

Engineering Report

For the NYSDEC Part 360 Series Permit
Modification/Renewal

Goshen Transfer Station Facility

DEC Application Number (3-3330-00094/00001)

MARCH 2024

PRESENTED TO

I.W.S. Transfer Systems of N.Y., Inc.

95 Hartley Road
Goshen, NY 10924

SUBMITTED BY

Cornerstone Engineering and Geology, PLLC
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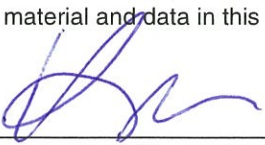
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REPORT CERTIFICATION

The material and data in this report were prepared under the supervision and direction of the undersigned.



Kristen M. Thordahl, P.E.
Project Engineer

3/27/2024

Date



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Sheet No. 3, Truck Route Map
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REGULATORY SUMMARY TABLES

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1.0 INTRODUCTION

1.1 PURPOSE AND OBJECTIVE

This Engineering Report (Report) has been prepared to demonstrate compliance of the Goshen Transfer Station (TS or Facility) with the operational requirements of 6 NYCRR Part 360 and provide operational guidelines to be implemented and followed upon approval by the New York State Department of Environmental Conservation (NYSDEC). As part of the NYSDEC Part 360 Series Solid Waste Management Facilities Permit Application (Permit Application) process, this Report and supporting documentation has been compiled for review and approval by the NYSDEC.

The basic objectives of this Report are as follows:

- To protect public health and the environment by ensuring that wastes are properly managed at the Facility in accordance with applicable federal, state and local laws and Facility permits.
- To protect employee health and safety by adopting and adhering to acknowledged industry standards concerning Facility operations.

A copy of this Report shall be maintained at the Facility for use and reference by its personnel. This Report will also be made available, upon request, for inspection and review by agencies having jurisdiction over the Facility and/or its operation(s).

1.2 CONSISTENCY WITH SOLID WASTE MANAGEMENT PLAN

New York State's Beyond Waste Plan sets forth a new path for solid waste management. The plan shifts from a perspective of focusing on "end-of-the-pipe" waste management techniques to looking "upstream" and more comprehensively at how materials that would otherwise become waste can be more sustainably managed through the state's economy. This shift is central to the state's ability to adapt to an age of growing pressure to reduce demand for energy, reduce dependence on disposal, minimize emission of greenhouse gases and create green employment jobs.

The Goshen Facility accepts Municipal Solid Waste (MSW) and Construction and Demolition Debris (C&D) Debris. The Facility no longer handles recyclable materials, which are now transported to the Millennium Material Recovery Facility (MRF) in Airmont, New York for processing. IWS is committed to divert materials from thermal treatment and disposal by culling recyclables from tipped C&D debris. The NYSDEC is committed to sustain and manage resources, the environment and economic competitiveness by placing emphasis on waste reduction and recycling, while providing an equitable waste management infrastructure where the needs of its residents, businesses and industry are met. The Goshen Transfer Station Facility meets these commitments.

1.3 6 NYCRR PART 360 PROHIBITED SITING

As identified by 6 NYCRR Part 360.8, solid waste facilities (*with certain exceptions*) may not be constructed or expanded within areas of the following classification:

- Special flood hazard areas.
- Areas where habitats of threatened or endangered species of plants and/or wildlife are known to exist.
- Areas containing regulated wetlands.

The existing TS and proposed building addition will not be sited in an area with the characteristics listed above, and therefore will not be located in a prohibited area. Sheet No. 4, "Zoning and Land Use Map" depicts the locations of nearby areas exhibiting these characteristics, if any.

1.4 NYSDEC SUBMITTAL REQUIREMENTS

As per General Condition 3, Applications for Permit Renewals, Modifications or Transfer of the Facility's existing Solid Waste Management Facility Permit (SWMF Permit) shall be submitted to the following:

Regional Permit Administrator
New York State Department of Environmental Conservation
Region 3 Headquarters
21 South Putt Corners Road
New Paltz, New York 12561-1620

All other submission required by the Facility's SWF Permit shall be submitted to the above address as well to the following address:

Bureau of Permitting and Planning
Division of Materials Management
New York State Department of Environmental Conservation
625 Broadway, 9th Floor
Albany, New York 12233-7258

1.5 APPLICATION FOR A SOLID WASTE MANAGEMENT FACILITY

IWS holds the current SWMF Permit (3-3330-00094/00001) for the Goshen Transfer Station located at 95 Hartley Road, Goshen, NY 10924. IWS is the Facility Owner and Operator. The current SWMF Permit expires on September 25, 2024. Appendix A includes the completed Application for a Solid Waste Management Facility Permit and also Record of Compliance Forms.

2.0 REGULATORY OVERVIEW

2.1 PERMITTING AND ENVIRONMENTAL ASSESSMENT

This section identifies and briefly discusses the relevant environmental regulations applicable to the proposed operations of receiving and processing solid waste at the Facility. The Facility currently holds SWMF Permit ID 3-3330-00094/00001 that was last renewed by the NYSDEC on September 26, 2019 and expiration date of September 25, 2024. A copy of the existing Solid Waste Management Facility Permit is included in Appendix A of the Facility Manual.

The Facility is permitted to receive waste from 7:00 AM to 3:30 PM, Monday through Friday and from 7:00 AM to 12:00 PM on Saturday. The Facility may conduct process waste between 7:00 AM to 6:00 PM Monday through Friday and from 7:00 AM to 12:00 PM on Saturday. The current NYSDEC Permit allows the Facility to accept a daily maximum capacity of 600 tons per day of MSW and C&D debris and up to 70 tons per day of dual stream recyclables. IWS is requesting that the 70 tons per day of recyclables be converted into 70 tons per day of MSW and C&D Debris, resulting in a daily maximum permitted capacity of 670 tons per day. No modification to the currently permitted hours is proposed.

Permit applications are reviewed in accordance with the New York State Environmental Quality Review Act (SEQR) (6 NYCRR Part 617), and the Uniform Procedures Act (6 NYCRR Part 621). The following Sections describe these requirements and how they pertain to the proposed Facility.

2.2 STATE ENVIRONMENTAL QUALITY REVIEW (SEQR)

SEQR requires that all State, regional, and local government agencies determine whether certain actions, such as the issuance of a 6 NYCRR Part 360 Permit to construct or operate a solid waste management facility, may have a significant impact on the environment. If it is determined that the action may have a significant adverse impact, SEQR requires the preparation of an environmental impact statement (EIS). Regulations implementing SEQR are contained in 6 NYCRR Part 617.

As part of the process to determine whether the proposed Facility will have a significant adverse impact, a Full Environmental Assessment Form (EAF) was prepared and submitted to the Town of Goshen Planning Board as part of the site plan approval process. The Facility was deemed to have no significant adverse environmental impact and a Negative Declaration was declared in June 2023. A copy of the SEQR documents will be included in Appendix B once finalized by the Town of Goshen Planning Board.

2.3 UNIFORM PROCEDURES ACT

The Uniform Procedures Act and the associated Permit Hearing Procedures (*6 NYCRR Parts 621 and 624, respectively*) clearly set forth timetables for the review and approval of environmental permit applications. Under the Uniform Procedures Act, the review process for projects requiring multiple NYSDEC approvals and/or permits is simplified via a concurrent review of applications. The following listing details NYSDEC environmental regulations and permit requirements, as they apply to this Facility.

<u>Protection of Water Permits</u>		
• Disturbance of Bed or Banks of a Protected Stream or Other Watercourse		Not Applicable
• Construction, Reconstruction or Repair of Dams and Other Impoundment Structures		Not Applicable
• Construction, Reconstruction or Expansion of Docking and Mooring Facilities		Not Applicable
• Dredge and Fill of Navigable Waters		Not Applicable
• Excavation or Placement of Fill in Navigable Waters and Their Adjacent and Contiguous Wetlands		Not Applicable
• Water Quality Certification for Placing Fill or Undertaking Activities Resulting in a Discharge to Waters of the United States		Not Applicable
• Coastal Erosion Management Permits		Not Applicable
• Freshwater Wetlands Permits		Not Applicable
• Tidal Wetlands Permits		Not Applicable
• Wild, Scenic and Recreational Rivers Permits		Not Applicable
<u>Wastewater, Stormwater & Water Withdrawal</u>		
• State Pollutant Discharge Elimination System (SPDES)		Not Applicable
• Stormwater - SPDES Multi-Sector General Permit for Stormwater Discharges from Industrial Activity		Applicable
• Stormwater - SPDES General Permit for Stormwater Discharges from Construction Activity - GP-0-15-002		Not Applicable
• Water Withdrawal Permits		Not Applicable
• Long Island Well Permits		Not Applicable
<u>Air Permits and Registrations</u>		
• Air Facility Permits (Air State Facility Permits or Air Title V (ATV) Facility Permits)		Not Applicable
• Air Facility Registrations		Not Applicable
<u>Mineral Resources</u>		
• Mined Land Reclamation Permits		Not Applicable

Waste Management, Composting & Recycling Permits		
• Solid Waste Management Permits		Applicable
• Hazardous Waste Management Permits		Not Applicable
• Radiation Control		Not Applicable

The Facility is permitted under existing 6 NYCRR Part 360 Permit No. 3-3330-00094 valid through September 25, 2024.

2.4 FINANCIAL SURETY

As per Solid Waste Management Permit Condition No. 35 of the existing SWMF Permit, IWS maintains financial surety in the amount of \$195,000 in favor of the New York State Department of Environmental Conservation. A copy of the existing surety bond is included in Appendix B in the Facility Manual.

2.5 APPLICABILITY OF 6 NYCRR PART 360 SERIES REGULATIONS

Proposed activities including operation of a transfer station and the associated recyclables handling and recovery are regulated under 6 NYCRR Part 360, Subpart 361-5, Construction and Demolition Debris Handling and Recovery Facilities and Subpart 362-3, Transfer Facilities.

2.6 CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT

The proposed Facility modification will include only the construction of an addition to the existing Transfer Station building to realize improved environmental controls and is not proposing changes to the currently permitted capacity, waste types, or operating hours.

Therefore, this Application proposes no modification to vehicle counts, types, or routing and is not subject to the clauses within the Climate Leadership and Community Protection Act (CLCPA).

2.7 COMMUNITY RISK AND RESILIENCY ACT (CRRA)

Section 9 of the CLCPA added a requirement to the existing Community Risk and Resiliency Act (CRRA) that applicants for “major permits” under ECL Article 70, such as this Permit Renewal and Modification Application, must “demonstrate that future physical climate risk has been considered.” Physical climate risks potentially relevant to this Facility modification and which could potentially impact the Facility include flooding, greater rainfall volumes, increased temperatures and heat waves, and power outages. These potential impacts have been considered in the following sections.

2.7.1 Future Flood Risk

The *New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act* document provides guidance for assessing future physical climate risk due to sea-level rise, storm surge, and flooding. In accordance with the methods outlined in this document, extreme flood events were assessed for this project and will not have a significant impact on the proposed modification project.

Table 2 in the referenced document provides an appropriate method to assess flood hazards areas for structures:

- *The elevation and horizontal flood-hazard area that result from adding two feet (three feet for critical facilities) of freeboard to the base flood elevation (BFE) and extending this level to its intersection with the ground. The document defines the BFE as “the elevation of surface water that has a 1-percent chance of being equaled or exceeded in any year, commonly known as the 100-year flood.” Given the definition of critical infrastructure given on page 25 of the document, the analysis for this project was completed by adding three feet of freeboard to the BFE.*

The document further states that the “BFE used in design planning should be the highest of any BFE on the project site, as indicated by a FIRM and accompanying effective flood insurance study (FIS), a FEMA preliminary or advisory FIRM and accompanying FIS, or an engineering analysis of current conditions using accepted hydrologic and hydraulic engineering techniques...Applicants and programs should ensure they use the most recent flood-risk information available.”

As further described in Section 3.4, the Facility is mapped on FEMA Flood Insurance Rate Map (FIRM) Map Number 36071C0269E, last revised on August 3, 2009, the Facility is located in Zone X, areas determined to be outside the 0.2% annual chance floodplain. Furthermore, the finished floor elevation of the tipping floor of the Facility is approximately 410 feet, which is over 30 feet higher the mapped flood zone that is situated on the eastern side of Hartley Road.

2.7.2 Greater Rainfall Volumes

Consistent with the methodology outlined in the document titled *Observed and Projected Climate Change in New York: An Overview*, NYSDEC 2021, projected rainfall volumes have been assessed and will not have a significant impact on the proposed development. The existing ground surface where the proposed building addition will be constructed is currently impervious, so there will be no increase in the impervious surface area at the Facility as a result of this project and there will not be a change to stormwater runoff as a result of this modification.

2.7.3 Increased Temperatures and Heat Waves

Increased average temperatures, and more frequent extreme heat days and heat waves will have minimal impact on Facility operations. All waste tipping and handling operations will continue to occur indoors. The modified Transfer Station Building will contain a Dust and Odor Control System, further described in Section 4.9.2 of the Facility Manual, to mitigate odors associated with waste during periods of high heat. The proposed Building modifications will also be equipped with a ventilation system consisting of exhaust fans and intake louvers to mitigate the harmful effects of dust and odor on employees and customers, during all weather conditions. The Facility Manual prepared in conjunction with this Engineering Report contains information on the signs of heat stress and heat-related illnesses in the basic safety training provided to all employees. Additionally, during periods of excessive heat, mobile equipment operation will be closely monitored to ensure that no single piece of equipment is being unnecessarily taxed or over utilized to prevent breakdown or risk to equipment operator.

3.0 SITE INFORMATION

3.1 BACKGROUND

The Facility currently holds SWMF Permit #3-3330-00094/00001 that was issued by the NYSDEC on September 26, 2019 and will expire on September 25, 2024. A copy of the existing Solid Waste Facility Permit is included in Appendix A in the Facility Manual.

The NYSDEC permits the Facility to receive waste during the following periods:

- Monday through Friday: 7:00 A.M. to 3:30 P.M.
- Saturday: 7:00 A.M. to 12:00 P.M. (Noon)

The NYSDEC permits the Facility to process waste during the following periods:

- Monday through Friday: 7:00 A.M. to 6:00 P.M.
- Saturday: 7:00 A.M. to 12:00 P.M. (Noon)

The Facility may process waste from 7:00 A.M. to 7:00 P.M. ONLY for the two (2) operating days immediately after Memorial Day, Independence Day, and Labor Day.

All receipt, delivery, or other operations are prohibited on all Sundays.

The Facility may not operate on the following New York State Holidays: New Year's Day, Memorial Day, Independence Day (4th of July), Labor Day, Thanksgiving, and Christmas, unless otherwise authorized by the NYSDEC.

Fully loaded trailers or rail canisters may be picked up at the Facility for shipment off-site before and after the operational hours listed above, provided no other solid waste handling activity takes place at the Facility and that a log of such activities is maintained and submitted with the annual report. The trailers will be weighed and the tonnage included in the daily tonnage limits and recordkeeping requirements for the Facility.

The current NYSDEC Permit allows the Facility to accept C&D debris and (MSW at a maximum combined rate of 600 tons per day. The Facility may also accept Source-Separated Recyclables (SSR) at a maximum of 70 tons per day.

Daily activities include the receipt, initial inspection, and weighing of Tipping Vehicles; tipping of solid waste onto the Tipping Floor; inspection of tipped materials; transfer of materials to Transfer Trailers, and daily transportation and disposal of residual wastes to various disposal facilities. The degree of recycling and separation is variable as it is dependent on waste composition and the effectiveness of manual removal.

The Facility is prohibited from accepting friable asbestos waste as defined as follows:

Friable asbestos-containing waste means any waste containing greater than one percent asbestos that can be crumbled, pulverized, or reduced to powder by hand pressure when dry; and any asbestos-containing waste that is collected in a pollution control device designed to remove asbestos. This definition does not include friable asbestos-containing wastes that are discarded by a household. However, C&D debris which contains minor amounts of non-friable asbestos, and which is not categorized as asbestos waste by Part 360, may be accepted but may not be pulverized, shredded, ground, or handled in any manner that causes the material to become airborne or friable.

The Facility is not authorized to accept tires in bulk but may accept tires which are incidental to incoming loads of MSW. The tires shall be separated from the MSW and stored separately in enclosed containers prior to shipment to a facility authorized to accept bulk tires. The Facility may store up to 1,000 waste tires on site in closed containers.

