

10' TYP

NEW CONCRETE SECTION

24' TYPE LS CROSSWALK ITEM 685.11 SEE CROSSING DETAIL B ON DT-02 FOR SIGNAGE

24' TYPE LS CROSSWALK ITEM 685.11 SEE CROSSING DETAIL B ON DT-02 FOR SIGNAGE

NEW CONCRETE WALK SEE DETAIL ON DWG MT-05

EXISTING BUILDING

BUILDING ENTRY RAMP

STOP

18-01 18-02 18-03 18-04 18-05 18-06 18-07 18-08 18-09 18-10 18-11 18-12 18-13 18-14

40 20 0 40 80

SCALE: 1"=80'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL

STATE OF NEW YORK MARK R. PARSONS No. 060098 PROFESSIONAL ENGINEER

PARSONS

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(315) 451-9560

JOB 450817
WBS 08220

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
GENERAL PLAN

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

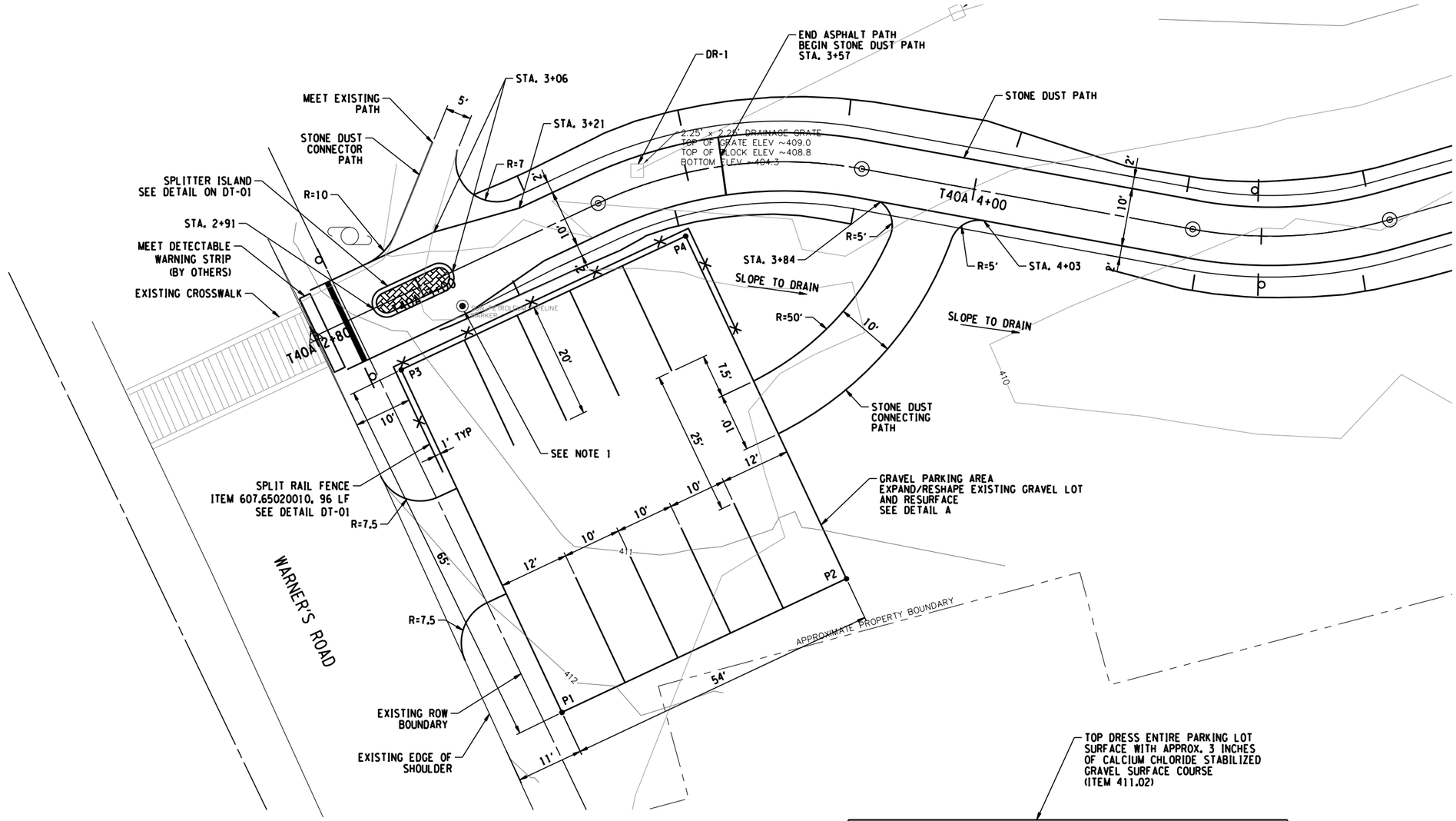
DRAWING NO. GP-18 REV. 0

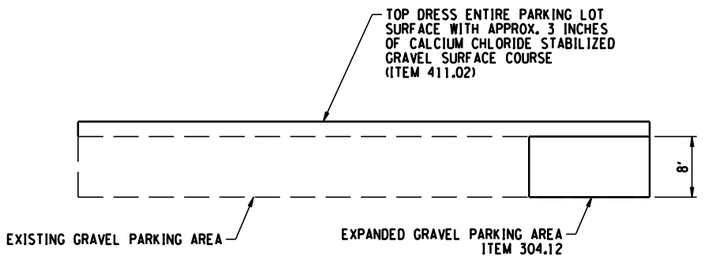
FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2020 1:36 PM PLOTTED BY: RUSSO, JILL

PARKING LOT LAYOUT TABLE				
	NORTHING	EASTING	PROPOSED ELEVATION	DESCRIPTION
P1	1116266.71	904311.62	412.3	CORNER ELEVATION
P2	1116289.66	904360.50	411.2	CORNER ELEVATION
P3	1116325.55	904283.99	411.7	CORNER ELEVATION
P4	1116348.50	904332.87	411.2	CORNER ELEVATION

NOTES:

1. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.





DETAIL A

10 0 10 20
SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

SEAL

PARSONS
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SYRACUSE, NY 13212
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JOB

WBS

PROJECT TITLE

Honeywell

ERIE CANALWAY TRAIL

ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. DP-01

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

EXISTING CHAINLINK FENCE

SPECIAL DITCH TYPE D
STA T40C 10+40, ELEV 481.1
STA T40C 12+50, ELEV 477.0
STA T40C 13+50, ELEV 476.0

PLACE NEW CHAINLINK FENCE, STYLE TO MATCH EXISTING, APPROXIMATELY 2' BEYOND THE TOP OF CUT
ITEM 607.3002

SPLIT RAIL FENCE
ITEM 607.65020010
305 LF, SEE DETAIL ON DT-05

RELOCATE EXISTING STOP SIGN

END STONE DUST BEGIN ASPHALT PATH, STATION T40B 23+47

Inv. 483.0

Catch Basin Rim Elevation 485.0

12" CMP

Inv. 483.1

CROSSWALK
ITEM 685.11

24" STOP BAR
ITEM 685.11
SEE PAVEMENT REPAIR DETAIL ON DWG DT-05

DR-15B

Inv. 482.6

DR-15A

INVERT 481.1

SPECIAL DITCH

SPLITTER ISLAND
SEE DETAIL ON DT-01

NORMAL DITCH

STA. T40B 23+97

T40B 24+08

T40B 24+21

T40C 10+00

DR-14

STA. T40B 24+12

SPLITTER ISLAND
SEE DETAIL ON DT-01

RELOCATE EXISTING STOP SIGN

END ASPHALT PATH BEGIN STONE DUST PATH, STATION T40C 11+05

T40C 11+00

STA. T40C 10+40

STA. T40C 10+55

EXISTING EDGE OF TRAVEL LANE

EXISTING EDGE OF SHOULDER

THOMAS AVE

T40A 2+80

BELLE ISLE RD

20 0 20 40
SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

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CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL

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SYRACUSE, NY 13212
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JOB

WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

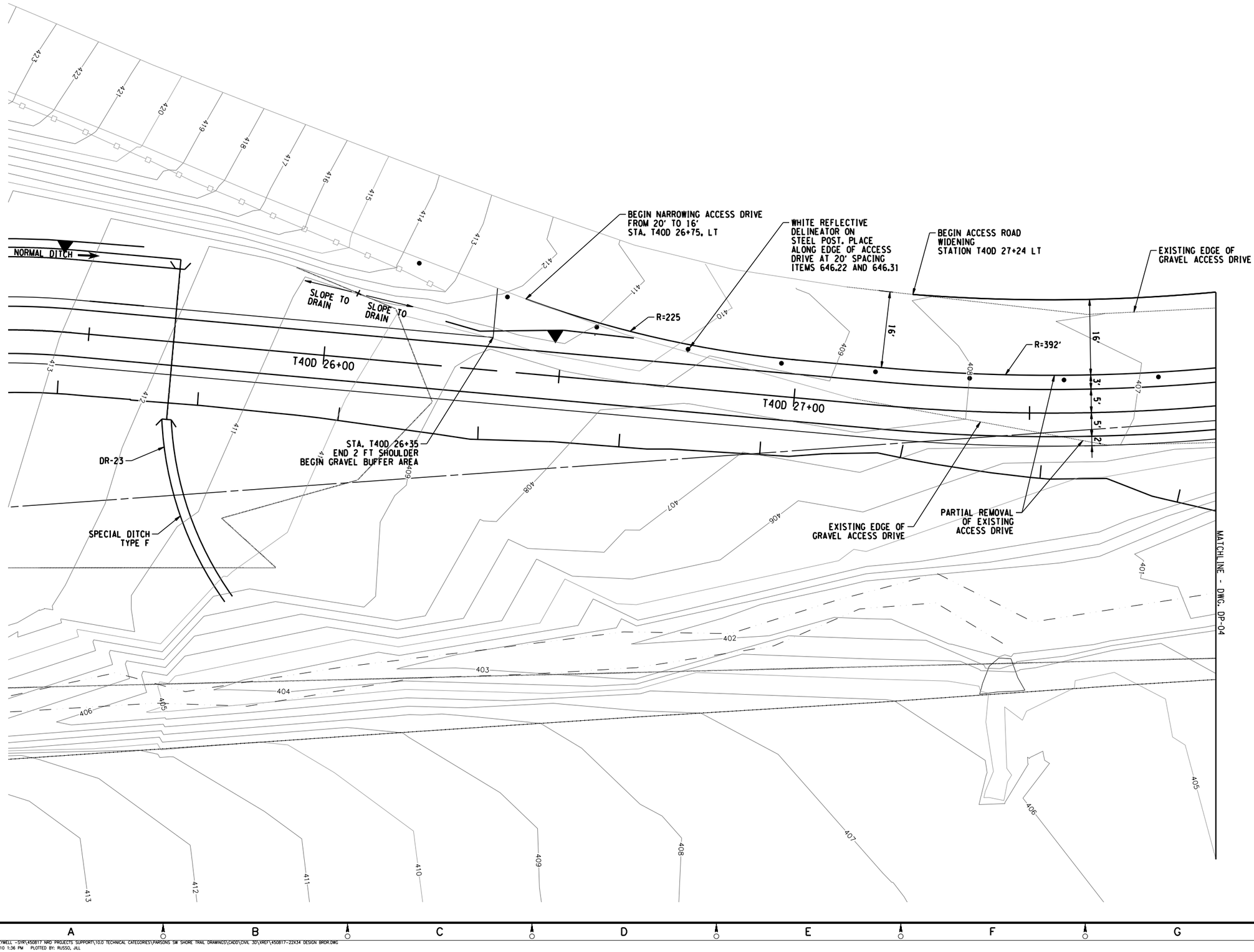
DRAWING TITLE
ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE
AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO.
DP-02

REV.
0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



10 0 10 20
SCALE IN FEET

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APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: MARK R. PARSONS, No. 060905-1, LICENSED PROFESSIONAL ENGINEER, STATE OF NEW YORK

PARSONS

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JOB

WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. DP-03

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

WHITE REFLECTIVE DELINEATOR ON STEEL POST. PLACE ALONG EDGE OF ACCESS DRIVE AT 20' SPACING ITEMS 646.22 AND 646.31

EXISTING EDGE OF GRAVEL ACCESS DRIVE

WIDEN EXISTING GRAVEL DRIVE

END BUFFER BEGINE NORMAL 2' WIDE TRAIL SHOULDER STA. T40D 28+97

DP4-1

DO NOT ENTER R5-1

END OF WIDENING EXISTING GRAVEL DRIVE

R=150'

R=70'

R=70'

SPECIAL DITCH TYPE B
STA T40D 29+00, 10.5' LT ELEV. 403.5
STA T40D 29+50, 16.5' LT ELEV. 402.0
STA T40D 29+62, 16.5' LT ELEV. 400.5

PARTIAL REMOVAL OF EXISTING ACCESS DRIVE

Outlet Unknown

DP4-2

R3-2

48" RCP

T40D 28+00

T40D 29+00

SPLIT RAIL FENCE ITEM 607.65020010 85 LF, SEE DETAIL ON DT-05

DR-24 CULVERT EXTENSION

DR-25

Inv. 395.9

SPECIAL DITCH TYPE F

PLACE ALONG TOE OF SLOPE AND SLOPE TO DRAIN

EXISTING EDGE OF GRAVEL ACCESS DRIVE

STREAM 1

RESHAPE DITCH AS NEEDED TO ALIGN WITH CULVERT EXTENSION

20' LONG x 15' WIDE STONE INLET PROTECTION SEE DETAIL DWG. NO. MD-1

LIMIT OF EXISTING GRAVEL DRIVE PARTIAL REMOVAL

T40D 30+00= T40E 10+36

T40E 10+36

NORMAL DITCH

NORMAL DITCH

T40E

MATCHLINE - DWG. DP-03

16'

3'

5'

5'

2'

SCALE IN FEET
10 0 10 20

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: MARK R. PARTRIDGE, No. 090595-1, STATE OF NEW YORK, PROFESSIONAL ENGINEER

PARSONS

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JOB

WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. DP-04

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
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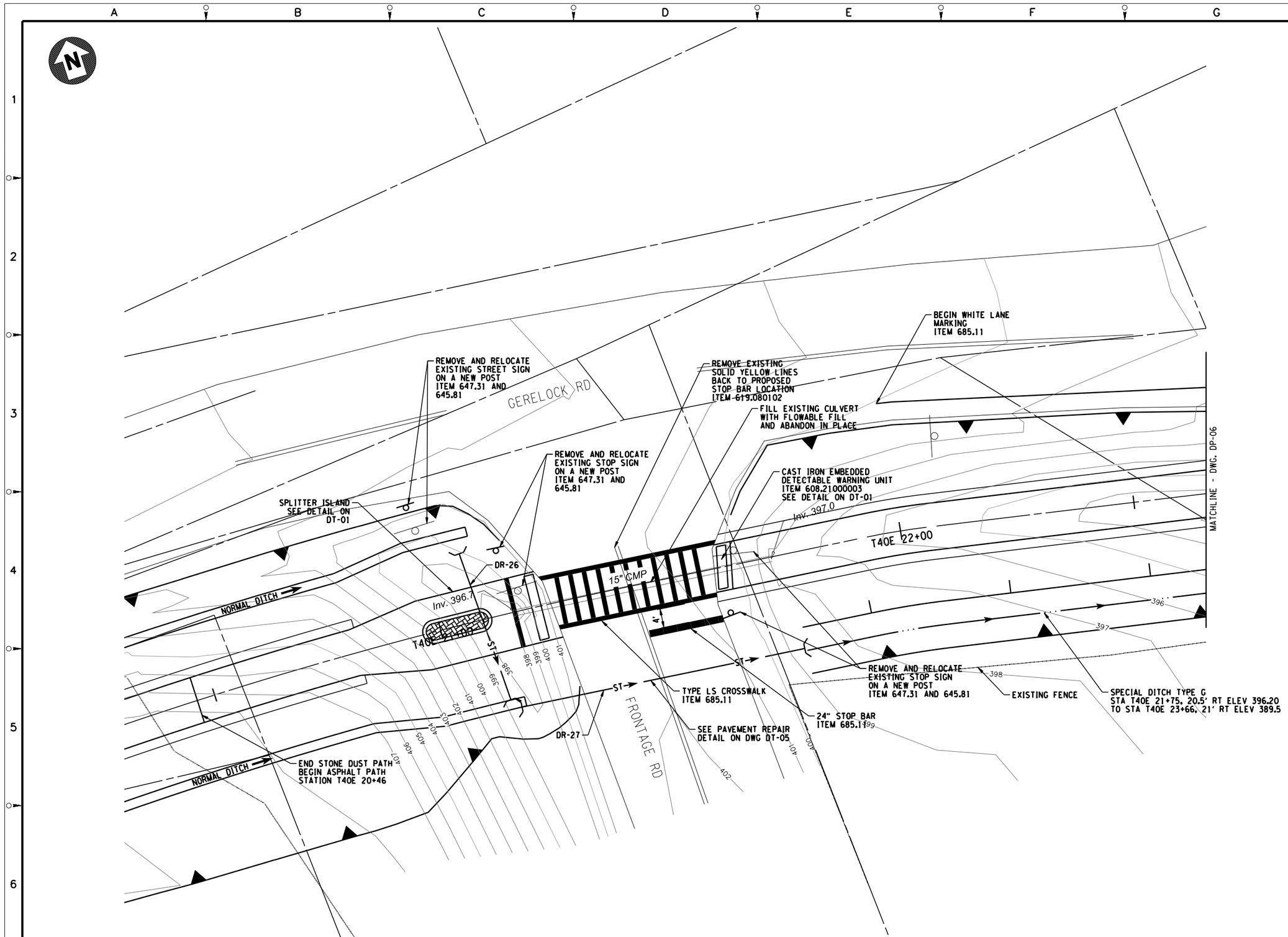

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SEAL

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SYRACUSE, NY 13212
(315) 451-9560

JOB

WBS

PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. DP-05

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
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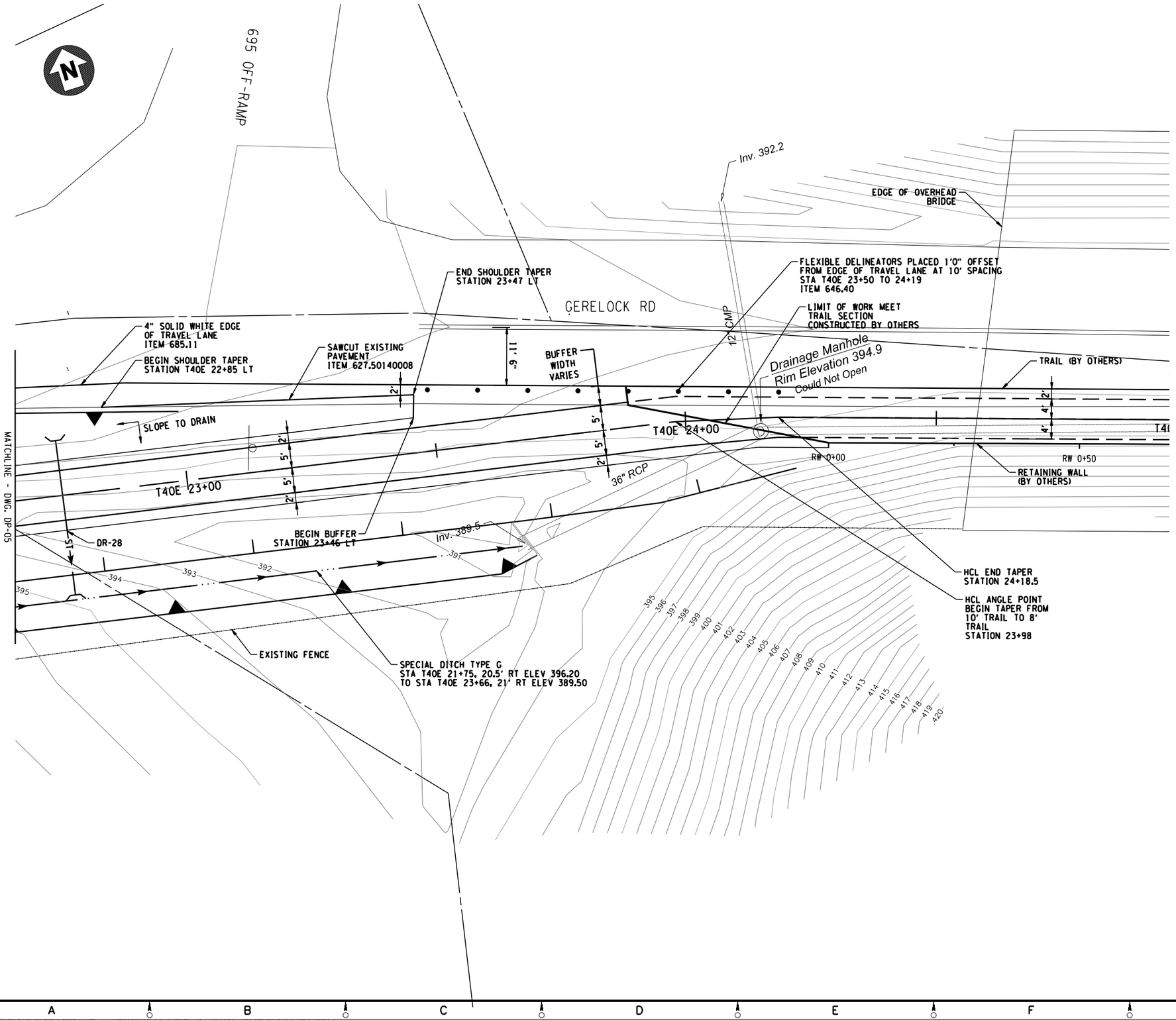

10 0 10 20
SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
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DRAWN BY	SLC	DATE
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SEAL

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JOB
WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. DP-06
REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

EDGE OF OVERHEAD BRIDGE

LIMIT OF WORK MEET EXISTING TRAIL SECTION CONSTRUCTED BY OTHERS

GERELOCK RD

FLEXIBLE DELINEATORS PLACED 1'0" OFFSET FROM EDGE OF TRAVEL LANE AT 10' SPACING
STA T40E 26+19 TO 26+91
ITEM 646.40

END BUFFER, BEGIN NORMAL SHOULDER
STATION T40E 26+91, 7' LT

END BUFFER, BEGIN NORMAL SHOULDER
STATION T40E 26+91, 7' LT

SAWCUT EXISTING PAVEMENT
ITEM 627.50140008

REMOVE AND RELOCATE EXISTING 690 695 SIGNS ON NEW POSTS
ITEM 647.31 AND 645.81

END WHITE LINE MARKING
ITEM 685.11

END SHOULDER TAPER
STATION T40E 27+67

NEW TYPE LS CROSSWALK
ITEM 685.11

Drainage Manhole
Rim Elevation 396.3

9.11'

4' 2'

T40E 26+00

Inv. 385.28

±50

RW 1+91

HCL ANGLE POINT
BEGIN TAPER FROM 8' TRAIL TO 10' TRAIL
STATION T40E 26+29.55

HCL ANGLE POINT
END TAPER
STATION T40E 26+49.57

SPLIT RAIL FENCE
ITEM 607.65020010

36" CMP

Inv. 388.22

690 695 ROAD SIGN

T40E 27+00

SLOPE TO DRAIN

2' 5' 5' 2'

T40E 27+93

Inv. 388.7

INV. 395.9' 18" CMP

MATCHLINE - DWG. DP-08

CAST IRON EMBEDDED DETECTABLE WARNING UNIT
ITEM 608.21000003
SEE DETAIL ON DT-01

WMKR

ELECT CABINET

NM1

EXISTING FENCE

FOMKR

HORAN RD

10 0 10 20
SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

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PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB

WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO.: DP-07

REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2020 1:36 PM PLOTTED BY: RUSSO, JILL

PARKING LOT LAYOUT TABLE				
	NORTHING	EASTING	PROPOSED ELEVATION	DESCRIPTION
P1	1118339.26	913466.11	404.74	CORNER ELEVATION
P2	1118316.53	913532.32	406.14	CORNER ELEVATION
P3	1118240.87	913506.34	407.76	CORNER ELEVATION
P4	1118263.60	913440.13	406.36	CORNER ELEVATION

NOTES:

1. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

REMOVE AND RELOCATE EXISTING STREET NAME SIGNS ON A NEW POST. ITEMS 647.31 AND 645.81

REMOVE EXISTING SOLID YELLOW LINES BACK TO PROPOSED STOP BAR LOCATION ITEM 619.080102

MEET EXISTING EDGE OF PAVEMENT

SPLITTER ISLAND SEE DETAIL ON DT-01

ADJUST WATER VALVE NOTE 1

PROTECT COMM STRUCTURE. COORDINATE ADJACENT GRADING WITH UTILITY OWNER, NOTE 1

CLEAN AND RESHAPE EXISTING DITCH TO DRAIN

PROTECT EXISTING HYDRANT NOTE 1

UTILITY POLE TO BE RELOCATED, NOTE 1

GERELOCK RD

T40F 14+65

T40F 10+00

DR-29B

DR-29A

24" STOP BAR ITEM 685.11

REMOVE AND RELOCATE EXISTING STOP SIGN ON A NEW POST. ITEMS 647.31 AND 645.81

T40F 9+74, 16.5' RT INVERT 398.5

END ASPHALT PATH BEGIN STONE DUST PATH STA T40F 10+40

DR-29, PLACE MANHOLE ON EXISTING PIPE AT STA T40F 9+63, 10' RT INVERT 396.3

T40F 11+00

T40F 12+00

NORMAL DITCH

MATCHLINE - DWG. DP-07

HORAN RD

403.74

404.5

406.75

P1

P2

P3

P4

20'

COMM MRK

inv. 401.4

R=10

12'

404.8

R=5

DR-31

5'

405.0

70'

DR-30, REMOVE AND REPLACE EXISTING CULVERT

EXISTING PAVEMENT EDGE

GT

inv. 403.3

405.36

406.76

DR-32

STONE DUST CONNECTING PATH

DITCH - SEE INSERT

COORDINATE RELOCATION OF GUY WIRE WITH UTILITY OWNER NOTE 1

UNDERGROUND COMM LINE

HOLD - REVISION TO PARKING LOT LAYOUT TO BE ISSUED BY AMENDMENT

PARKING AREA OR CONNECTING PATH

1' VARIES 2' VARIES

3 1 1 2

FINISH DITCH WITH 4" TOPSOIL AND SEED

ELEVATION AS SHOWN ON PLAN

DITCH SECTION
N.T.S.