Hazardous waste, liquid waste, regulated medical waste, and other such materials are not accepted at the Facility.

3.2 CONTACT INFORMATION

3.2.1 Name and Address of Facility Owner, Operator and Property Owner

I.W.S. Transfer Systems of N.Y., Inc.
89 Black Meadow Road
Chester, New York 10918
Contact: (845) 572-3373

3.3 PROPOSED FACILITY MODIFICATION

IWS will be constructing a 9,345 square foot addition to the Transfer Building along with a 432 square foot mechanical and electrical room for housing the fire water pump and electrical equipment for the Transfer Station. The proposed addition to the TS building will include a new loadout tunnel that will be equipped with a truck scale and tarping rack. The existing tarping rack located adjacent to the Maintenance Shop/Offices building will be removed.

The curb cut at the Facility entrance on Hartley Road will be extended to 75 feet for easier access of trucks travelling in and out of the Facility.

Leachate from the proposed addition will be directed into a new dual-walled underground leachate storage tank. The water for the fire suppression system in the proposed TS Building will be provided via a new 65,000-gallon Aboveground Water Storage and Supply Tank.

IWS has previously submitted a permit modification requesting that the 70 TPD of source-separated recyclables be converted to MSW and C&D Debris which will allow the Facility to accept up to 670 TPD of MSW and C&D Debris under Part 362-3, or a maximum of 570 TPD of MSW and a maximum of 100 TPD of C&D when the Facility is operating under both Part 362-3 as a Transfer Facility and Part 361-5 as Construction and Demolition Debris Handling and Recovery Facilities. Recyclable materials are now directed to the IWS MRF located in Airmont, New York. As such, IWS is requesting the currently permitted 70 TPD to be converted into MSW and C&D Debris.

The upgraded Facility has received local approval from the Town of Goshen Planning Board, dependent on approval from NYSDEC.

The Facility Plans to continue operations during construction of the addition. Once the addition has been completed, the operations will be moved into the TS Building addition area while modifications will be completed to the existing TS Building. These modifications will include filling in the existing loadout tunnels, installation of overhead doors at the three (3) existing loading bays and installation of two (2) new overhead doors on the western side of the existing TS Building.

3.4 LOCATION AND PROPERTY BOUNDARIES

The Facility is located at 95 Hartley Road in Goshen, New York. Refer to Figure 1, Site Location Map. The 3-acre Site is located on Section 12, Block 1, Lot 21.21 in the Town of Goshen and is situated in the I, Industrial Zoning District. Operation of a solid waste management Facility requires a special use permit from the Town of Goshen. The site location is shown on Sheet No. 1, "Regional Map" and Sheet No. 2, "Vicinity Map" and on Figure 1, "Site Location Map".

The Facility is bounded to the north, south and west by other tax parcels zoned I. A portion of the Amy's Kitchen organic and vegetarian meals manufacturing facility is currently being constructed to the north of the Facility and to

the west on the opposite side of the Walkill River. The closed Al Turi Landfill is located to the south and west of the Facility. Property located across Harley Road to the east is zoned CO, Commercial/Office Mixed-Use. IWS owns the parcel directly across the street which is used for vehicle and container storage. On Time Disposal and HiG Fabrications are also located across Hartley Road to the east of the Facility. On Time Disposal provides roll-off container rentals to customers, HiG fabricates automobile chassis and parts for race cars.

As per FEMA Map Panel 269 of 630 (No. 36071C0269E), last revised on August 3, 2009, the Facility is located in Zone X, areas determined to be outside the 0.2% annual chance floodplain. The Facility is not located in or adjacent to a NYSDEC or Federal wetland.

3.5 SITE ACCESS AND SECURITY

Access and egress to the Facility is from a single access location along Hartley Road. Only those vehicles transporting solid waste in covered vehicles or confined vehicles will be allowed access to the Facility. Access to the TS receiving and processing areas is restricted to authorized personnel. At the close of business hours all doors and the access gate is secured and locked to prevent unauthorized access and to preclude illegal dumping.

3.5.1 Visitors

Visitors must sign in and sign out in the existing Office. Because of the nature of activities at the Facility, anyone entering the site must receive sufficient instruction to understand the operation and utilize appropriate safety and protective measures. Visitors will not be left unattended and will be escorted whenever entering the waste handling area. Visitors will be provided with the necessary PPE when they enter the Facility, which is subsequently returned prior to departing the Facility.

3.5.2 Signs

Signage is conspicuously posted at the entrance to the Facility along Hartley Road detailing the operator name, address of the Facility, hours of operation, types of wastes accepted and not accepted, regular business and emergency phone numbers, NYSDEC permit numbers, and complaint telephone numbers.

Additional information on the vehicle traffic at the Facility, as well as traveling to and from the site, is discussed in Section 6.5.1, "Traffic Routes To and From the Facility".

3.6 EXISTING FACILITY

There is one (1) truck scale located within the site that is situated adjacent to the Maintenance Shop/Offices. The Scale Operator sits inside the Maintenance Shop/Offices and is also the location of the scale instrumentation and data management equipment for the scale.

The transfer station building is approximately 111 feet by 88 feet. The existing building has three (3) openings for vehicle tipping which are in the center of the building and one (1) opening to each Transfer Trailer Loading Pit (Pits A and B) which are on the ends of the building, one at the north end and the other on the south end of the building. There is a concrete pad adjacent to the north and south side of the transfer station is used for trailer staging. The north concrete pad occupies approximately 2,100 square feet and the south concrete pad occupies approximately 1,574 square feet. Liquids contacting each concrete pad are drained via gravity into a double-walled underground leachate storage tank. The leachate tank is pumped as needed, depending on precipitation, with the leachate removed for treatment to a licensed wastewater treatment plant.

There is an elevated tarping rack located adjacent to the Maintenance Shop/Offices which is utilized to tarp loaded transfer trailers prior to exiting the site.

3.6.1 Utilities

Electrical Services to the Facility is provided by Orange and Rockland Utilities, Inc. Water is supplied to the Facility by a private well. The Facility maintains two (2) fully functioning restrooms and two (2) restrooms that are currently not in use. The two (2) fully functioning restrooms are situated on the first floor of the Office Area building. The two (2) restrooms that are currently closed are located on the second floor of the Office Area building, which is also not in use.

Water for operational and fire protection, which is located at several locations within the Facility, will be provided by a proposed 65,000-gallon storage and supply tank. This tank will initially be filled via a commercial water truck. Periodically, the tank will be filled via the groundwater well and pumps located on site. The Location of this tank is shown on Sheet No. 6, "Proposed Site Plan."

Sanitary wastewater from the Facility is discharged into an on-site holding tank which is located on the southwestern side of the Office Area building. The holding tank is emptied on a regular basis by a licensed hauler for offsite treatment.

Leachate generated within the TS Building will be directed toward the Loadout Tunnel via slopped floors and directed via vertical scuppers on the interior wall of the Loadout Tunnel and collected via floor drains in the Loadout Tunnel and conveyed via dual-walled gravity pipe to a proposed underground, dual-walled leachate storage tank situated outside of the TS along the southern end of the building. Leachate from the western portion of the TS Building will also be collected and directed via dual-walled gravity pipe to the existing underground, dual-walled leachate storage tank on the west side of the existing TS Building.

3.6.2 Stormwater Management

The current stormwater management for site is primarily overland flow to catch basins located along the eastern fence line where the stormwater is discharged into an existing drainage channel. Roof drains from the existing Transfer Station building are discharged to the west where there is an existing culvert that conveys stormwater runoff from off-site underneath the existing Transfer Station building to an existing drainage channel situate to the east of the Site.

3.6.3 Recycling Area Building

The existing Recycling Area structure is approximately 3,000 square feet and will be demolished as part of this modification. Currently, the existing 500-gallon and a 2,000-gallon aboveground dual-wall diesel fuel tanks that are used for fueling the on-site mobile equipment are located in the Building. These tanks are both registered with the NYSDEC. Following construction of the Transfer Station addition, these existing fuel tanks will be relocated to an area adjacent to the west side of the Maintenance Building.

3.6.4 Scale

There is one (1) Truck Scale located at this Facility which is situated adjacent to the Office Area Building. The Truck Scale is a Mettler Toledo scale, Model 7562. A Radiation Detection System, Ludlum Measurements, Inc., Model 44-99 Gamma Scintillator, is situated at the scale which is used to detect radioactive materials that may be in the Tipping Vehicles.

The location and orientation of the Truck Scale is depicted on Sheet No. 5, "Existing Site Plan" and Sheet No. 6, "Proposed Site Plan." Specifications for the above piece of equipment can be found in Appendix D in the accompanying Facility Manual.

4.0 FACILITY DESCRIPTION

4.1 FACILITY DESIGN CAPACITY

The Proposed Transfer Station configuration has been designed with a material handling capacity in excess of the existing inbound material rate of 670 TPD of a combination of MSW and C&D. As demonstrated by the Throughput Capacity Calculations and Truck Queuing Model, both of which are described below and included in Appendix C of this Report, projected waste processing and vehicle traffic at this operating capacity will be easily accommodated by the TS Building and Facility layout.

4.1.1 Throughput Capacity Calculations

The Proposed Transfer Station configuration will include approximately 17,205 square feet for Tipping Vehicle unloading, material processing, and material storage on the Tipping Floor. Transfer Trailer loading and tarping operations will take place in the approximately 1,420 square foot Loadout Tunnel. The Tipping Floor and Loadout Tunnel comprise the TS Building operational areas. The remaining 390 square feet of the TS Building consists of the Mechanical and Electrical Room.

The following analyses have been performed to support the proposed floor space available within the TS Building for materials processing and storage, based on historical tipping records and the existing permitted capacity of 690 tpd. Further detail is presented within Appendix C.

4.1.2 Surge Pile Analysis

Floor space requirement calculations, as they relate to material handling operations and the design tonnage, are discussed in this report section. The areas discussed below are presented on Sheet No. 9, "Proposed General Arrangement Floor Plan."

A Surge Pile Analysis (included within Appendix C) was performed to illustrate the ability of the Proposed Transfer Station configuration to receive and process the maximum capacity of 670 tpd during a peak operating day. The analysis utilized historic peak data for incoming waste and average vehicle tonnage to calculate the projected rate of waste processing, as further detailed within the Surge Pile Analysis.

The analysis concluded that on a peak operating day, assuming simultaneous tipping and waste transfer, the maximum anticipated surge pile resultant from the 670 tpd capacity of MSW and C&D would equal a total of 642 cubic yards or approximately 180 tons, assuming an on-floor waste density of 560 pounds per cubic yard.

These analyses also illustrated that surge piles will not be carried over from the previous day, and therefore the Tipping Floor would be clean at the end of each operating day. Figure 2, "Tipping Floor Emergency Storage Pile Volume" illustrates a surge piles described above.

Appendix C of this Report also presents calculations for the maximum anticipated surge pile resultant from 670 tpd capacity of MSW and C&D would equal 642 cubic yards or approximately 180 tons. Figure 3, "Tipping Floor Operational Surge Pile Volume" demonstrates this projected MSW and C&D surge pile under proposed operating conditions.

Material will be stored in accordance with Section 6.9, "Material Storage" of this Report, which further details acceptable storage conditions and durations for materials accepted at the Facility. The Tipping Floor will be cleared of all waste at the end of each operating day, so that no unprocessed waste materials are stored within the TS overnight.

4.1.3 Truck Queuing Model

The Truck Queuing Model, included within Appendix C, demonstrates the Facility's capacity to process Tipping Vehicles accessing the Facility, from scaling through unloading within the TS Building. The peak hourly inbound truck rate of 17 tipping vehicles per hour occurs between 2:00 PM and 3:00 PM (*as further detailed within the Throughput Capacity Calculations memo*).

As demonstrated in Appendix C, seventeen (17) Tipping Vehicles arriving per hour utilizing the four (4) available tipping slots with a ten (10) minute cycle time results in a maximum of ten (10) Tipping Vehicles on site at one time, by applying a Poisson Distribution. Four (4) of these Tipping Vehicles will be located within the tipping slots, and six (6) Tipping Vehicles will be waiting in the queue during peak projected operating conditions. As demonstrated in the Figure 4, "Queuing – Operational Site Plan", there is sufficient space available for the peak projected Tipping Vehicle queue in the area east of the tipping bays of the TS.

The Truck Queuing Analysis calculations demonstrate the Facility's capacity to process Tipping Vehicles accessing the Facility, from pre-scale queuing through unloading within the TS Building. Queuing areas are available directly following the existing Truck Scale. The Tipping Vehicle travel paths and available queuing locations are depicted on Sheet No. 7, "Proposed Vehicle Circulation Plan" of the Engineering Drawings.

4.2 TRANSFER STATION BUILDING ADDITION

The Proposed Transfer Station configuration will house the Facility's operational areas, including waste tipping, handling, and processing activities. The following subsections detail design aspects of the structures and equipment proposed to support material processing operations within the Proposed Transfer Station configuration.

4.2.1 Operational Area Building Structure

The proposed TS Building addition will be a pre-engineered steel structure constructed atop a reinforced concrete foundation of suitable strength and of adequate drainage capability. The support for the insulated steel siding and insulated steel roofing of the building will be provided by steel girts and purlins which will in turn be supported by steel frames (columns and beams) spaced on twenty-five foot (25') and thirty foot (30') centers. These frames will produce a clear span between the exterior walls to provide floor space that is not impinged upon by interior columns. The top of the ridge will be approximately at elevation 438.5', and will run from the northwest side of the building to the southeast side. The roof will be constructed with a slope of one-quarter (1/2) vertical to twelve (12) horizontal.

The lower twelve feet (12') of select building walls in the Tipping Floor area will be constructed with concrete to serve as pushwalls. A three and one-half foot (3.5') concrete knee wall will be constructed to divide portions of the Tipping Floor from the Loadout Tunnel, to facilitate trailer loading. Metal wall panels would be installed around the building's exterior, with a band of translucent panels along the upper portion of the walls to provide light inside of the building, as depicted on Sheet No. 11, "Proposed Elevations" and Sheet No. 12, "Proposed Elevations".

Metal panels will be installed as the roofing material for the proposed TS Building addition. The exterior of the TS Building will be fitted with adequately sized roof gutters and downspouts to control runoff from the roof of the building. Downspouts will be connected to the Stormwater Collection System, as described in Section 3.6.2, "Stormwater Management".

Access to the TS Tipping Floor will be provided by eight (8) vehicular door openings which can be utilized for inbound Tipping Vehicles. Tipping Vehicles will typically utilize two (2) vehicular door openings that will be twenty-six foot (26') wide by twenty-seven foot (27) high located on the eastern side of the TS Building. Tipping Vehicles will typically exist the TS Tipping Floor via a proposed twenty-six foot (26') wide by twenty-seven foot (27) high located on the western side of the building addition.

Door openings will be protected by concrete filled pipe bollards at the interior and exterior of each opening, as necessary. Man doors will be located to provide employee access to the TS Building per life safety and building code requirements. These features are depicted on Sheet No. 9, "Proposed General Arrangement Floor Plan."

4.2.2 Loading Area

The southwest side of the TS Building will be equipped with a partial grade separation, back-in Loadout Tunnel to allow a Transfer Trailer to be loaded inside of the TS Building in a dedicated area separate from the Tipping Floor. The Loadout Tunnel will be constructed of concrete. The Transfer Trailer loading position within the Loadout Tunnel will be equipped with a certified Loadout Tunnel Scale to allow Equipment Operators to obtain accurate load and axle weights during loading operations. A digital readout will be mounted above the Loadout Tunnel Scale and will be observable to the Equipment Operators. These readouts will indicate individual Transfer Trailer axle weights (*or groupings of axles*), as well as total vehicle weight.

The Loadout Tunnel Scale will be equipped with removable scale decks and durable load cells that are designed for expedited cleaning of the shallow scale pit, to facilitate the removal of material that may accumulate during loading operations.

Leachate generated in the Loadout Tunnel will drain via sloped concrete floors to catch basins and sumps within the scale pits, for collection by the Leachate Management System, as described in Section 4.2.3, "Leachate Management System".

4.2.2.1 Tipping Floor and Loadout Tunnel

The Tipping Floor within the existing TS Building and proposed TS Building addition will have approximately 17,200 square feet of floor area. The Loadout Tunnel will have dimensions of approximately 88 feet by 16 feet.