10 0 10 20
SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

DRAWN BY: SLC DATE
CHECKED BY: AM DATE
APPROVED BY: MRP DATE
PROJECT MGR: MB DATE

SEAL

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SYRACUSE, NY 13212
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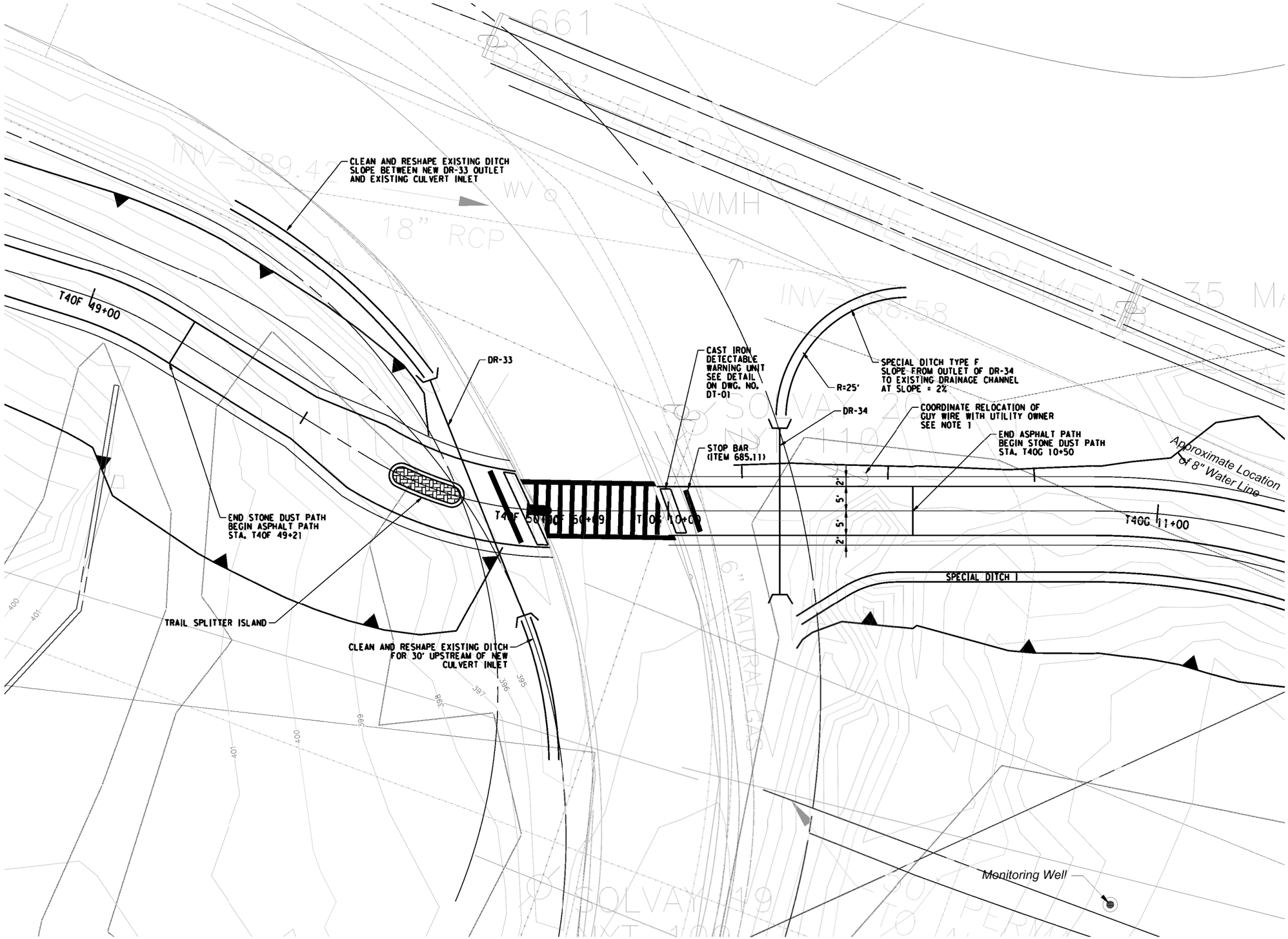
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. DP-08 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: ROSSO, JILL



NOTES:

1. REFER TO UTILITY CONFLICT AND COORDINATION TABLE ON DWG. NO. DT-09.

10 0 10 20
SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

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PROJECT MGR.	MB	DATE

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PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN
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DRAWING NO.: DP-09

REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D*REF*\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL

BEGIN GRAVEL DRIVEWAY WIDENING
STABLIZE ERODED AREA WITH COMPACTED STABLIZED GRAVEL (ITEM 411.01)
REMOVE EXISTING GATE, INSTALL NEW 20' WIDE GATE ITEM 607.9101 SEE DETAIL ON DWG DT-05
END GRAVEL DRIVEWAY
WIDEN GRAVEL DRIVE
WHITE REFLECTIVE DELINEATOR ON STEEL POST. PLACE 1' OFFSET FROM EDGE OF ACCESS DRIVE AT 20' SPACING ITEMS 646.22 AND 646.31 STA T40G 17+92 TO 19+12
LIMIT OF REMOVAL
LIMIT OF REMOVAL EXISTING GRAVEL DRIVE
END TRAIL SHOULDER BEGIN BUFFER AREA STA. T40G 18+00
END STONE DUST PATH BEGIN ASPHALT PATH STA. T40G 18+00
LOCATE END OF EXISTING 12" CULVERT AND COORDINATE DISPOSITOR WITH ENGINEER
FENCE/RAILING
PRECAST BLOCK RETAINING WALL SYSTEM (ITEM 554.40)
CAST IRON DETECTABLE WARNING UNIT SEE DETAIL ON DWG. NO. DT-01
Edge of Gravel
R=80'
R=120'
14" DI
Inv. 389.6
Inv. 387.2
Inv. 384.6
Inv. 380.6
Inv. 380.7
Inv. 385.
Inv. 386.6
Inv. 386.3
Inv. 385.3
Inv. 385.5
Inv. 388.3
Inv. 385.4
Inv. 389.3
Inv. 388.6
Inv. (SE) 388.6
Drainage Manhole
Rim Elevation 394.8
Inv. 389.5
Inv. 388.9
Inv. 390.3
Inv. 388.7
Inv. 387.0
Inv. 384.1
Inv. 387.1
Inv. 386.9
Inv. 386.8
Inv. 390.7
Inv. 389.4
Catch B
Rim Elevatic
Catch Basin
Rim Elevati
Unknown Origin
12" SICPP
18" SICPP
18" CPP
18" CCP
24" CPP
4" CPP
4" CCP
48" Steel
74" DI
48" RCP
36"x48" RCP
52" RCP
Concrete Pad
Concrete Walk
Granite Curb
Curb Cut
Sheet Pile Wall
Jersey Barrier
Bollard (typ.)
BRIDGE ST
390.81 BC
T40G 19+00
T40G 19+15
T40G 18+00
NG459
GATE POST
X2-1
Outlet Unk
Access Road
16'
4'
5'
2'

10 0 10 20
SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/31/19	SLC	MRP	

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CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

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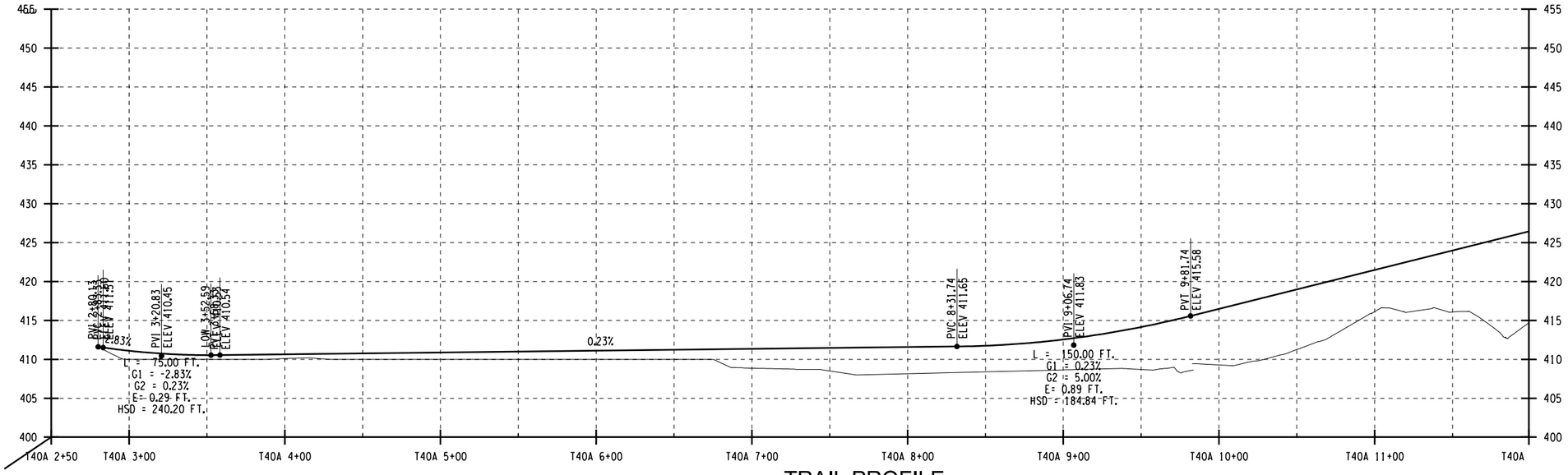
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

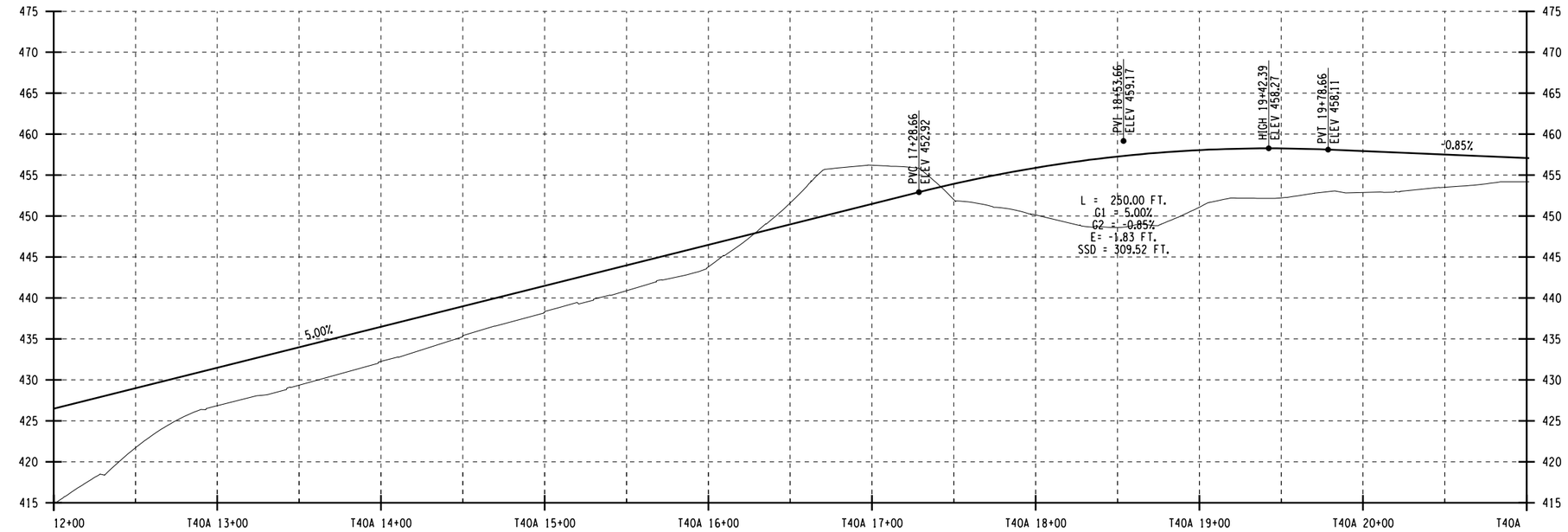
DRAWING TITLE
ERIE CANALWAY TRAIL
DETAIL PLAN

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)
DRAWING NO.: DP-10
REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



TRAIL PROFILE



TRAIL PROFILE

VERT. SCALE IN FEET
8 0 8 16

40 0 40 80
HORIZ. SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE	
CHECKED BY	AM	DATE	
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PROJECT MGR.	MB	DATE	

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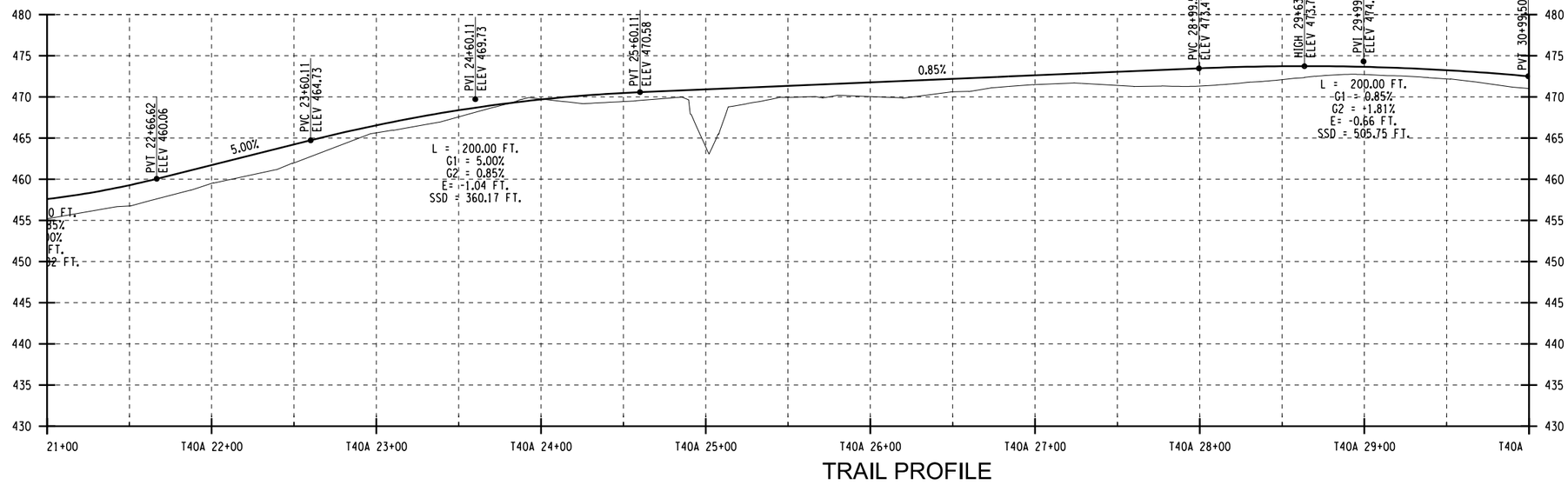
PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL PROFILE

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. PR-01 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



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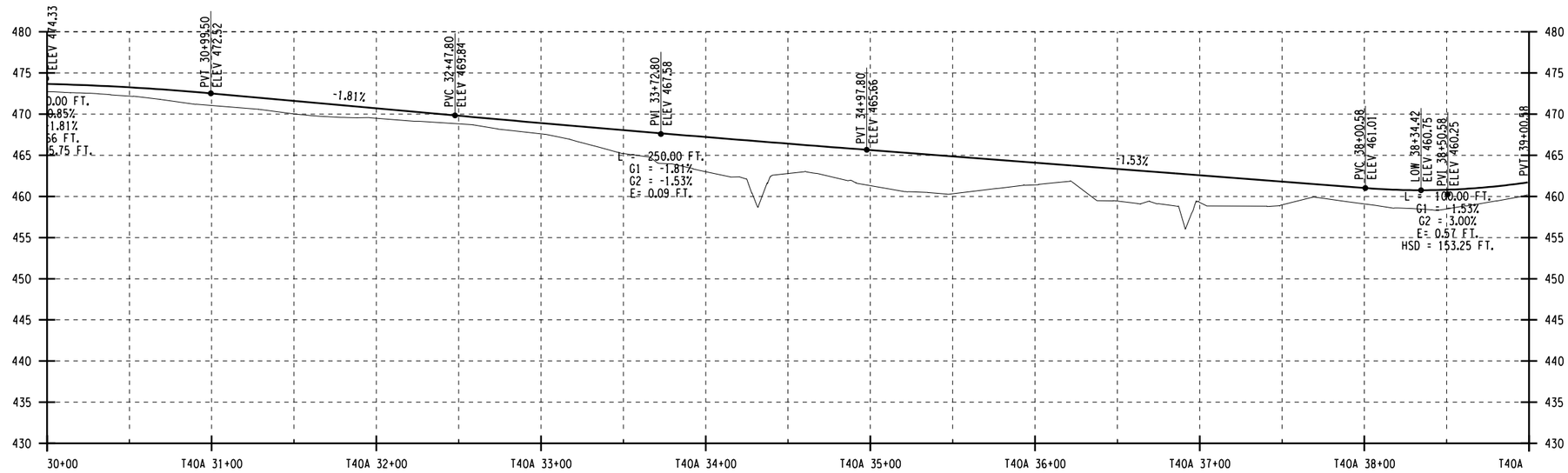

TRAIL PROFILE

VERT. SCALE IN FEET
8 0 8 16

40 0 40 80
HORIZ. SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
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PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

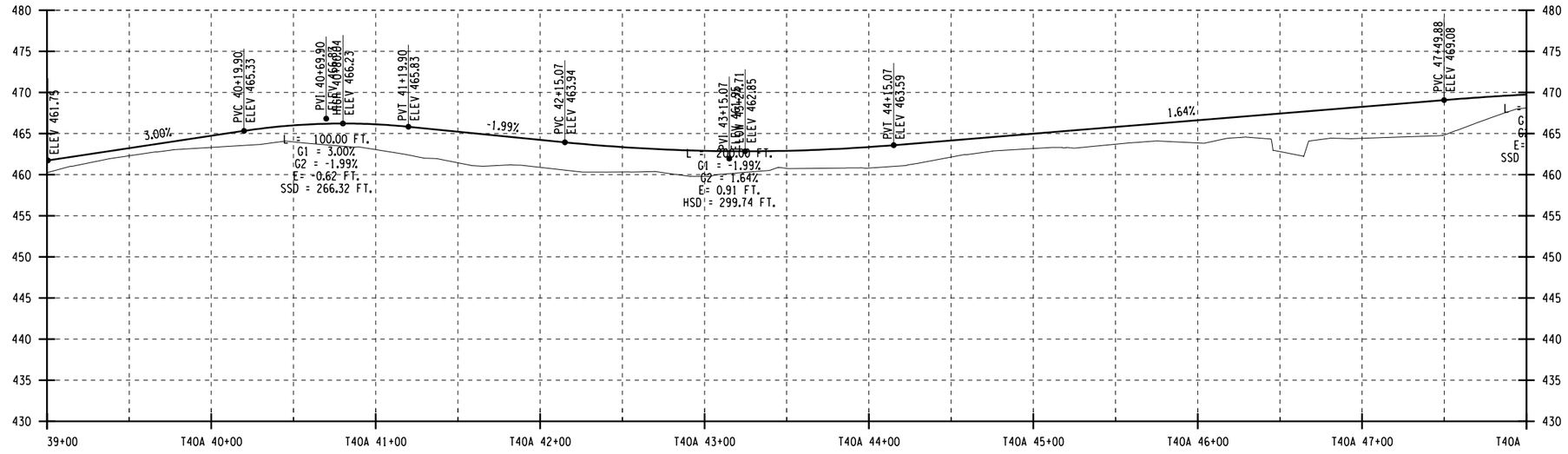
DRAWING TITLE
ERIE CANALWAY TRAIL PROFILE

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. PR-02

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



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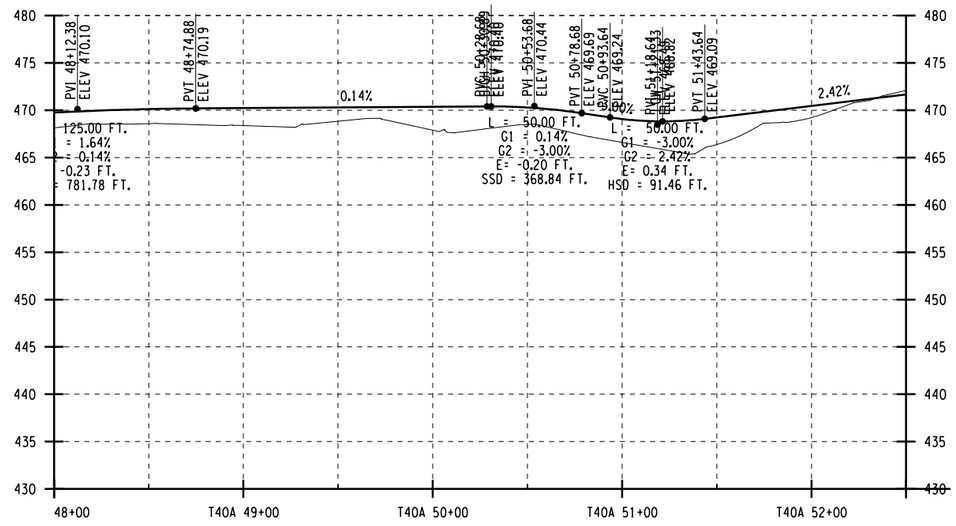