The Tipping Floor and Loadout Tunnel floor will be constructed of reinforced concrete, designed to withstand the expected loads from material processing operations. The top of slab for the Tipping Floor will be poured to an approximate nominal elevation between 409.49' to 411.00', with the Loadout Tunnel floor approximately nominal elevation between 407.75' and 408.00' to facilitate efficient material loading operations.

Material handling operations will take place on the reinforced concrete Tipping Floor within the enclosed TS Building to guard against the potential of pollution, spills, or rinse water to contaminate soils or ground water. Drainage of leachate generated during material handling operations within the enclosed TS Building will be managed as described below and as depicted on the Engineering Drawings.

4.2.3 Leachate Management System

To ensure the collection of liquids that may be released during the waste handling and processing operations within the TS Building, the Tipping Floor within the proposed building addition will be constructed to slope inward from the door openings and pitch toward the push wall that divides the Tipping Floor from the Loadout Tunnel. Liquid that is not absorbed by the solid waste will be directed through two (2) push wall openings constructed at the base of the Tipping Floor push wall, flow down sixteen inch (16") wide vertical channels (inset approximately 1.5") in the Loadout Tunnel wall, and be conveyed to two (2) Loadout Tunnel catch basins via double containment piping to a double-walled underground leachate storage tank (HighGuard underground steel storage tank manufactured by Highland Tank, or equal).

Trench drains will be installed along the openings of the two proposed overhead doors on the eastern side of the existing TS building. Liquids collected in these trench drains will be directed via double containment piping to the existing a double-walled underground leachate storage tank.

This design approach to the collection and conveyance of liquids resultant from transfer station operations has a proven track record of optimizing the management of leachate while minimizing the maintenance requirements persistent to other approaches (i.e. floor drains and associated piping in the Tipping Floor area).

The liquid level in the leachate storage tank will be monitored daily by a Facility employee in accordance with the Facility Inspection Plan detailed within the Facility Manual. When each tank nears three-quarter (3/4) capacity, it will be evacuated by the Facility's permitted wastewater hauler. The leachate storage tank will also include a high level alarm system.

The layout of the Leachate Management System is depicted on Sheet No. 9, "Proposed General Arrangement Floor Plan," with details of the System included on Sheet No. 14, "Proposed Leachate Management Details."

4.2.4 Building Fire Protection System

Fire protection for existing TS Building and TS Building addition will be provided by a suspended "dry" sprinkler system that will consist of a ceiling mounted pipe network and sprinkler heads. The water supply for the sprinkler system will be provided via a 65,000 gallon above ground water storage and supply tank.

In addition, fire extinguishers will be located at numerous locations throughout the TS Building and Mechanical and Electrical Room. These fire extinguishers will be suitable for use on Class A, B, and C fires making them effective against fires involving wood, paper, cloth, rubber, plastics, flammable liquids, gases and greases, and for electrical components.

The locations of each fire protection device are shown on the Sheet No. 9, "Proposed General Arrangement Floor Plan".

4.2.5 Building HVAC

The Facility's Ventilation System will provide a minimum of six (6) building volume air changes per hour and serve to maintain negative air pressure within the Building. The existing TS Building and TS Building Addition will be equipped with a ventilation system consisting of exhaust fans and intake louvers, which will be located on the roof and sides of the Facility. The exhaust fans will be equipped with electrostatic filters in order to control the dust generated by the C&D debris. The building's Mechanical and Electrical Room will be heated using electric (or propane) heating units. Supporting calculations can be found in Appendix D of this Report.

4.2.6 Dust and Odor Control System

A high-pressure dust and odor control misting system will be installed within the ceiling structure of the proposed TS Building Addition. This system will include atomizing spray heads, set to discharge a combination of atomized water mixed with an odor neutralizing agent at timed intervals. The atomizing spray heads will be distributed to provide coverage over the Tipping Floor and at each of the exhaust fans. When combined with an odor neutralizing agent, the atomized discharge from the misting system will serve to absorb and/or eliminate odors while successfully mitigating dust emissions that may be generated as a result of the MSW or C&D debris processing operations.

4.2.7 Building Electrical Service

Electric service will be delivered to the Mechanical and Electrical Room where the necessary panel boards and electrical distribution equipment will be located.

Interior operational areas will be illuminated with lighting to provide a minimum sustained illumination level in accordance with local and state building codes. In addition to electrical lighting, a band of translucent panels will be installed along the upper portion of the walls to provide light inside of the building. Exterior operational areas will be equipped with lighting designed to minimize light scatter to the degree possible, and as per applicable codes.

4.3 SCALES

There is one Truck Scale situated at the Facility, as shown on Sheet No. 5, “Existing Site Plan” and Sheet No. 6, Proposed Site Plan. This scale is an existing scale and does not require relocation.

4.3.1 Loadout Scale

The Transfer Trailer loading position within the TS will be equipped with a certified Loadout Scale to allow Equipment Operators to obtain more accurate load weights during loading operations. Four (4) digital readouts will be mounted above the Loadout Scale and be observable to the Equipment Operators. These readouts will indicate individual Transfer Trailer axle weights (or groupings of axles), as well as total vehicle weight.

The Loadout Scale will be similar to the model presented in Appendix E, with removable scale decks and durable load cells that are designed for expedited cleaning of the shallow scale pit, to facilitate the removal of material that may accumulate during loading operations.

Leachate and rinse water generated in the Loadout Tunnel will drain via sloped concrete floors into sumps within the scale pits, for collection by the Leachate Management System, as described in Section 4.2.3, “Leachate Management System”.

The location and orientation of the Loadout Scale and Leachate Management System is depicted on Sheet No. 9, “Proposed General Arrangement Floor Plan,” with details of the scale pit sump and pipe included on Sheet No. 14, “Proposed Leachate Management Details.”

4.4 STORMWATER

The proposed modifications will result in the disturbance of less than 1 acre of land and will not result in an increase in impervious surface area since the area where the addition is to be constructed is currently paved. As such, no changes to the current stormwater collection system is required. Stormwater discharges from the site are currently managed in accordance with the site’s existing SPDES Multi-Sector General Permit (Permit I.D. No. NYR00F289). Required monitoring records are maintained at the Facility and filed in accordance with the MSGP.

4.5 FIRE PROTECTION SYSTEM

Fire protection for the TS Building will be provided by a suspended “dry” sprinkler system that will consist of a ceiling mounted pipe network and sprinkler heads. The water supply for the sprinkler system will be provided via a 65,000 gallon above ground water storage and supply tank.

In addition, fire extinguishers will be located at numerous locations throughout the TS Building and Electric Room. These fire extinguishers will be suitable for use on Class A, B, and C fires making them effective against fires involving wood, paper, cloth, rubber, plastics, flammable liquids, gases and greases, and for electrical components.

The locations of each fire protection device are shown on the Sheet No. 9, “Proposed General Arrangement Floor Plan”.

5.0 NOISE EVALUATION

Cornerstone performed a noise assessment for the Facility to evaluate the potential noise impacts the facility might have on the surrounding area in order to satisfy Special Condition No. 15 of the Facility's SWF Permit. Cornerstone staff recorded existing sound measurements produced by ambient noise levels on-site and in the vicinity of the site. The Facility is currently in use and is located on Hartley Road in the Town of Goshen, Orange County, New York. Measurements were taken from one location on-site and two locations along the property boundary along Hartley Road to evaluate sound levels at the point of generation at the Facility as well as at the property lines.

The goals of any project should include minimal increases in sound pressure levels above ambient levels at a chosen point relative to the receptor. Increases in the ambient sound levels from 0-3 dBA generally have no appreciable effect on receptors. Increases from 3-6 dBA may have the potential for adverse noise impacts, but typically only where the most sensitive receptors are present. Sound level increase of 6 dBA or more may require a closer analysis of impact potential depending on the existing sound levels and the character of the surrounding land uses and receptors.

5.1 SITE LOCATION

The Transfer Station is located at 95 Hartley Road, in the Town of Goshen, Orange County, New York, on a 3.0 acre parcel of land. The Facility is located approximately 1,250 feet north of the intersection of New York State Route 17M and Hartley Road. Access to the Facility is primarily from Route 17M.

According to the zoning criteria for the Town of Goshen, the Facility property is located in an Industrial District, as is virtually all of the land west/northwest of Hartley Road between Route 17M and Echo Lake Road. The property on the east side of Hartley Road is zoned for Commercial/Office Mixed-Use. The operation of the Facility is a non-conforming use, as solid waste management facilities are prohibited uses in all districts within the Town of Goshen. The site is bounded to the south and west by the closed Al Turi Landfill. The landfill gas to energy plant is located immediately adjacent to the west side of the Facility. The land to the north is the Amy's Kitchen facility, currently being constructed. To the east, across Hartley Road, - are two container storage yards and HiG Fabrications, a metals fabrication facility.

The nearest residential land use to the Facility is a single-family home and old farm located approximately 1,500 feet to the north on Hartley Road. No other residential properties are located within 2,400 feet of the Facility. Traffic sounds from Route 17M to the south and Route 17, over 1 mile to the north, were noted during the survey. The landfill gas to energy plant adjacent to the Facility is no longer operating.

The 6 NYCRR Part 360 sound pressure level (SPL) limits are provided as follows.

Character of Community within a 1-mile radius of Facility	Leq Energy Equivalent Sound Levels	
	7 AM - 10 PM	10 PM - 7AM
Rural	57 dBA	47 dBA
Suburban	62 dBA	52 dBA
Urban	67 dBA	57 dBA

Considering the existing land use in the vicinity of the Facility, the zoning designation for much of the area, and the location within the Town of Goshen, the character of the area is considered to be suburban in nature.

5.2 DESCRIPTION OF SOUND

Sound is any pressure variation (in air, water, or other medium) that the human ear can detect. The number of pressure variations per second is known as the frequency of the sound and is measured in cycles per second, or Hertz (Hz). Typical human hearing can detect sounds between 20 Hz to 20,000 Hz (20 kHz). The amplitude of a sound wave is equivalent to the sound pressure and therefore, the loudness of a sound increases as the pressure increases.

When conducting a noise study, the ambient noise levels, existing noise sources, and sound receptors in proximity to an activity are important factors to consider. Additionally, the topography, vegetation and the relative location of both the sound source and the receptors must be considered when assessing noise impacts. The expression of overall sound levels, as it relates to the listener, is a single value of sound over a period of time that provides an indicated average of the sound in an area (Leq).

The environmental effects of sound and human perceptions of sound can be described in terms of four (4) characteristics:

1. Sound Pressure Level (SPL) may also be designated by the symbol L_p or perceived loudness and is expressed in decibels (dB) or A-weighted decibel scale (dBA), which is weighted towards those portions of the frequency spectrum, between 20 and 20,000 Hz, to which the human ear is most sensitive. Both SPL and dBA measure sound pressure in the atmosphere.
2. Frequency (perceived as pitch) is the rate at which a sound source vibrates or makes the air vibrate.
3. Duration may be the recurring fluctuation in sound pressure or tone at an interval; sharp or startling noise at recurring interval; the temporal nature (continuous vs. intermittent) of sound.
4. Pure tone, which is comprised of a single frequency. Pure tones are relatively rare in nature but, if they do occur, they can be extremely annoying.

5.3 DESCRIPTION OF NOISE

Most sounds are mixtures of frequencies and amplitudes. The mixture of frequencies and amplitudes contributes to a particular sound having a characteristic “signature” and being clearly distinguishable from other sounds. Sounds that are considered annoying and unwanted are termed “noise.”

5.4 DECIBEL EQUIVALENCY

Sound measurement gives a clear indication of when a sound may be heard by the human ear. As such, it is the primary diagnostic tool used in evaluating requirements for acceptable community noise levels. Sound pressure levels, perceivable by the human ear fall within a very large range, which is difficult to manage due to the large numbers involved. The decibel scale simplifies this condition by compressing the million to one audible range into a 140 dB range. The decibel scale uses the hearing threshold of 20 micro pascals (a unit of pressure) as its starting point or reference pressure. This is defined as 0 dB. Each time the sound pressure in pascals is multiplied by 10, 20 dB are added to the decibel level.

Human hearing starts at 0 dBA (with 10 dBA being just audible) and goes up to 150 dBA, although at 130 dBA noise is considered painfully loud and speech is severely limited.

5.5 ATTENUATION

The intensity of a sound wave diminishes (attenuates) as it gets further from the source. This attenuation is due to a combination of factors: distance-being the length of path of transmission and the most important factor; absorption by surfaces such as vegetation, buildings, earth formations, etc.; atmospheric conditions such as fog, rain and snow; and the nature of the ground over which the transmission occurs.

The intensity of an unobstructed sound wave is reduced by 6 decibels each time the distance from the source is doubled, provided the source is not linear in nature. Therefore, a sound level of 70 dB at 50 feet would have a sound level of approximately 64 dB at 100 feet. At 200 feet from the same source, the sound would be perceived at a level of approximately 58 dB. Decibel level attenuation from linear sources, such as continuous flowing highway traffic, drops by about three decibels each time the distance from the source is doubled.

5.6 NOISE LEVELS

Sound pressure measurements obtained following the opening of the Transfer Station were typical of normal operating conditions. The activities occurring at the Facility during the survey included trucks and cars entering and leaving the Transfer Station, trucks unloading waste onto the Transfer Station tipping floor, and solid waste being transferred into transfer trailers using both a loader and an excavator.

Noise levels were recorded at 10-minute intervals over a 6 hour period on Wednesday, February 8, 2023. To obtain ambient sound levels SPL measurements were made between 5:15 AM and 6:59 AM (before the opening of the site). Sound levels were measured from the 3 monitoring locations included in the study during this time period, although some activity began after 5:00 AM at the Facility. Three addition SPL measurement sessions were obtained over 10-minute intervals at each of the monitoring locations between 7:00 AM and 10:00 AM during which the operations at the facility were underway.

Test Location	Distance from Site Boundary
1. Northeast corner of Transfer Station property along Hartley Road	At site boundary
2. Entrance to Facility	At site boundary
3. Vehicle maneuvering area	90 feet north of Transfer Station Building

The SPL measurements were obtained by Cornerstone using a Type 1 Digital Sound Level Meter manufactured by Quest Technologies (model SoundPro SE/DL). The average sound level at Location 1 during one of the monitoring periods (60.9 dBA) was the only offsite location with a SPL lower than the NYSDEC limit for suburban locations having residential uses. As all land uses in the area surrounding this Facility is industrial, the residential limits are not applicable. This location is at the property line near the entrance to the Facility and the SPLs recorded at this location were generally related to trucks entering and leaving the Facility as well as other traffic on Hartley Road. Ambient noise levels in industrial or commercial areas may exceed 65 dB with SPLs up to 79 dB (EPA 550/9-79-100, November 1979). Given the industrial use of the area and the SPLs identified, the Facility has no negative impact on the noise levels in the area.

The readings obtained at onsite Location 3 were elevated, up to 80.4 dBA, due to the close proximity to the operations of the Transfer Station. If these sound levels are attenuated, the measured SPL of 80.4 dBA at Location 3 would result in a SPL of approximately 50.9 dBA at nearest residence along Hartley Road, using only distance for sound attenuation which is less than the suburban limit for residential areas. As such, the residence on Hartley Road to the north of the Transfer Station is not impacted by noise generated from the Transfer Station operations.

In conclusion, based on the results of this noise assessment and the land use in the area, the Facility does not have any negative sound impacts on adjacent properties given the sound pressure levels present, the background noise

levels generated by the roadways in the area, and the land uses adjacent to the Transfer Station. Additionally, due to the distance to the nearest residential land use and the background noise conditions associated with traffic and road noise from Route 17 and 17M, sound levels generated at the Facility have no impact on residential land uses in the area.

6.0 OPERATING PLAN

6.1 HOURS OF OPERATION

The NYSDEC permits the Facility to receive waste during the following periods:

- Monday through Friday: 7:00 A.M. to 3:30 P.M.
- Saturday: 7:00 A.M. to 12:00 P.M. (Noon)

The NYSDEC permits the Facility to process waste during the following periods:

- Monday through Friday: 7:00 A.M. to 6:00 P.M.
- Saturday: 7:00 A.M. to 12:00 P.M. (Noon)

The Facility may process waste from 7:00 A.M. to 7:00 P.M. only on the two (2) operating days immediately after Memorial Day, Independence Day, and Labor Day.

All receipt, delivery, or other operations are prohibited on all Sundays.