TRAIL PROFILE

VERT. SCALE IN FEET
8 0 8 16

40 0 40 80
HORIZ. SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

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SYRACUSE, NY 13212
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PROJECT TITLE

Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

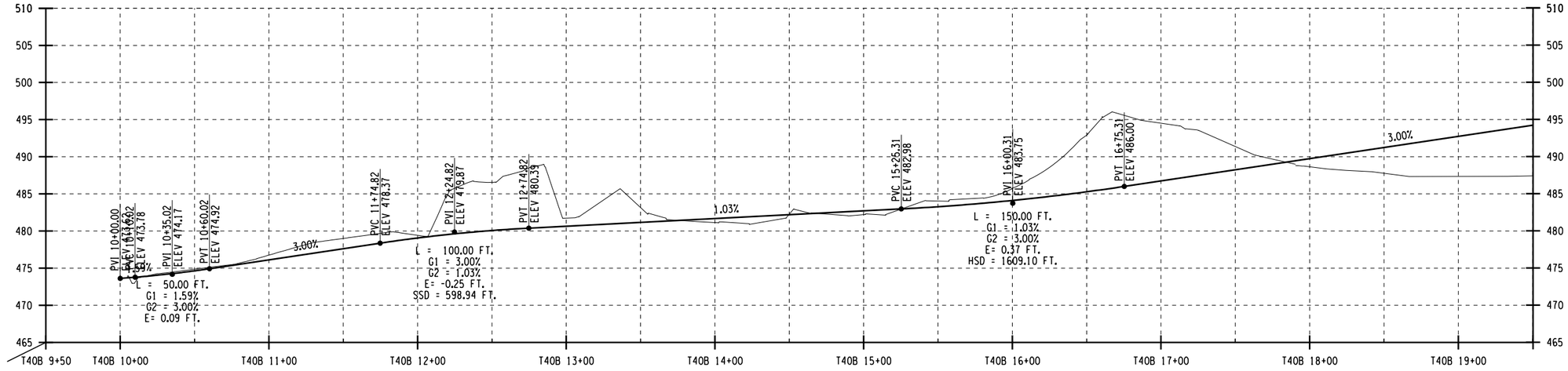
ERIE CANALWAY TRAIL
PROFILE

SCALE: AS SHOWN
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. PR-03

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



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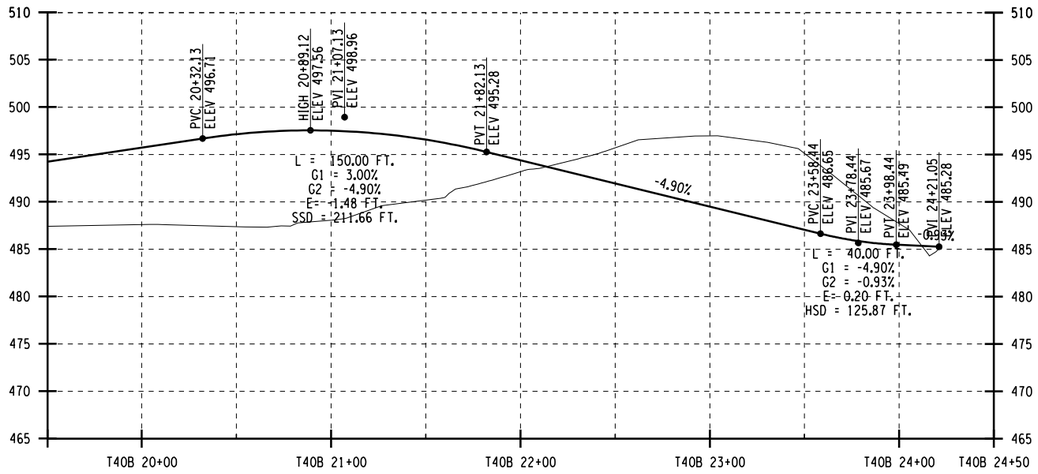

TRAIL PROFILE

VERT. SCALE IN FEET
8
16

40 0 40 80
HORIZ. SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

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PROJECT TITLE

Honeywell

ERIE CANALWAY TRAIL

ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

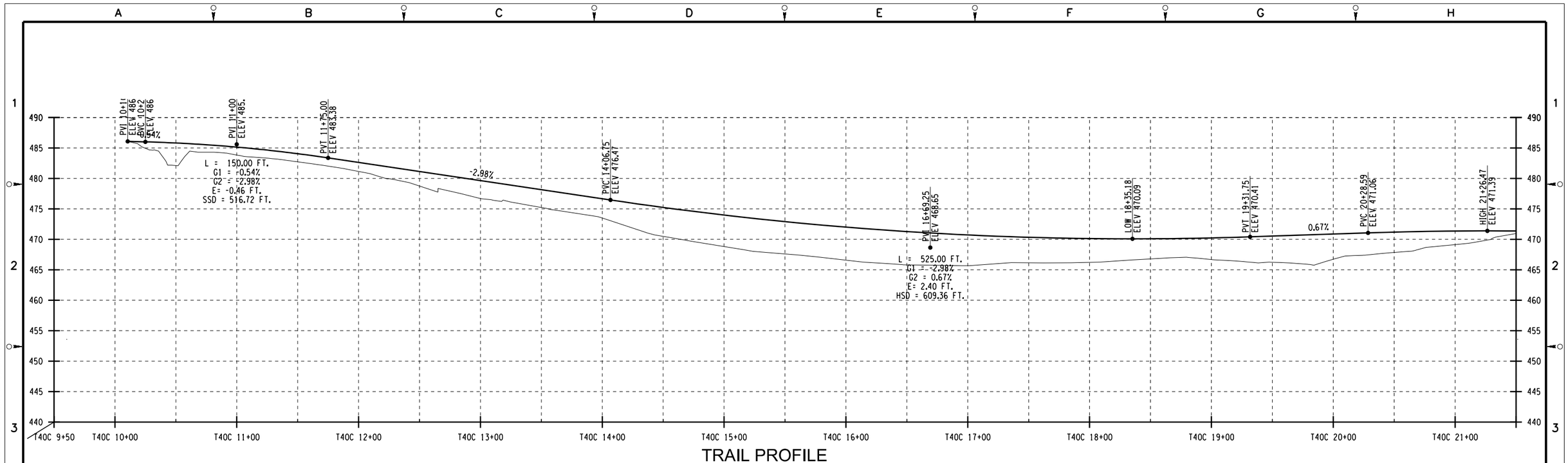
ERIE CANALWAY TRAIL PROFILE

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. PR-04

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



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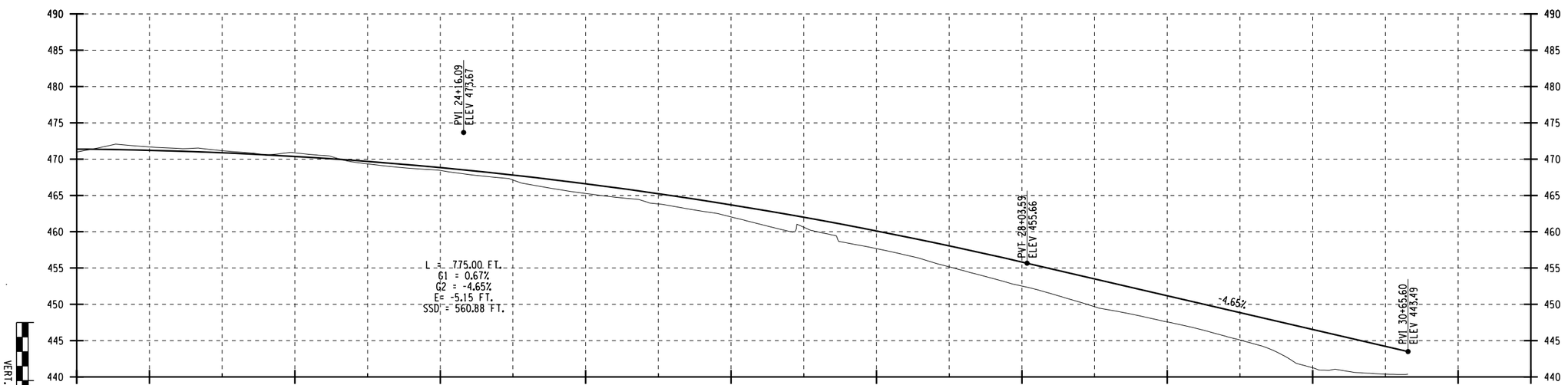

TRAIL PROFILE

VERT. SCALE IN FEET
8
16

40 0 40 80
HORIZ. SCALE IN FEET

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PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL PROFILE

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. PR-05

REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BROR.DWG
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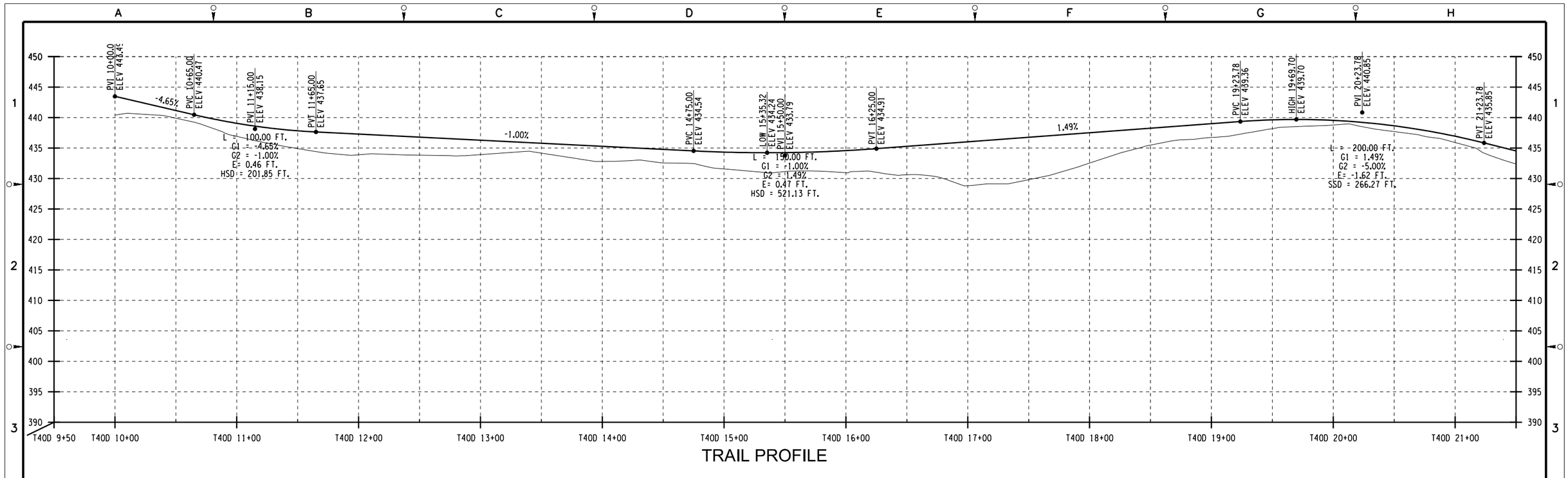

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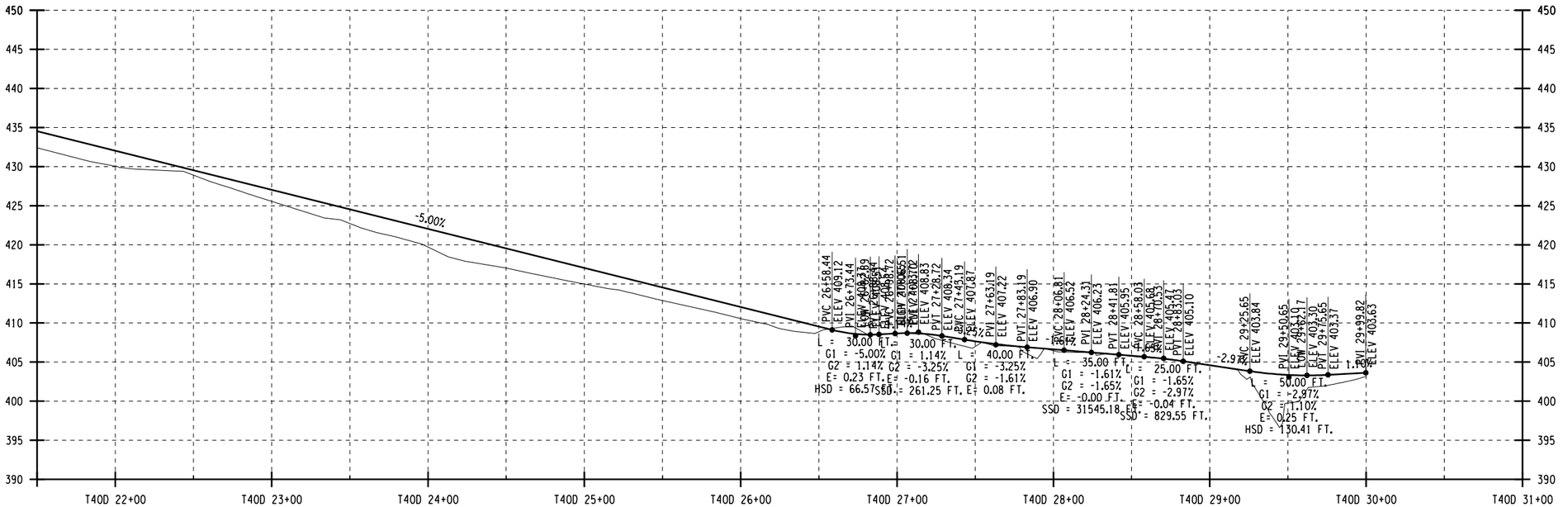

TRAIL PROFILE

VERT. SCALE IN FEET
8
16

40 0 40 80
HORIZ. SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY: SLC — DATE
CHECKED BY: AM — DATE
APPROVED BY: MRP — DATE
PROJECT MGR.: MB — DATE

SEAL: STATE OF NEW YORK — MARK R. PRATT — No. 060908 — LICENSED PROFESSIONAL ENGINEER

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PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
PROFILE

SCALE: AS SHOWN
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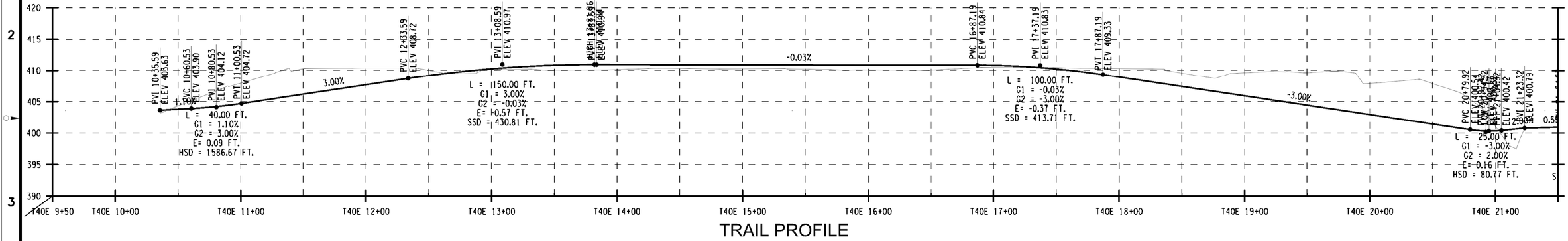
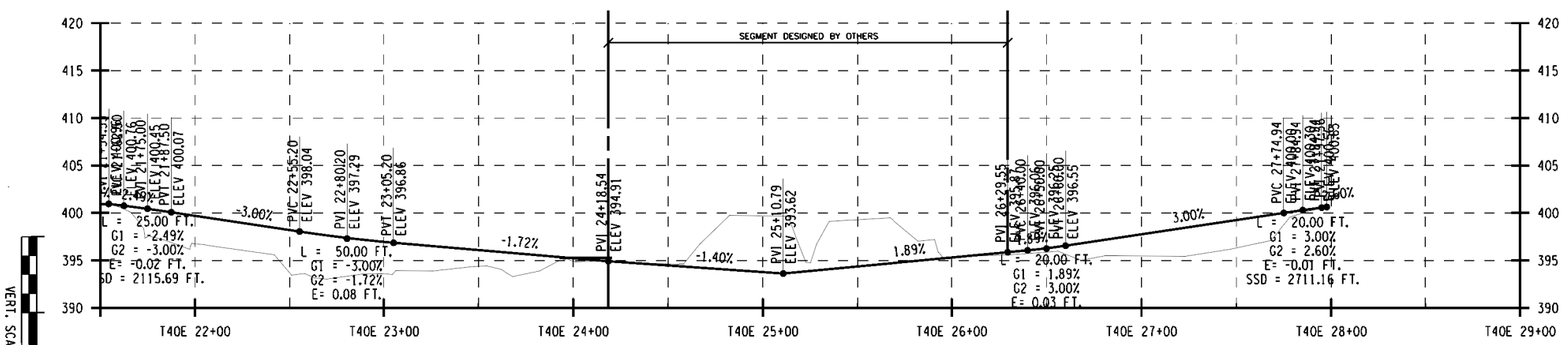
DRAWING NO.: PR-06
REV.: 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 30\XREF\450817-22X34 DESIGN BROR.DWG
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



TRAIL PROFILE



TRAIL PROFILE

VERT. SCALE IN FEET
8
16

40 0 40 80
HORIZ. SCALE IN FEET

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
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PROJECT MGR.	MB	DATE

SEAL: STATE OF NEW YORK · MARK R. PARSONS · No. 060906 · LICENSED PROFESSIONAL ENGINEER

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SYRACUSE, NY 13212
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PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL PROFILE