The Facility may not operate on the following New York State Holidays: New Year's Day, Memorial Day, Independence Day (4th of July), Labor Day, Thanksgiving, and Christmas, unless otherwise authorized by the NYSDEC.

Fully loaded trailers may be picked up at the Facility; for shipment off-site before and after the operational hours listed above, provided no other solid waste handling activity takes place at the Facility and that a log of such activities is maintained and submitted with the annual report. The trailers must be weighed, and this tonnage must be included in the daily tonnage limits and recordkeeping requirements for the Facility.

Traffic generated by the handling of inbound empty Transfer Trailers or Rail Containers, the pickup of fully or partially loaded Transfer Trailers, and the movement of support vehicles for maintenance or repair on facilities and equipment will be acceptable outside of the authorized hours of operation. Any other operations (including trailer loading) outside of the hours of operation must first receive contingency approval from the NYSDEC Regional Materials Management Supervisor (RMMS).

6.2 SERVICE AREA

The Facility only accepts wastes as described within this Report and as authorized by the NYSDEC. The Facility accepts most of its waste materials from the Orange County, New York. It remains a priority of the Facility to continue to reduce solid waste volumes scheduled for landfill disposal through methods of recycling and material recovery.

The service area is depicted on Sheet No. 1, "Regional Map".

6.3 MATERIALS HANDLED

The material streams currently permitted at the Facility include MSW and C&D debris and Source-Separated Recyclables (SSR). It is a priority of IWS to continue to reduce solid waste volumes scheduled for landfill disposal through methods of recycling. The Facility is permitted to accept MSW and C&D debris up to a maximum combined rate of 600 TPD. With the construction of the addition to the TS Building and the elimination of the currently permitted 70 TPD of Recyclables, the Facility is requesting a permit modification so the Facility can be permitted to accept up to 670 TPD MSW and C&D debris, resulting in no change to the total maximum of 670 TPD of waste material.

Wastes that will not be accepted at the Facility include the following:

- Radioactive Materials;
- Suspected Hazardous Waste;
- Liquid Waste;
- Biosolids;
- Chemical or Explosive Wastes;
- Industrial Wastes, as defined in 6 NYCRR Part 360 and/or Part 371;
- Infectious or Medical Wastes, as defined in Public Health Law 1389-aa and Environmental Conservation Law Article 27 Section 1501;
- Suspected Asbestos Containing Waste;
- Electrical fixtures containing hazardous liquids such as fluorescent light ballasts or transformers;
- Fluorescent lights;
- Drums, fuel tanks, or containers greater than 10 gallons in size, and any containers having more than 1 inch of residue remaining on the bottom;
- Source-separated food scraps; or

Fill material, or similar material from a site being remediated pursuant to a program administered by the NYSDEC or EPA unless accompanied by written approval from the NYSDEC or EPA.

6.4 START-UP AND SCHEDULED SHUTDOWN OPERATIONS

During start-up, the Facility Supervisor or designee prepares for incoming Tipping Vehicles, completes the Radiation Detection System Daily Background Reading Log, walks the site and conducts the daily safety briefing. The Equipment Operator then starts up the equipment.

In the event of a scheduled shutdown, the Facility Supervisor would close the Facility to inbound Tipping Vehicles and the Equipment Operator would turn off the equipment.

6.5 VEHICLE CIRCULATION

The vehicular traffic flow to and from the Facility, as well as on site, has been designed to maximize efficiency of movement, while minimizing impacts on surrounding roadways.

Vehicular traffic projections were developed based on historical tipping records and the proposed permitted capacity of 670 TPD. Expected traffic volume calculations are further explained within Section 4.1, "Facility Design Capacity".

Tipping Vehicles and Transfer Trailers/Rail Containers enter and exit the Facility via lawful truck routes as described below.

6.5.1 Traffic Routes to and From the Facility

The Facility is permitted to accept up to 600 TPD of a combination of MSW and C&D debris and a up to 70 TPD of Recyclables. The requested maximum waste acceptance volume of 670 TPD of MSW and C&D debris will result in no increase on vehicle trips to and from the Facility. Based upon current operations, on average there is approximately 107 inbound tipping vehicles and approximately 27 outbound transfer trailers per day. These values extrapolated to 670 TPD equate to approximately 122 inbound tipping vehicles and approximately 36 outbound transfer trailers per day. Since there is no change to throughput or material type as part of this permit modification, there will be no change in the number of inbound and outbound vehicles.

Sheet No. 2, "Vicinity Map" depicts the routes used to access the Facility that is situated on Hartley Road, less than 2,300 feet north of NYS Route 17M. Major roadways used by tipping vehicles and transfer trailers include NYS Route 17M, and NYS Route 17 to the east and Interstate Route 84 to the west.

6.5.2 Vehicle Staging

Truck queuing areas for the Facility will be designated between the entrance to the Facility that is situated off of Hartley Road and the Facility scale. This queuing area provides ample space for queuing inbound vehicles and will also allow unobstructed traffic movement on Hartley Road. Facility personnel will utilize portable hand-held radios to advise the Facility Manager or designee of the availability of queuing areas in order to maintain smooth operating conditions at the Facility. Figure 4, "Queuing – Operational Site Plan" shows the required pre-scale queuing for 6 inbound tipping vehicles. As shown, there is ample space along the on-site access road for 6 additional tipping vehicles.

6.5.3 On-Site Traffic Patterns

Inbound Tipping Vehicles and empty Transfer Trailers/Rail Containers will enter the Facility through the existing Facility entrance along Hartley Road.

Inbound Tipping Vehicles travel west to the existing Truck Scale. After processing at the Truck Scale area is completed, these Tipping Vehicles will traverse from the Truck Scale to the TS Building. When Tipping Vehicles have reached the vicinity of the TS, site personnel will direct the Tipping Vehicles to the appropriate area of the TS Building. Vehicles that can tip their load onto the floor will be directed to one of the Tipping Floor entry doors and a location within the TS Building where the unloading of materials will be performed.

After unloading on the concrete Tipping Floor, the Tipping Vehicles will exit the TS Building via the roll-up door, return to the Truck Scale, finalize the transaction with the Weighmaster, and exit the Facility Hartley Road. IWS vehicles and tipping vehicles with tare weights on record with the TS Facility do not require a second scaling.

Empty Transfer Trailers and Rail Containers will bypass the Truck Scale area, and head directly to the TS Building or to the empty Trailer storage area at the western side of the Facility. Transfer Trailers/Rail Containers will be backed into the Loadout Tunnel from the west side and stage atop the Loadout Scale to obtain a tare weight and prior to the initiation of waste transfer operations. Once fully loaded, the Transfer Trailer and Rail Containers will be tarped before exiting the Loadout Tunnel. The tarped Transfer Trailers/Rail Containers will exit via Hartley Road toward Route 17M or be stored on the Trailer Storage Pad on the west side of the TS Building.

The frequency of truck traffic to the TS has been evaluated within the Throughput Capacity Calculations and Truck Queuing Model, both included within Appendix C of the Engineering Report, which demonstrate more than adequate truck traffic capacity in the proposed Facility layout.

The proposed flow of materials and traffic within the Facility is depicted on Sheet No. 7, "Proposed Vehicle Circulation Plan."

Based upon current operations, extrapolating the current weekday and Saturday vehicle count to 670 TPD, there would be approximately 127 inbound tipping vehicles and approximately 36 outbound Transfer Trailers/Rail Containers per day based upon current operations. Appendix C of the Engineering Report contains a detailed queuing summary.

6.6 SITE OPERATIONS

Inbound Tipping Vehicles and empty Transfer Trailers/Rail Containers will enter the Facility through the existing entrance along Hartley. Inbound Tipping Vehicles then travel to the Truck Scale. If necessary, while the vehicles are on the Truck Scale, vehicle drivers may exit vehicles to initiate the transaction process with the Scale Master.

After processing at the Truck Scale area is completed, the Tipping Vehicles will traverse from the Truck Scale to the TS Building. When Tipping Vehicles have reached the vicinity of the TS Building, site personnel will direct the Tipping Vehicles into the TS Building where the unloading of materials will be performed.

The Facility Manager or designee will be in charge of the operations at the Facility including traffic control and material handling.

Empty Transfer Trailers and Rail Containers will bypass the Truck Scale area north of the Maintenance Building, and around the south side of the Maintenance Building. In this area, empty inbound Transfer Trailers and Rail Containers will typically be maneuvered backing into the Loadout Tunnel on the south side of the TS Building. Loaded and empty Transfer Trailers/Rail Containers that are dropped off and stored on the Trailer Pad will be driven through waste loading operations and stowed utilizing a dedicated Trailer Jockey. At times during operations, it may be operationally convenient for an empty inbound Transfer Trailer to not stow the loaded Transfer Trailers or Rail Containers, and instead head toward the TS Building Loadout Tunnel in preparation of direct live-loading of waste.

Once loading is completed, the Transfer Trailer or Rail Container will be tarped within the Loadout Tunnel. The Loadout Tunnel tarping area will be equipped with a tether system to enable personnel to safely “tie-off” before executing tarping actions. Loaded Transfer Trailers and Rail Containers will be covered and secured prior to leaving the immediate vicinity of the TS Building.

Typically, a Trailer Jockey will pull a loaded Transfer Trailer or Rail Container out of the Loadout Tunnel’s overhead roll-up door, maneuver immediately south of the Maintenance Building and around the north side of the Building before backing onto the leachate collection equipped Trailer Pad. An over the road Tractor will engage loaded Transfer Trailers and Rail Containers that are stored on the Trailer Pad and proceed along the north side of the Facility and exit via Hartley Road. Live loaded Transfer Trailers proceed out of the Loadout Tunnel, obtain shipping documentation, and exit the Facility via Hartley Road.

Waste materials leaving the Facility will be accompanied by a tracking document, acceptable to the NYSDEC, indicating at a minimum, where the material was generated, the hauler, and the destination. This document will be signed by the hauler upon delivery to the destination. The owner or operator of the receiving facility will also sign the document and be instructed to return the form to the Operator within two (2) weeks. Should the material be transported to another solid waste facility for further processing, and subsequently transferred again, an additional tracking document will be required to document that the material was ultimately treated or disposed of at an authorized solid waste facility. A record of all transactions will be maintained on site for a period not less than seven (7) years from the date of recording.

6.6.1 Waste Tipping Operations

Inbound Tipping Vehicles drive onto the Truck Scale where the gross vehicle weight will be obtained. If the Scale Master determines, upon inquiry of the driver, that the load contains unauthorized waste, the driver will be advised accordingly, and Facility personnel will be notified via the intercom system or via a hand-held radio not to permit the Tipping Vehicle to enter the tipping area. This is the first step in the waste screening/inspection program.

If the load contains acceptable material, and the driver has obtained a signed truck weight ticket from the Scale Master, the Tipping Vehicles will then pull forward off the scale and will be directed by the Facility Manager or designee to one of the tipping bay areas.

Based on market and disposal conditions, the Facility may manage MSW and C&D debris separately, or MSW and C&D debris may be commingled and managed as a single waste type. If and when C&D debris is separately managed, a portion of the Tipping Floor will be designated for C&D debris use. Tipping Vehicles will be directed to the appropriate area of the Tipping Floor if the materials are to be handled separately. Operational flexibility will be provided as any of these unloading positions may be used for any material type and will be dependent on the

material types being delivered, the storage of material on the Tipping Floor, the availability of Transfer Trailers or Rail Containers, and other operational considerations.

An Equipment Operator or designee within the Tipping Floor area will also serve to direct inbound Tipping Vehicles using hand signals. As instructed by the Scale Master and the Tipping Floor personnel, drivers of the Tipping Vehicles will be directed to proceed only after making eye contact with a Facility employee and being directed/signaled by that Facility employee.

After the Tipping Vehicle enters the TS Building, and prior to unloading on the Tipping Floor, Tipping Floor personnel and/or the Equipment Operator or designee will visually inspect the Tipping Vehicle and look for unauthorized materials, or evidence thereof, in the presence of the driver, prior to the tipping. If unauthorized material is found in the load prior to tipping, IWS reserves the right to reject the entire load and not accept it for processing. Immediately upon tipping, Tipping Floor personnel and/or Equipment Operator or designee will visually inspect the load for unauthorized materials. If unauthorized materials are discovered after unloading, IWS will immediately secure such waste and the handling of the materials in accordance with the procedures outlined in Section 7.0, "Waste Control Plan." Occasional items of identified unauthorized materials will be removed from the Tipping Floor by hand picking after the waste is unloaded.

After the waste material is tipped, it is loaded into a Transfer Trailer or Rail Container, or it is temporarily stockpiled in the designated storage areas on the Tipping Floor. After waste tipping, Tipping Vehicles will exit the TS Building. If a tare weight is on record for the Tipping Vehicle, it may by-pass the Truck Scale and exit the Facility. If a tare weight is not on-file for the Tipping Vehicle, the outbound Tipping Vehicle will maneuver to the Truck Scale to obtain a tare weight to complete the transaction. The Facility maintains a database of vehicle tare weights of Tipping Vehicles that frequent the Facility which eliminates the need for the vehicle to be weighed after tipping to complete a transaction.

The total maximum processing time for inbound Tipping Vehicles to unload waste, as described above, is typically performed in approximately ten (10) minutes.

6.6.2 Transfer Operations

Transfer Trailers/Rail Containers will be backed into the Loadout Tunnel and positioned upon the Loadout Tunnel Scale. Digital readouts mounted above the Loadout Tunnel Scale and observable to the Equipment Operators or designee will allow the Transfer Trailers to be properly loaded to maximize each outgoing load. These readouts will indicate individual Transfer Trailer axle weights (or groupings of axles), as well as total vehicle weight.

Mobile equipment, such as a Wheel Loader and/or Mobile Excavator, operating on the Tipping Floor will be used for loading the Transfer Trailer or Rail Container. Waste material will be systematically placed, compacted, leveled, and groomed within the Transfer Trailer or Rail Container. When the Transfer Trailer or Rail Container is loaded to the desired weight, the gross vehicle weight will be transmitted to the Scale Master in the Truck Scale along with the previously obtained tare weight. The Transfer Trailer or Rail Container driver will tarp and cover the top of the Transfer Trailer/Rail Container, prior to leaving the TS Building using the tarping station within the Transfer Tunnel. Prior to deploying the tarp, the driver or designated employee will connect to the tether system to safely "tie-off" before executing Transfer Trailer tarping actions. The tarp will be secured to prevent blowing litter at the Facility. When the tarping is completed, the loaded Transfer Trailer will either be stored on the Trailer Pad for future shipment from the facility or will be driven from the site.

Table 2 in the Facility Manual lists the NYSDEC authorized waste destination facilities currently owned and used by IWS. (Refer to Appendix E of the Facility Manual for the disposal facility permit, a table summarizing the name, address, contact person, type of authorization, expiration date of authorization, and the amount of each type of material that the Facility can send to each disposal facility). Due to ever changing market conditions beyond IWS

control, available disposal facilities may change. IWS will request approval from the NYSDEC for additional facility disposal facilities prior to use.

6.6.3 Recycling Operations

The TS may recover recyclable materials found within the MSW and/or C&D debris once the material has been unloaded on the Tipping Floor. These materials, including metals and corrugated cardboard, will be temporarily segregated on the Tipping Floor by Equipment Operators or Laborers/Sorters before being placed into roll-off containers for transport to an approved materials recovery provider, as listed in Table 2.

6.7 FACILITY PROCESS FLOW DIAGRAMS

The flow of materials through the Facility is depicted in Figure 5, "Facility Process Flow Diagram, Combined MSW and C&D Debris (Part 362-3)". This figure illustrates the receipt and handling of MSW and C&D debris separately. MSW and C&D debris may be handled together.

The average daily amount of MSW and C&D accepted at the Facility is approximately 395 TPD or 1,411 cubic yards based upon an average density of 560 pounds per cubic yard for the combined waste stream. The maximum daily tonnage will not exceed 670 TPD or 2,393 cubic yards. This equates to an approximate average annual tonnage of 123,240 TPY or 440,143 cubic yards and a maximum of 209,040 TPY or approximately 746,571 cubic yards of MSW and C&D.

Figure 6, "Facility Process Flow Diagram, MSW (Part 362-3 and C&D Debris (Part 361-5)". The average daily amount of MSW accepted at the Facility is approximately 348 TPD or 1,160 cubic yards based upon an average density of 600 pounds per cubic yard. The maximum daily tonnage of MSW not exceed 590 TPD or 1,967 cubic yards. This equates to an approximate average annual tonnage of 108,576 TPY or 361,920 cubic yards and a maximum of 184,080 TPY or approximately 613,600 cubic yards of MSW.