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. PR-07 REV. 0

FILE NAME: P:\HONEYWELL -SYR\450817 NRD PROJECTS SUPPORT\10.0 TECHNICAL CATEGORIES\PARSONS SW SHORE TRAIL DRAWINGS\CADD\CIVIL 3D\XREF\450817-22X34 DESIGN BRDR.DWG
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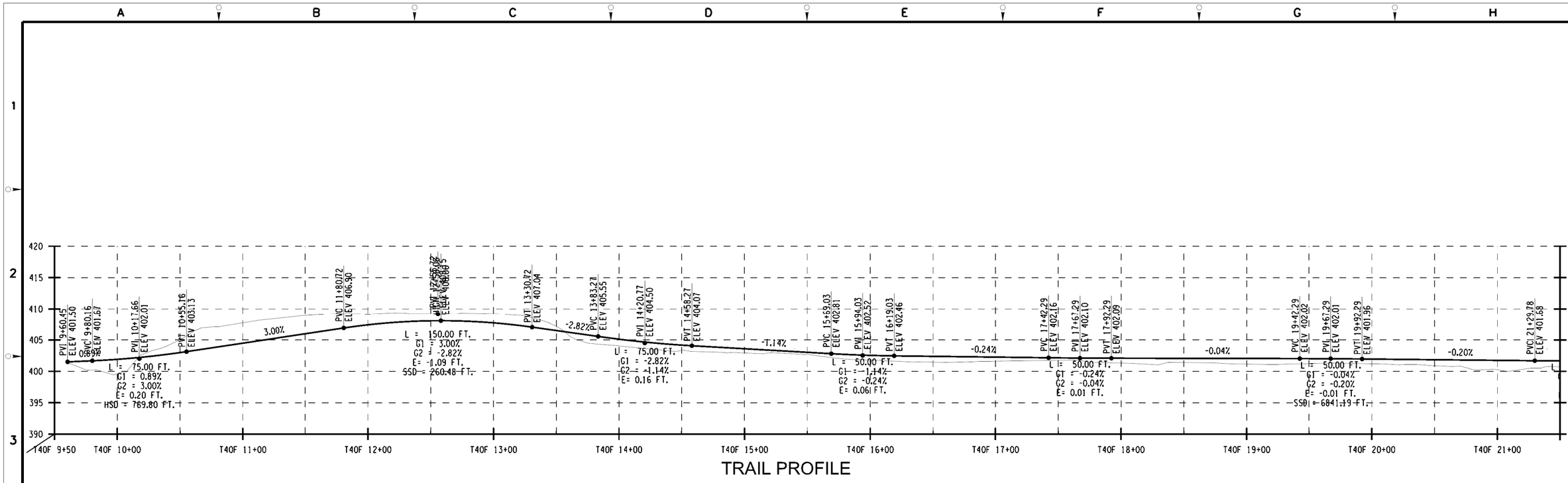
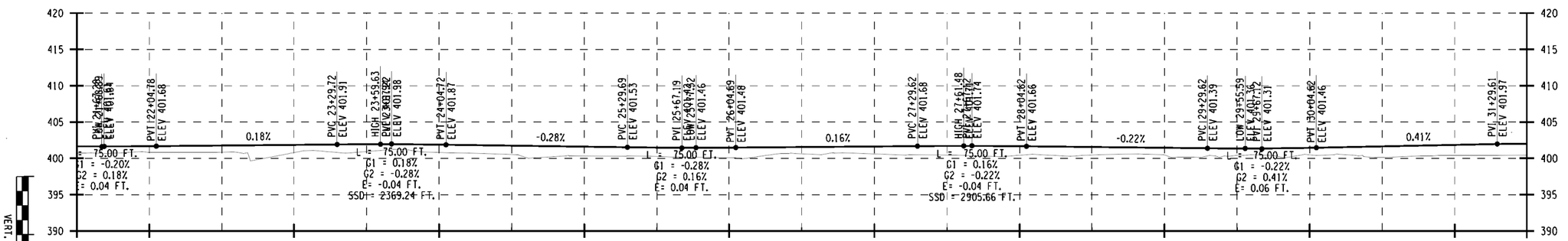


TRAIL PROFILE



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0	ISSUED FOR BID	03/29/19	SLC	MRP	

DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: MARK R. PAPPAS, STATE OF NEW YORK, No. 060305-1, LICENSED PROFESSIONAL ENGINEER

PARSONS
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB
WBS

PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL PROFILE

SCALE: AS SHOWN (IF PRINTED ON 22x34 SHEET)

DRAWING NO. PR-08 REV. 0

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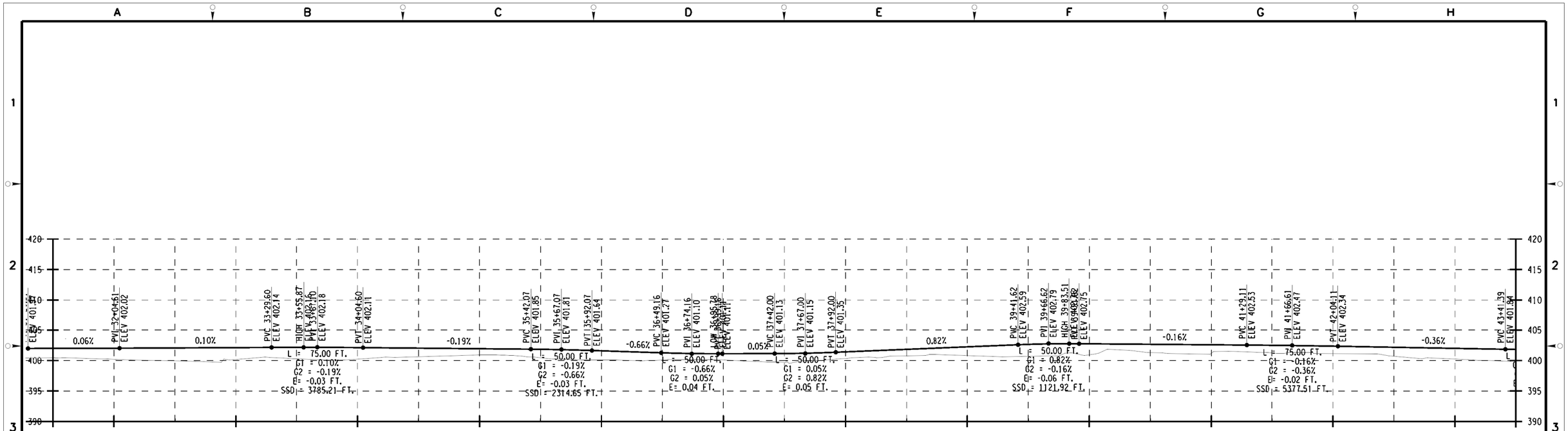
PLOT DATE: 1/7/2010 1:36 PM PLOTTED BY: RUSSO, JILL



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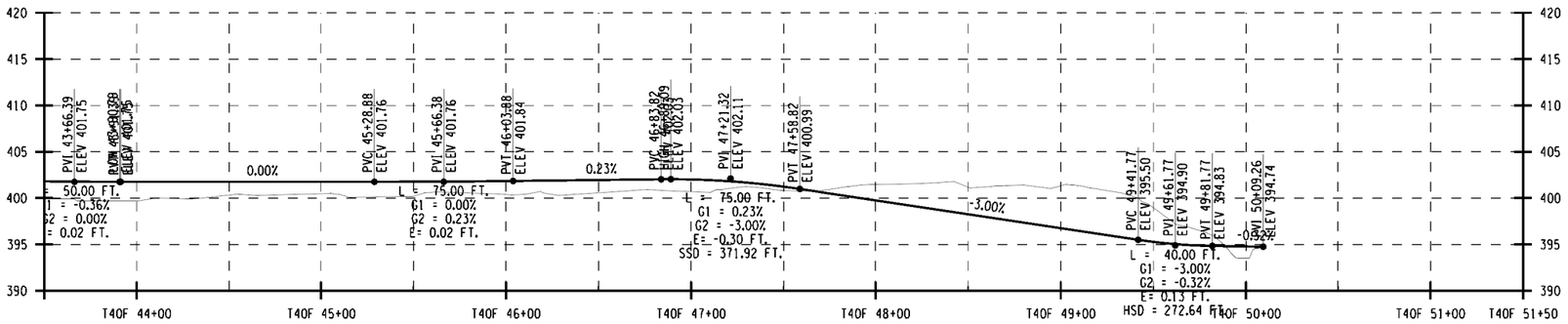

TRAIL PROFILE

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DRAWN BY	SLC	DATE
CHECKED BY	AM	DATE
APPROVED BY	MRP	DATE
PROJECT MGR.	MB	DATE

SEAL: STATE OF NEW YORK · MARK R. PRITCHARD · No. 060906 · LICENSED PROFESSIONAL ENGINEER

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PROJECT TITLE
Honeywell
ERIE CANALWAY TRAIL
ONONDAGA COUNTY, NEW YORK

DRAWING TITLE
ERIE CANALWAY TRAIL
PROFILE

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DRAWING NO. PR-09 REV. 0

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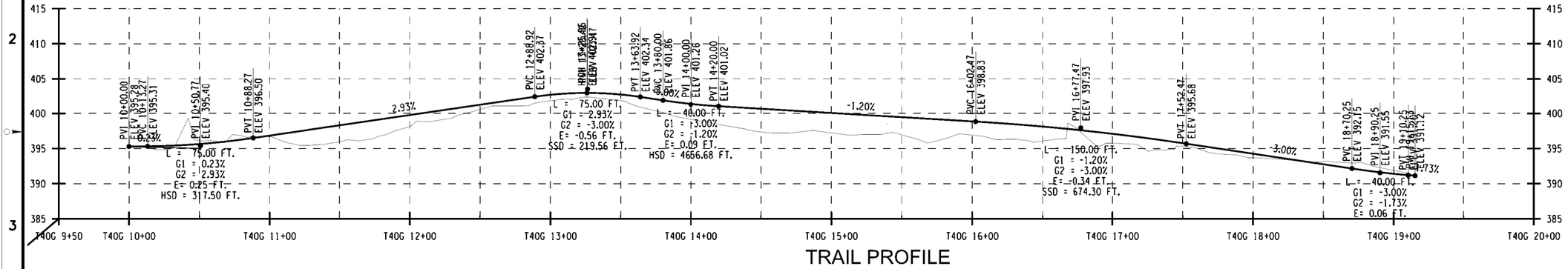

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CHECKED BY	AM	DATE	
APPROVED BY	MRP	DATE	
PROJECT MGR.	MB	DATE	

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ONONDAGA COUNTY, NEW YORK

DRAWING TITLE

ERIE CANALWAY TRAIL
PROFILE

SCALE: AS SHOWN
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