The average daily tonnage of C&D accepted at the Facility is approximately 47 TPD or 188 cubic yards based upon an average density of 500 pounds per cubic yard. The maximum daily tonnage will not exceed 80 TPD or 320 cubic yards. This equates to an approximate average annual tonnage of 14,664 TPY or 58,656 cubic yards and a maximum of 24,960 TPY or approximately 99,840 cubic yards of C&D.

6.8 MATERIALS RECOVERY AND DISPOSAL PROVIDERS

IWS has established relationships with markets for the recovered materials from the Facility. These markets, as presented in Table 2 in the Facility Manual, will continue to be used and others may be added as market conditions and availability may change.

The IWS Goshen Facility utilizes the services of several authorized disposal facilities for the MSW and C&D debris leaving the Facility. In accordance with disposal contracts, the ultimate disposal site for waste from the Facility will be an approved facility utilized at the discretion of IWS. Many in state options are available to be used as disposal facilities, as presented in Table 2 in the Facility Manual. IWS may form disposal agreements that utilize any combination of approved facilities, including those listed on this Table.

Recyclable materials recovered from C&D debris in accordance with the SWMF Permit will be transported to a provider listed on Table 2 in the Facility Manual.

Materials will be separated from C&D debris to be recycled or to be reused for a specific use if approved by the NYSDEC. Material that is not recovered will be sent to a permitted landfill or waste-to-energy facility.

Recyclables recovered from the C&D debris will not be stored onsite for more than sixty (60) days unless prior written approval has been granted by the NYSDEC Region 3.

6.9 MATERIAL STORAGE

The proposed TS Building will include approximately 17,206 square feet for Tipping Vehicle unloading, waste transfer/material recovery operations, and temporary material storage. Floor space requirement calculations, as they relate to the ability of the TS Building to store an entire day of capacity under emergency conditions, are discussed below and depicted on Figure 2, "Tipping Floor Emergency Storage Pile Volume."

Approximately 7,430 square feet of Tipping Floor space within the TS Building may be utilized for emergency storage of unprocessed MSW and/or C&D debris. Unconfined storage slopes are calculated to be one (1) horizontal to one (1) vertical. Stacking of waste an average of twelve feet (12') high would equate to a total capacity of 2,415 cubic yards, or 676 tons of MSW and C&D (*applying a density of 560 pounds per cubic yard on the Tipping Floor*). Pile 1 equates to approximately 1,845 cubic yards and Pile 2 equates to approximately 570 cubic yards.

Throughput Capacity Calculations included in Appendix C contains a Collection Vehicle Queuing Analysis, a Tipping Floor Surge Pile Analysis, and Emergency Storage Area Calculations.

Appendix C also presents calculations for the maximum anticipated surge pile resultant from 670 TPD capacity of MSW and C&D would equal six hundred and forty-two (642) cubic yards or approximately one-hundred and eighty (180) tons. Figure 3, "Tipping Floor Operational Surge Pile Volume" demonstrates this projected MSW and C&D surge piles under proposed operating conditions.

6.9.1 Storage Durations

When operating under Part 362-3, MSW and C&D debris received at the TS will be processed and loaded into a Transfer Trailer or Rail Containers by the end of each day and removed from the Facility by the end of the next business day after the container becomes full or within seven (7) calendar days of receipt, whichever comes first. If a Transfer Trailer or Rail Containers is not fully loaded at the end of the day, it will remain in the Loadout Tunnel until the next day. The Tipping Floor shall be cleaned at the end of each operating day.

When operating under both Part 362-3 and Part 361-5, C&D debris, will be processed within 30 days of receipt.

Unauthorized material discovered within the Facility will be removed within seven (7) days of receipt, in accordance with the procedures in Section 7.0, "Waste Control Plan".

6.10 MOBILE EQUIPMENT

In order to process the inbound material streams, the Facility will employ a combination of the following mobile equipment:

- (2) Wheel Loader (Caterpillar 950)
- (1) Excavator (CAT 32)
- (1) Backhoe (Caterpillar 416)
- (3) Yard Tractor (Capacity)
- (1) Yard Tractor (MACK)

Appendix D of the Facility Manual includes equipment specifications typical of the mobile equipment utilized at the Facility.

The above equipment list and associated specifications represent a sample of equipment capable of performing tasks required by the Facility operations. Any or all of the equipment pieces specified in this Report or its appendices may be substituted with equally capable machinery upon approval from the NYSDEC. The necessary equipment will be available at the Facility during hours of operation to prevent curtailment of operations because of equipment failure, except under extraordinary conditions beyond the IWS's control.

In the event of equipment failure, IWS will rent similar equipment to provide immediate backup. IWS will notify the NYSDEC of such situation.

6.10.1 Mobile Equipment Fuel Storage and Dispensing

The Facility has a 500-gallon and a 2,000-gallon aboveground double-walled diesel fuel tanks that are used for fueling the on-site mobile equipment. These tanks are located in the former Recycling Area Building and are both registered with the NYSDEC. These existing fuel tanks will be relocated to an area along the west side of the Maintenance Building following construction of the building addition.

6.11 NUISANCE MITIGATION

Nuisance mitigation is described in Section 4.9 of the accompanying Facility Manual.

6.12 SITE INSPECTION AND MAINTENANCE

Comprehensive Inspection and Maintenance Plans have been developed to ensure that the availability and function of the Facility and equipment are kept in efficient operating condition.

The Facility's Inspection Plan establishes schedules for inspecting various components of the Facility, indicating recommended items to be inspected and procedures for inspections to be performed. The Inspection Plan is accompanied by the IWS Transfer Station Weekly Facility Inspection Log (included in the Tables section of the Facility Manual), to provide a record of scheduled inspections.

The Maintenance Plan for the Facility provide for the preventive maintenance of operational components on a time scheduled basis in accordance with industry best practices and/or equipment manufacturer's recommendations. These maintenance activities will be overseen by the Facility Manager and performed by the Facility's Staff.

The detailed Inspection and Maintenance Plans are included within the accompanying Facility Manual.

7.0 WASTE CONTROL PLAN

A detailed Waste Control Plan is included in Section 5.0 of the accompanying Facility Manual (Manual).

The Waste Control Plan includes the following:

- Random load inspections;
- Procedures to manage unauthorized waste, including suspected hazardous waste, upon discovery;
- Notification procedures to report to the NYSDEC the discovery of unauthorized waste, including suspected hazardous waste; and;
- Training of Facility personnel to recognize unauthorized waste, including likely or suspected hazardous waste.

8.0 STAFFING AND TRAINING PLAN

The Facility's Staffing and Training Plan is presented as Section 6.0 of the accompanying Facility Manual (Manual).

9.0 EMERGENCY RESPONSE PLAN

The Emergency Response Plan is included in Section 9.0 of the accompanying Facility Manual (Manual) and provides emergency operational guidelines to be implemented and followed upon the occurrence of a contingent event.

Situations addressed within the accompanying Emergency Response Plan include:

- Procedures for Contingent Situations;
- Preparedness, Prevention, and Response to Contingent Events;
- Medical Emergencies/First Aid;
- Information for Emergency Services;
- Severe Weather;
- Unauthorized Wastes;
- Unusual Traffic Conditions;
- Reporting and Recordkeeping; and
- Closure.

10.0 REPORTING AND RECORDKEEPING

Reporting and recordkeeping requirements are presented in Section 10.0 of the accompanying Facility Manual, relating specifically to the following:

- Application documents required by 6 NYCRR Subpart 360.19 (k)(1);
- Operating records required by 6 NYCRR Subpart 360.19 (k)(2); and
- Annual reports submitted to the NYSDEC, as per the requirements of 6 NYCRR Part 360.19(k)(3).

11.0 CLOSURE

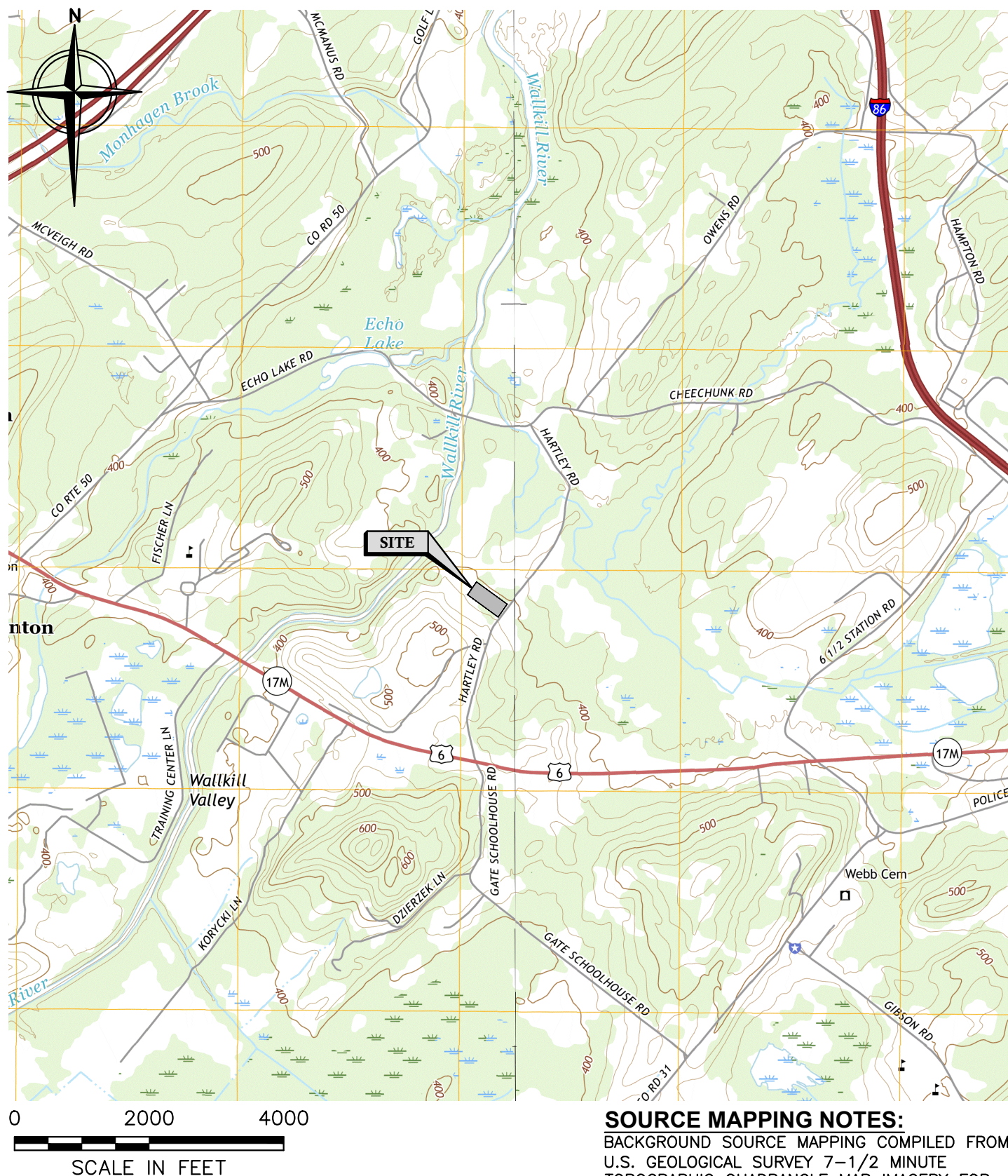
Closure of the facility will be in accordance with the requirements of 6 NYCRR Part 360.21 Closure Requirements. The Facility's Closure Plan and Closure Cost Estimate are presented in further detail as Section 11.0 and Appendix C of the accompanying Facility Manual.

12.0 LIMITATIONS

The work product included in the attached was undertaken in full conformity with generally accepted professional consulting principles and practices and to the fullest extent as allowed by law we expressly disclaim all warranties, express or implied, including warranties of merchantability or fitness for a particular purpose. The work product was completed in full conformity with the contract with our client and this document is solely for the use and reliance of our client and the NYSDEC (unless previously agreed upon that a third party could rely on the work product) and any reliance on this work product by an unapproved outside party is at such party's risk.

The work product herein (including opinions, conclusions, suggestions, etc.) was prepared based on the situations and circumstances as found at the time, location, scope and goal of our performance and thus should be relied upon and used by our client recognizing these considerations and limitations. Cornerstone Engineering and Geology, PLLC shall not be liable for the consequences of any change in environmental standards, practices, or regulations following the completion of our work and there is no warrant to the veracity of information provided by third parties, or the partial utilization of this work product.

FIGURES



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SOURCE MAPPING NOTES:

BACKGROUND SOURCE MAPPING COMPILED FROM U.S. GEOLOGICAL SURVEY 7-1/2 MINUTE TOPOGRAPHIC QUADRANGLE MAP IMAGERY FOR GOSHEN (2016), AND MIDDLETOWN (2016).

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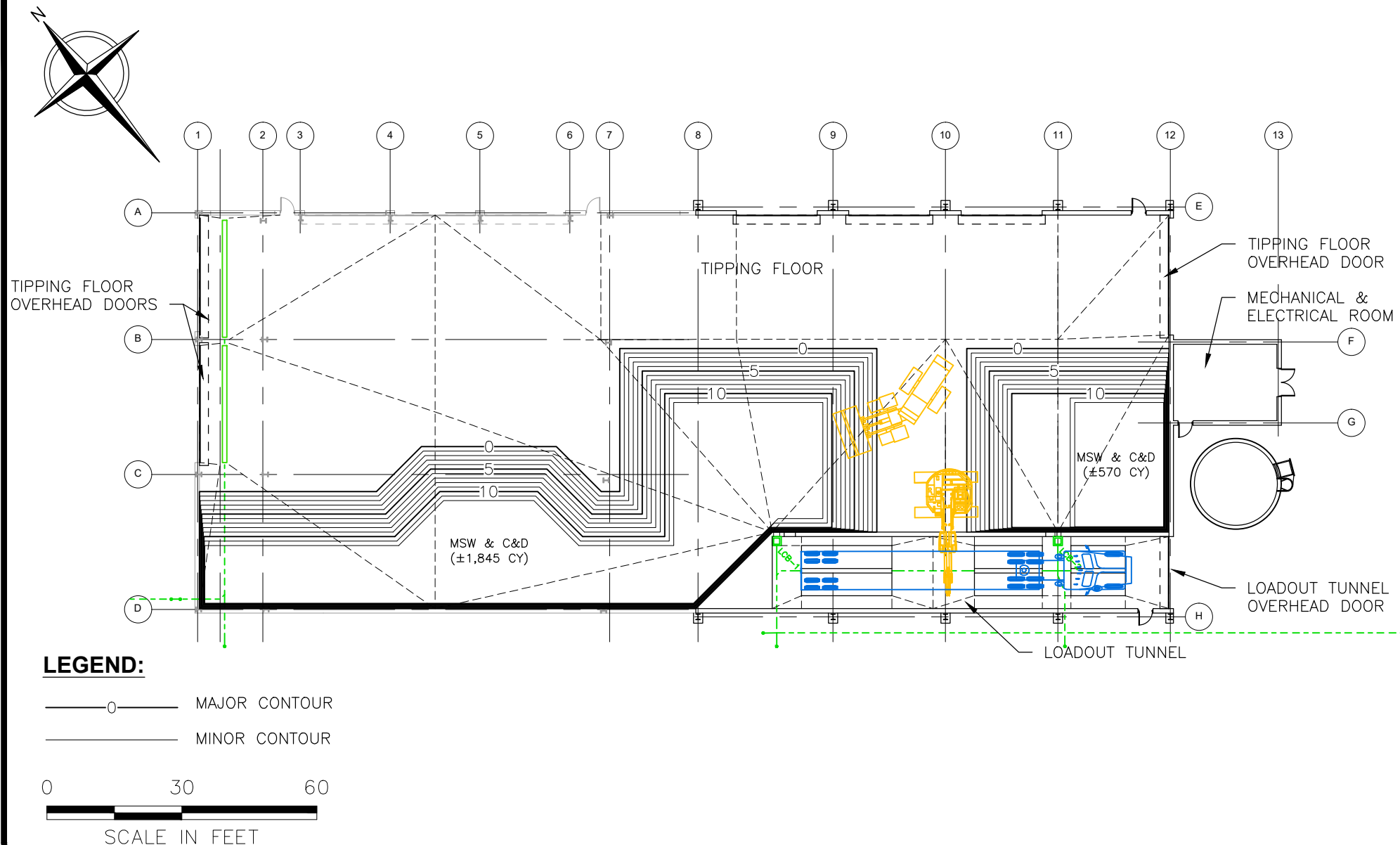
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SITE LOCATION MAP

FIGURE NO.

1

PROJECT NO.
4233429



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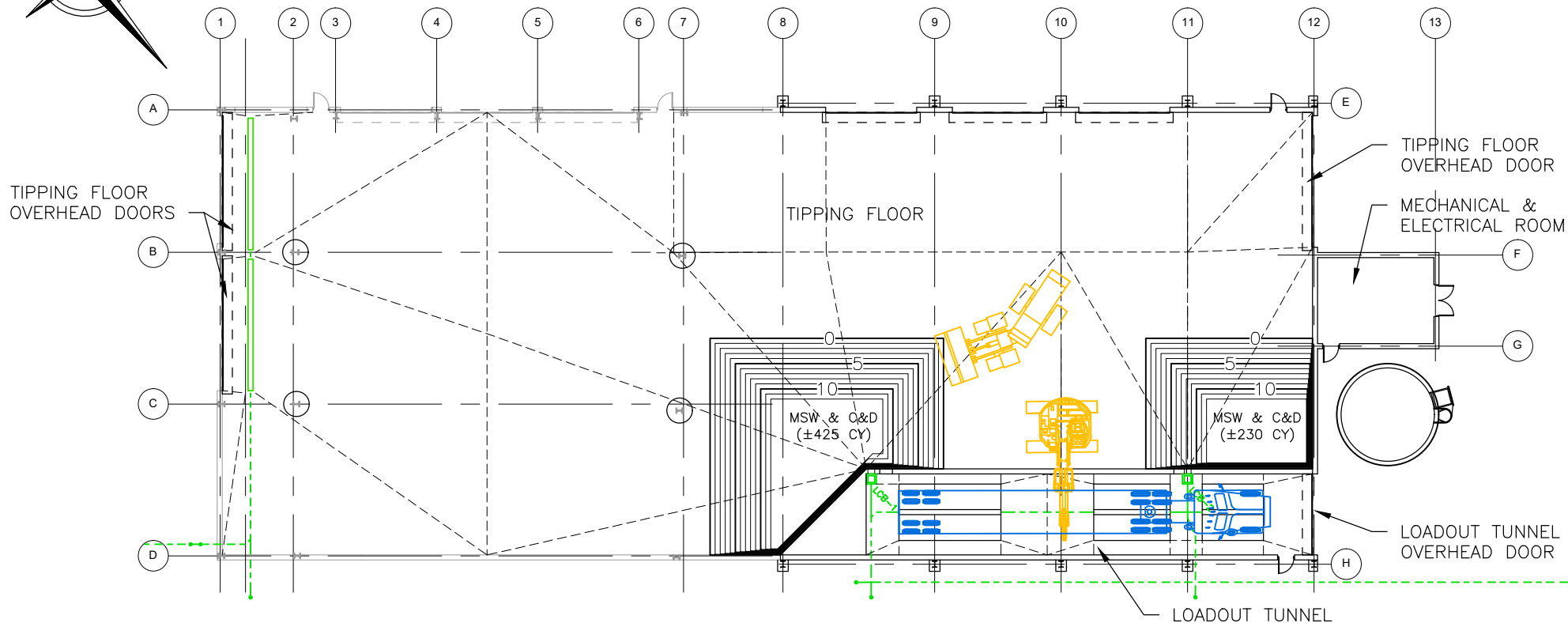
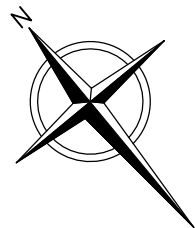
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PROPOSED FACILITY MODIFICATIONS
TIPPING FLOOR EMERGENCY STORAGE PILE VOLUME

FIGURE NO.

2

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LEGEND:

- MAJOR CONTOUR
- MINOR CONTOUR

0 30 60
SCALE IN FEET

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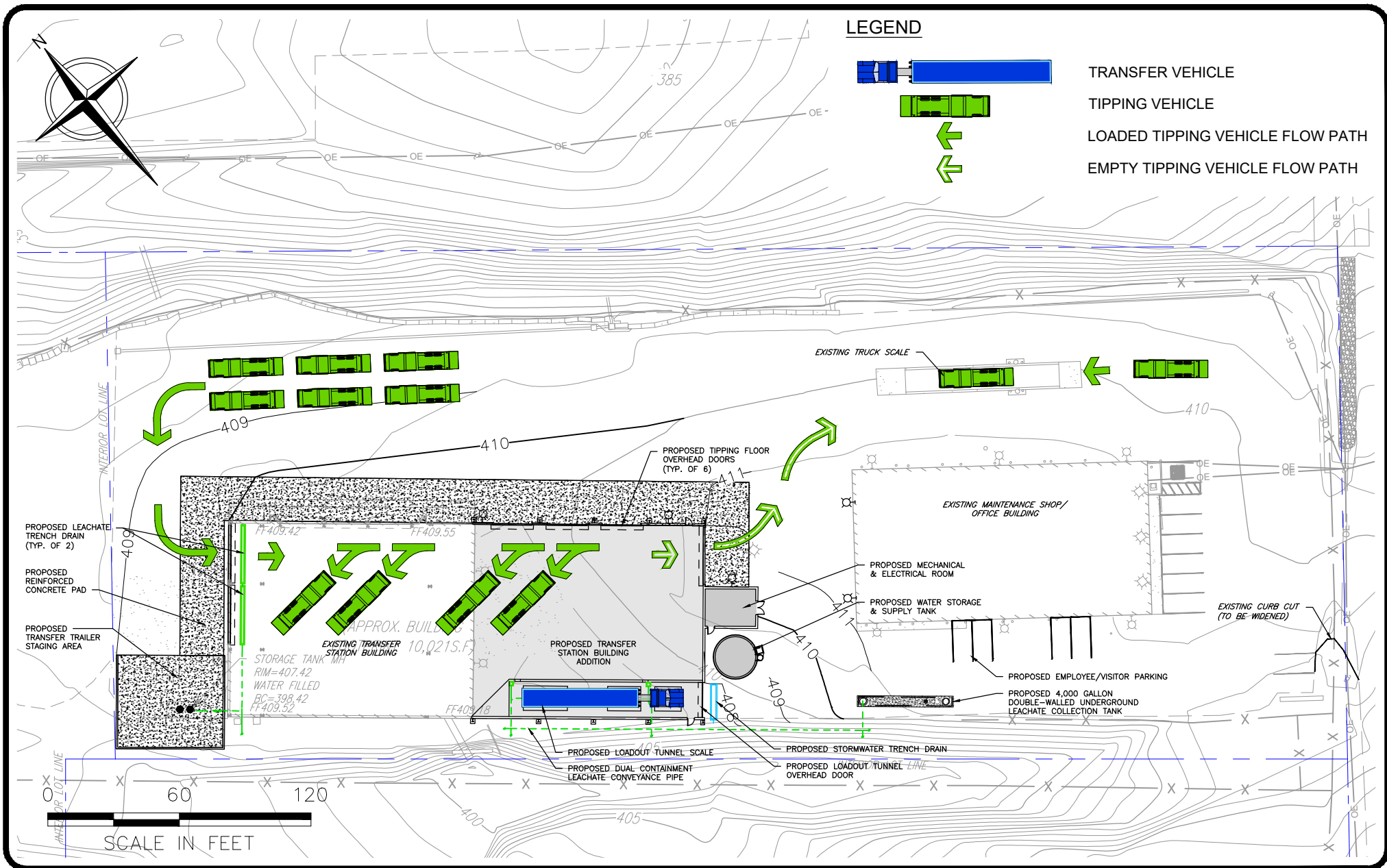
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PROPOSED FACILITY MODIFICATIONS
TIPPING FLOOR OPERATIONAL SURGE PILE VOLUME

FIGURE NO.

3

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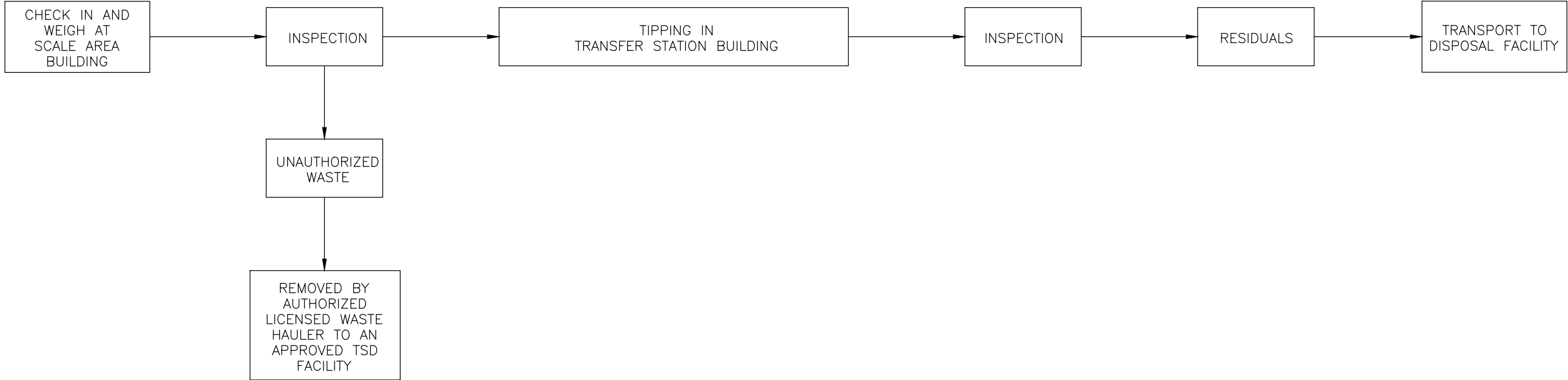
**PROPOSED FACILITY MODIFICATIONS
 QUEUING - OPERATIONAL SITE PLAN**

FIGURE NO.

4

PROJECT NO.
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MSW AND C&D PROCESSING MAXIMUM OF 670 TPD (2,393 CY) AND AVERAGE OF 395 TPD (1,411 CY)



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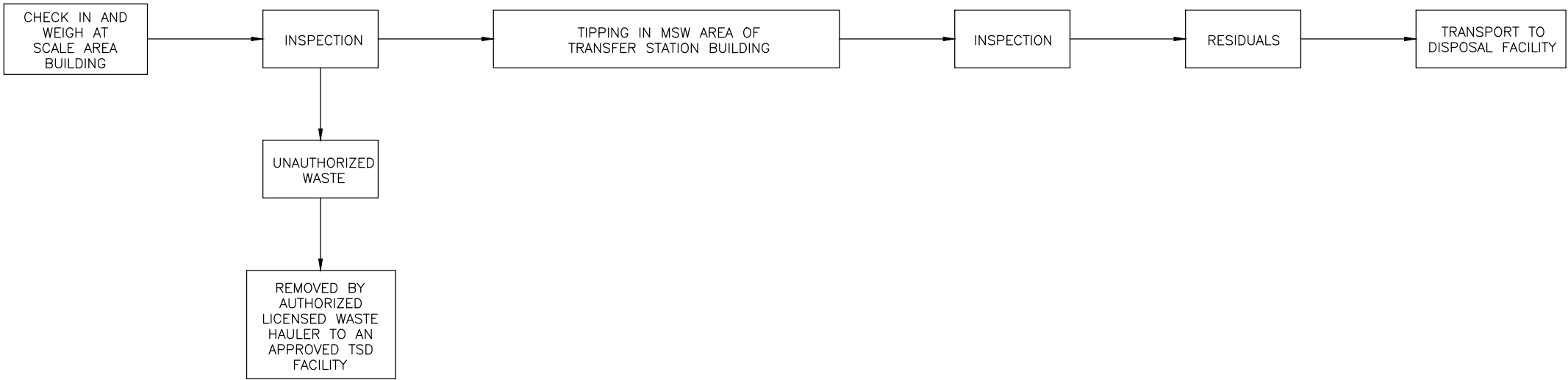
**PROCESS FLOW DIAGRAM
MSW & C&D DEBRIS (PART 362-3)**

FIGURE NO.

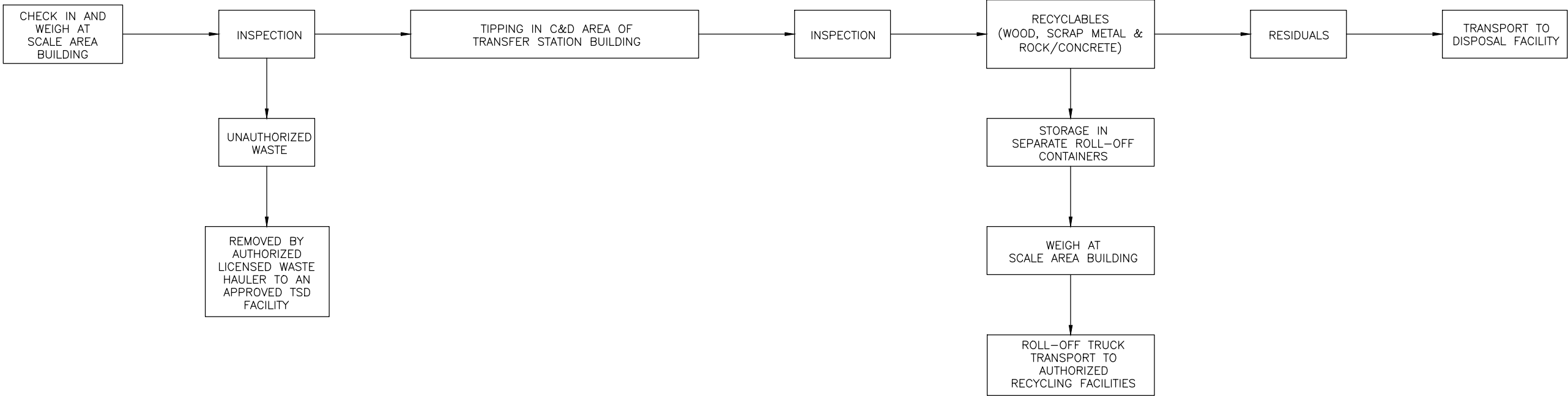
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MSW PROCESSING MAXIMUM OF 590 TPD (1,967 CY) AND AVERAGE OF 348 TPD (1,160CY)



C&D PROCESSING MAXIMUM OF 80 TPD (320 CY) AND AVERAGE OF 47 TPD (180 CY)



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PROCESS FLOW DIAGRAM
MSW (PART 362-3) & C&D DEBRIS (PART 361-5)

FIGURE NO.

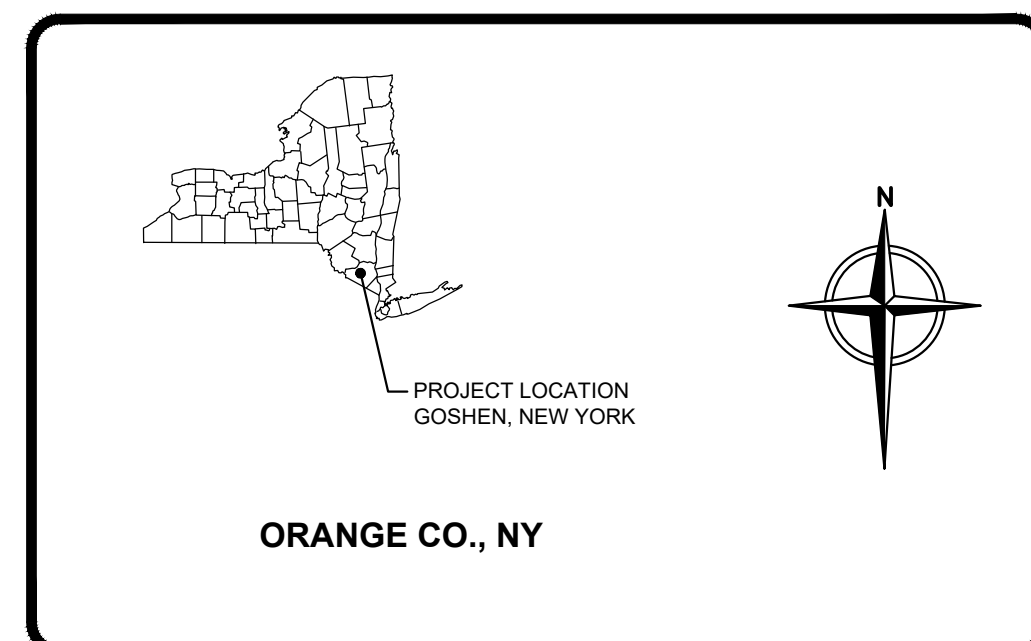
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4223429

DRAWINGS

Fig. 10. PROJECTS van Goyen (423149) - TRANSFER STATION DESIGN_Plot SWADEC SET122428 S-00-COVER SHEET.dwg Layout: COVER User: b.diermestschm Mar 26, 2024 - 5:25pm

MARCH 2024



LOCATION MAPS

INDEX OF DRAWINGS

0	COVER SHEET
1	REGIONAL MAP
2	VICINITY MAP
3	TRUCK ROUTE MAP
4	ZONING & LAND USE MAP
5	EXISTING SITE PLAN
6	PROPOSED SITE PLAN
7	PROPOSED VEHICLE CIRCULATION PLAN
8	PROPOSED EVACUATION PLAN
9	PROPOSED GENERAL ARRANGEMENT FLOOR PLAN
10	PROPOSED OPERATIONS FLOOR PLAN
11	PROPOSED BUILDING ELEVATIONS
12	PROPOSED BUILDING ELEVATIONS
13	PROPOSED SITE DETAILS
14	PROPOSED LEACHATE MANAGEMENT DETAILS
15	PROPOSED WATER SUPPLY TANK DETAILS
16	PROPOSED EROSION & SEDIMENT CONTROL DETAILS
17	PROPOSED MISCELLANEOUS DETAILS

PREPARED BY:



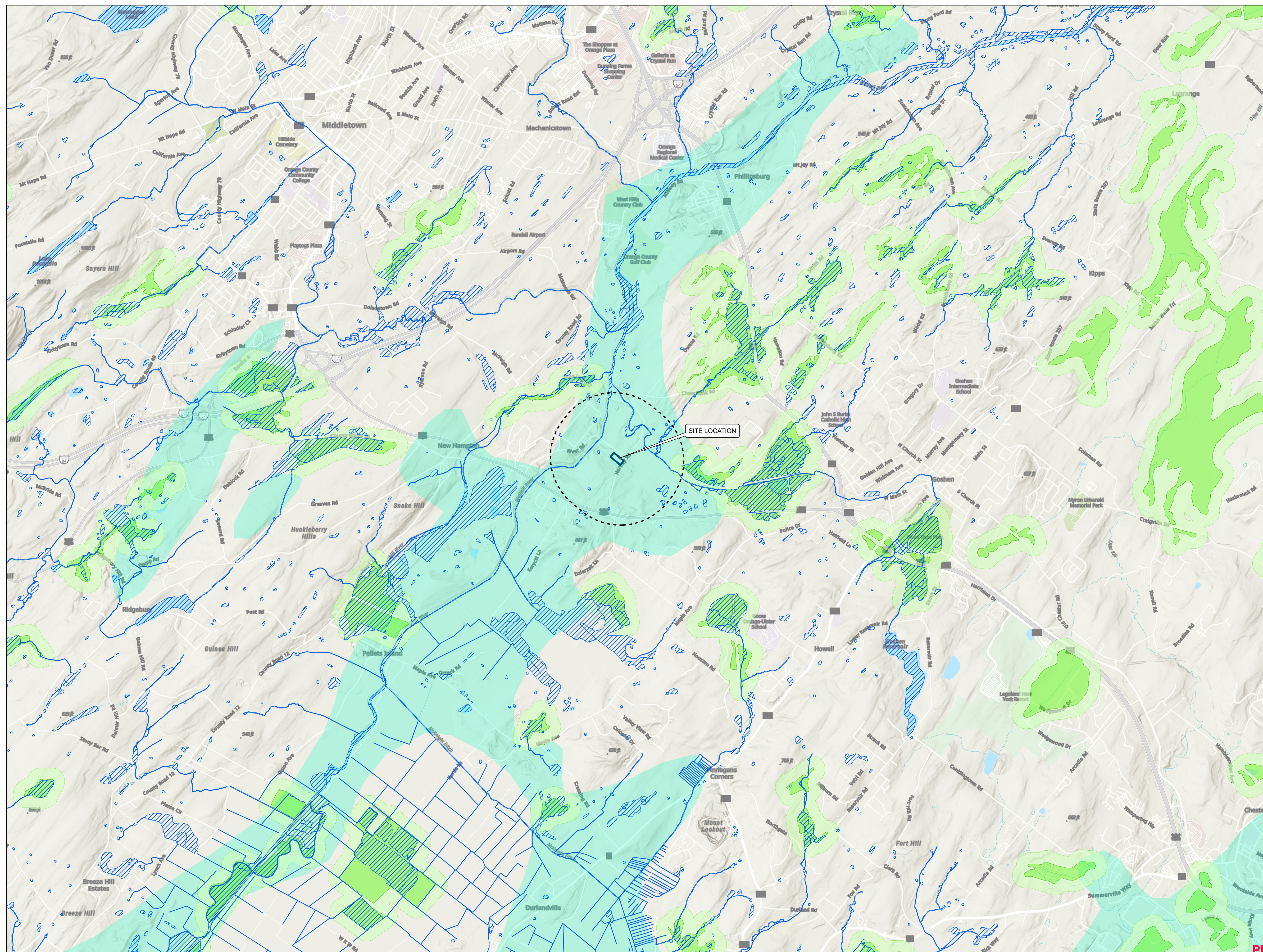
PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

**100 CRYSTAL RUN ROAD
SUITE 101
MIDDLETOWN, NEW YORK 10941
Tel: (877) 294-9070
Fax (845) 692-5894**

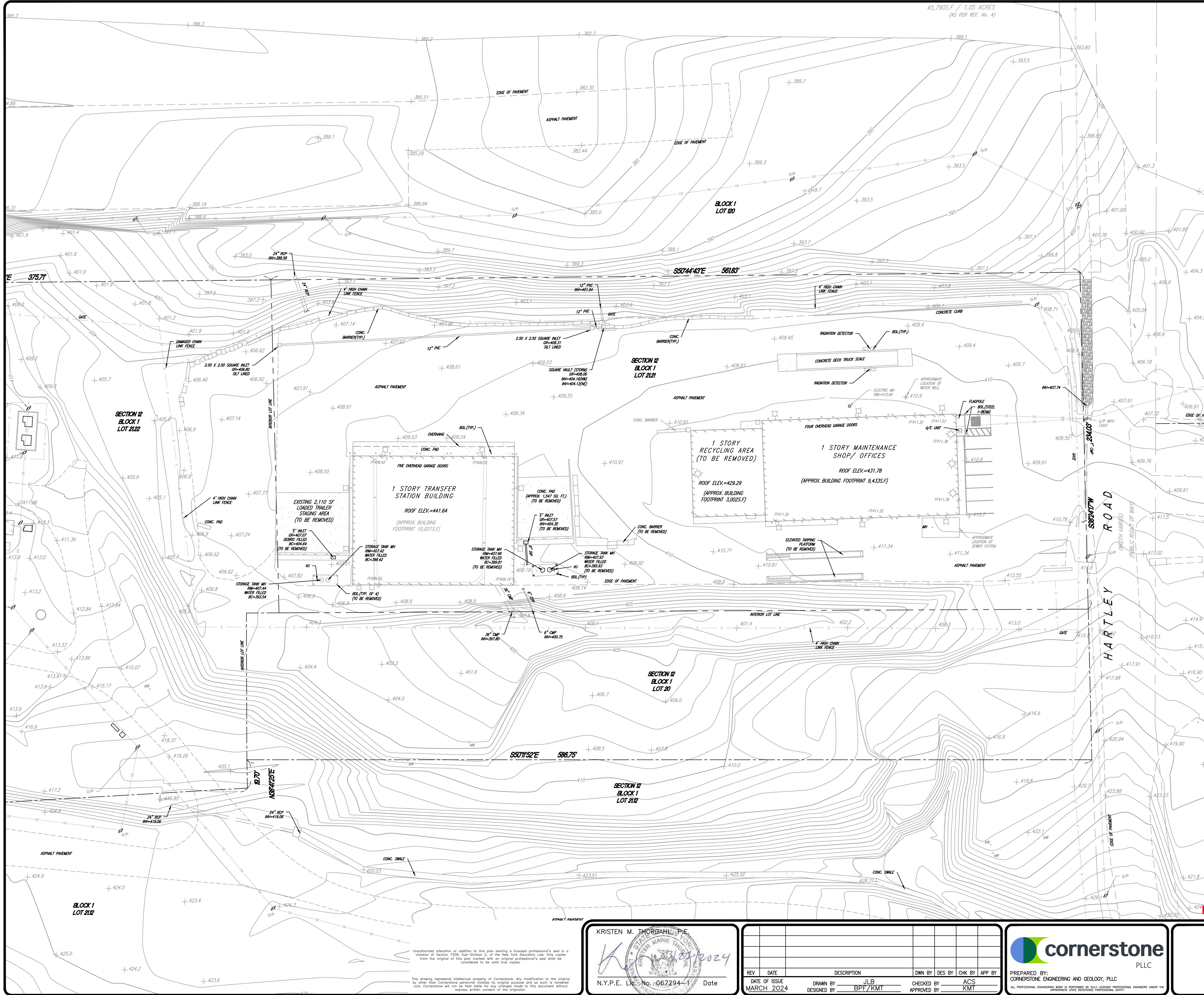
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PROJECT NO. 4223429

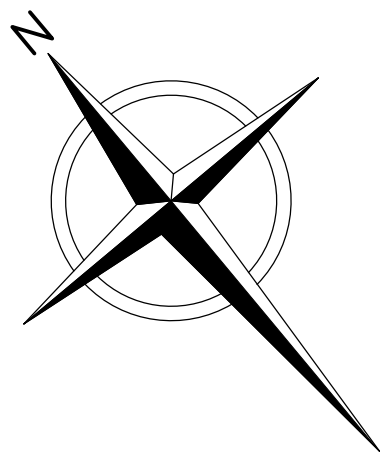
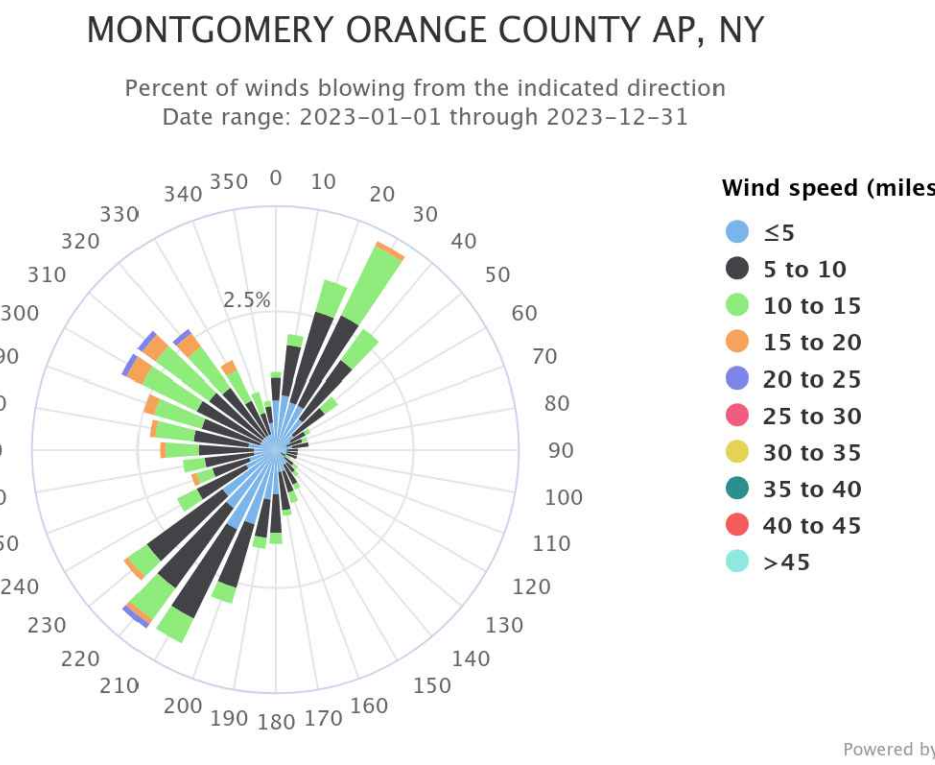


SHEET NO.
2
PROJECT NO.
4223429



- LEGEND**
- PROPERTY LINE
 - ADJACENT PROPERTY LINE
 - EASEMENT LINE
 - RIGHT OF WAY LINE
 - EXISTING MINOR CONTOURS
 - EXISTING MAJOR CONTOURS (AS LABELED)
 - EXISTING GROUND ELEVATION
 - EXISTING EDGE OF PAVEMENT
 - EXISTING EDGE OF GRAVEL
 - EXISTING FENCE LINE
 - EXISTING CONCRETE
 - EXISTING BUILDING
 - EXISTING TREE LINE
 - EXISTING GUIDE RAIL
 - EXISTING CURB LINE
 - EXISTING OVERHEAD WIRE
 - EXISTING UTILITY POLE
 - EXISTING CULVERT

- NOTES:**
- SITE BOUNDARY & TOPOGRAPHY SURVEY, LOT 17.32, 20, 21.21 & 21.22 OF BLOCK 1, PORTIONS OF LOTS 18, 21.12, 112, & 120 OF BLOCK 1, TOWN OF GOSHEN, ORANGE COUNTY, NEW YORK. SHEET 1 OF 1, DATED 3/20/2024, BY DRESDNER ROBIN OF JERSEY CITY, NEW JERSEY.
 - HORIZONTAL DATUM IS REFERENCED TO NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM (NAD 83), US SURVEY FEET.
 - VERTICAL DATUM BASED UPON NYGEIOD 12 GRS80, US SURVEY FEET. CONTOUR INTERVAL IS ONE FOOT.



0 30 60
SCALE IN FEET

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N.Y.P.E. License No. 067294-1
Date

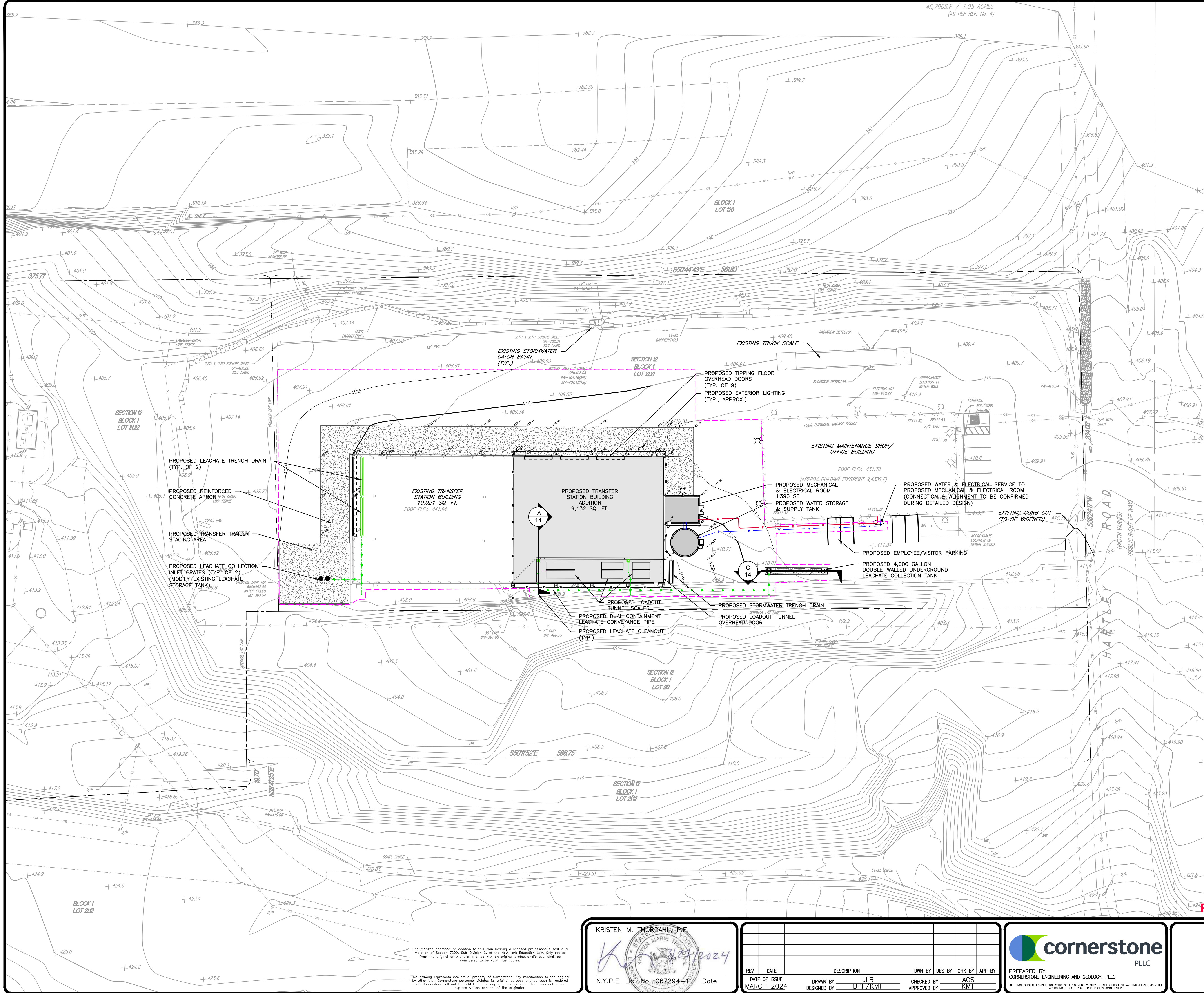
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1	MARCH 2024	DATE OF ISSUE	JLB	ACS	KMT	
2		DRAWN BY	BPF/KMT	CHECKED BY		
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GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK

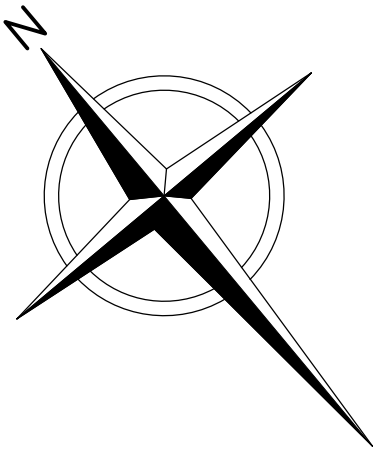
**PROPOSED FACILITY MODIFICATIONS
EXISTING SITE PLAN**

SHEET NO.
5
PROJECT NO.
4223429



- LEGEND**
- PROPERTY LINE
 - ADJACENT PROPERTY LINE
 - EASEMENT LINE
 - RIGHT OF WAY LINE
 - EXISTING MINOR CONTOURS
 - EXISTING MAJOR CONTOURS (AS LABELED)
 - EXISTING GROUND ELEVATION
 - EXISTING EDGE OF PAVEMENT
 - EXISTING EDGE OF GRAVEL
 - EXISTING FENCE LINE
 - EXISTING CONCRETE
 - EXISTING BUILDING
 - EXISTING TREE LINE
 - EXISTING GUIDE RAIL
 - EXISTING CURB LINE
 - EXISTING OVERHEAD WIRE
 - EXISTING UTILITY POLE
 - EXISTING CULVERT
 - PROPOSED MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - PROPOSED STRUCTURE
 - PROPOSED DUAL CONTAINMENT LEACHATE CONVEYANCE PIPE
 - PROPOSED LEACHATE TRENCH DRAIN
 - PROPOSED REINFORCED CONCRETE PAD
 - PROPOSED STORMWATER MANAGEMENT PIPING
 - PROPOSED STORMWATER TRENCH DRAIN
 - LIMIT OF DISTURBANCE (APPROXIMATE)

- NOTES:**
- SEE PLAN SHEET 5 OF THIS PLAN SET FOR LEGEND AND BASE MAP NOTES.
 - ANY IMPORTED TOPSOIL SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.
 - OFF-SITE DISPOSAL OF EXCESS CUT SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.



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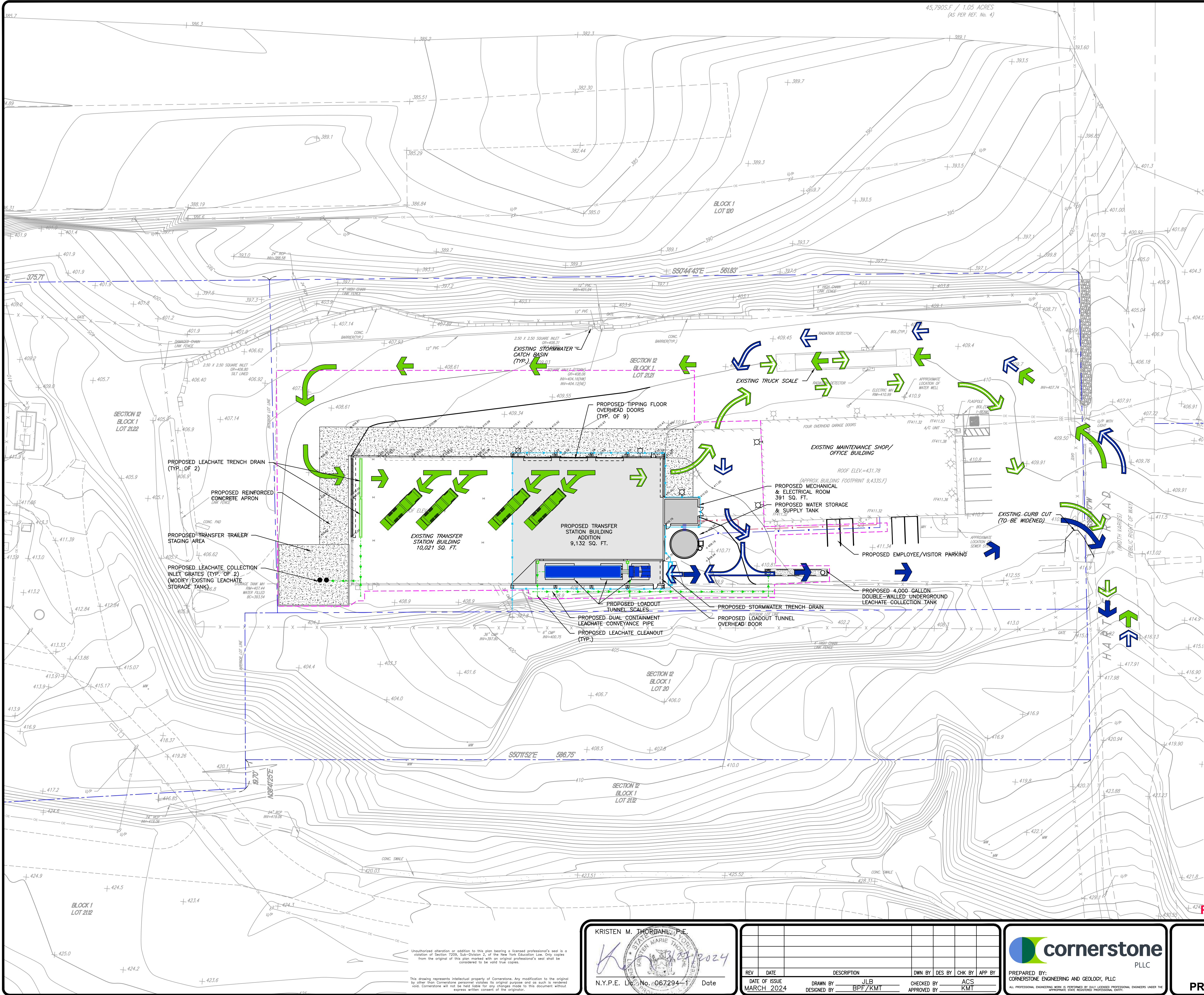
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95 HARTLEY ROAD, GOSHEN, NEW YORK

**PROPOSED FACILITY MODIFICATIONS
PROPOSED SITE PLAN**

SHEET NO.

6

PROJECT NO.
4223429

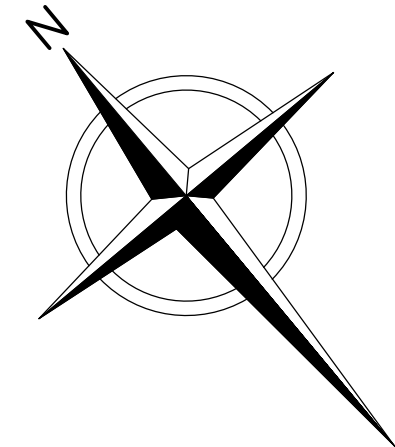


LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- RIGHT OF WAY LINE
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS (AS LABELED)
- EXISTING GROUND ELEVATION
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- EXISTING FENCE LINE
- EXISTING CONCRETE
- EXISTING BUILDING
- EXISTING TREE LINE
- EXISTING GUIDE RAIL
- EXISTING CURB LINE
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING CULVERT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STRUCTURE
- PROPOSED DUAL CONTAINMENT LEACHATE CONVEYANCE PIPE
- PROPOSED LEACHATE TRENCH DRAIN
- PROPOSED REINFORCED CONCRETE PAD
- PROPOSED STORMWATER MANAGEMENT PIPING
- PROPOSED STORMWATER TRENCH DRAIN
- LIMIT OF DISTURBANCE (APPROXIMATE)
- TRANSFER VEHICLE
- TIPPING VEHICLE
- LOADED TIPPING VEHICLE FLOW PATH
- EMPTY TIPPING VEHICLE FLOW PATH
- LOADED TRANSFER VEHICLE FLOW PATH
- EMPTY TRANSFER VEHICLE FLOW PATH

NOTES:

- SEE PLAN SHEET 5 OF THIS PLAN SET FOR LEGEND AND BASE MAP NOTES.



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PROPOSED FACILITY MODIFICATIONS
PROPOSED VEHICLE CIRCULATION PLAN

SHEET NO.

7

PROJECT NO.
4223429



- NOTES:**
1. SEE PLAN SHEET 5 OF THIS PLAN SET FOR LEGEND AND BASE MAP NOTES.

NOTES:

1. SEE PLAN SHEET 5 OF THIS PLAN SET FOR LEGEND AND BASE MAP NOTES.



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SHEET NO.
8
PROJECT NO.
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		BPF/KMT									

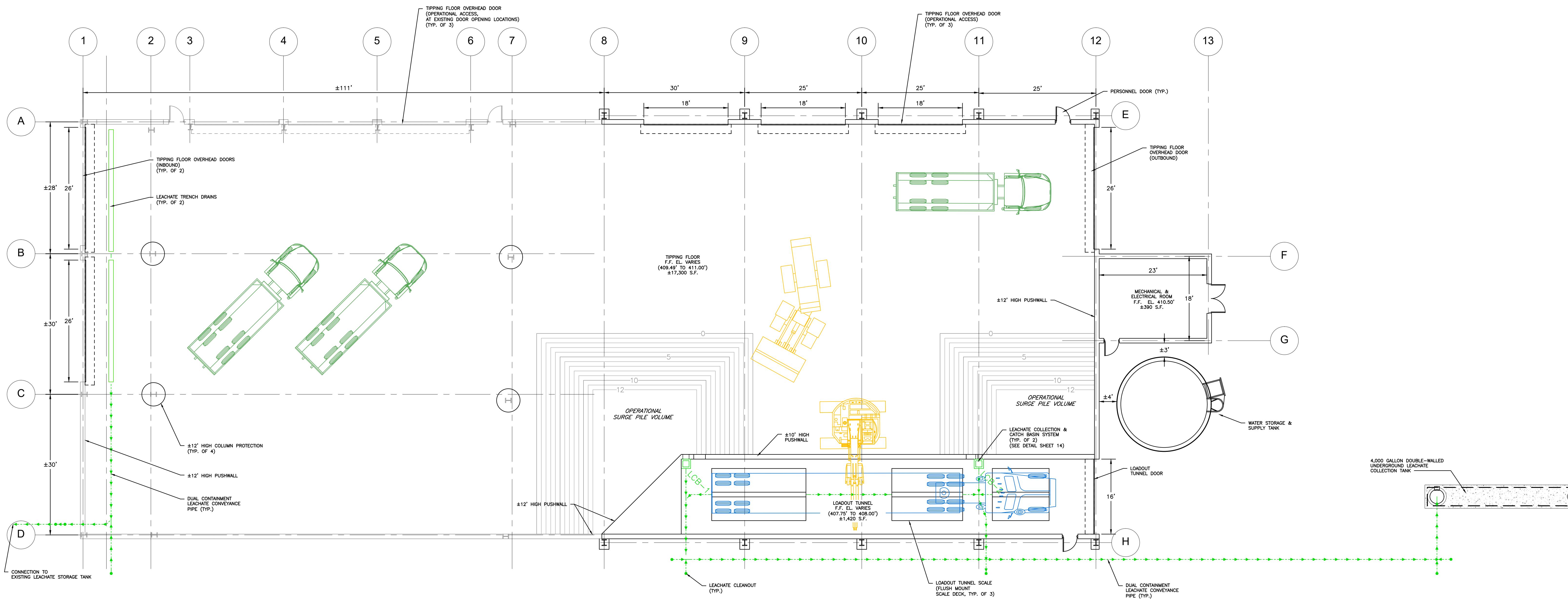
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95 HARTLEY ROAD, GOSHEN, NEW YORK

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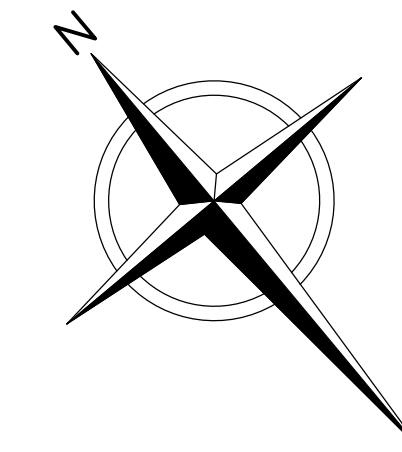
FLOOR PLAN

SCALE: 1" = 10'

1
10

NOTES:

1. THE LOCATIONS OF EMERGENCY EQUIPMENT, INCLUDING FIRE EXTINGUISHERS AND FIRE ALARM PULL BOXES, WILL BE IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODES AND NFPA REQUIREMENTS.



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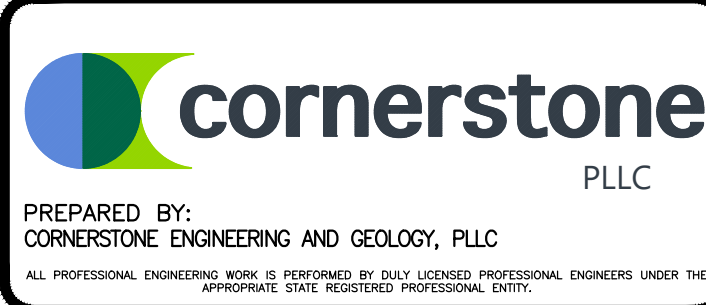
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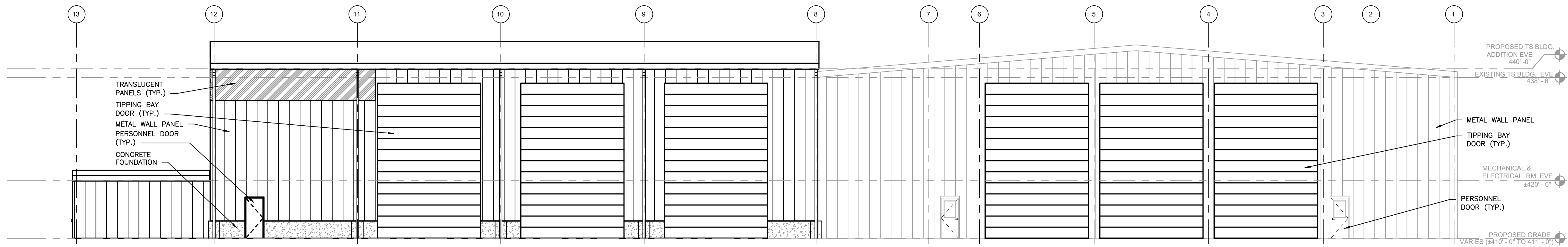
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		DESIGNED BY	BPF/KMT	CHECKED BY	KMT	APPROVED BY



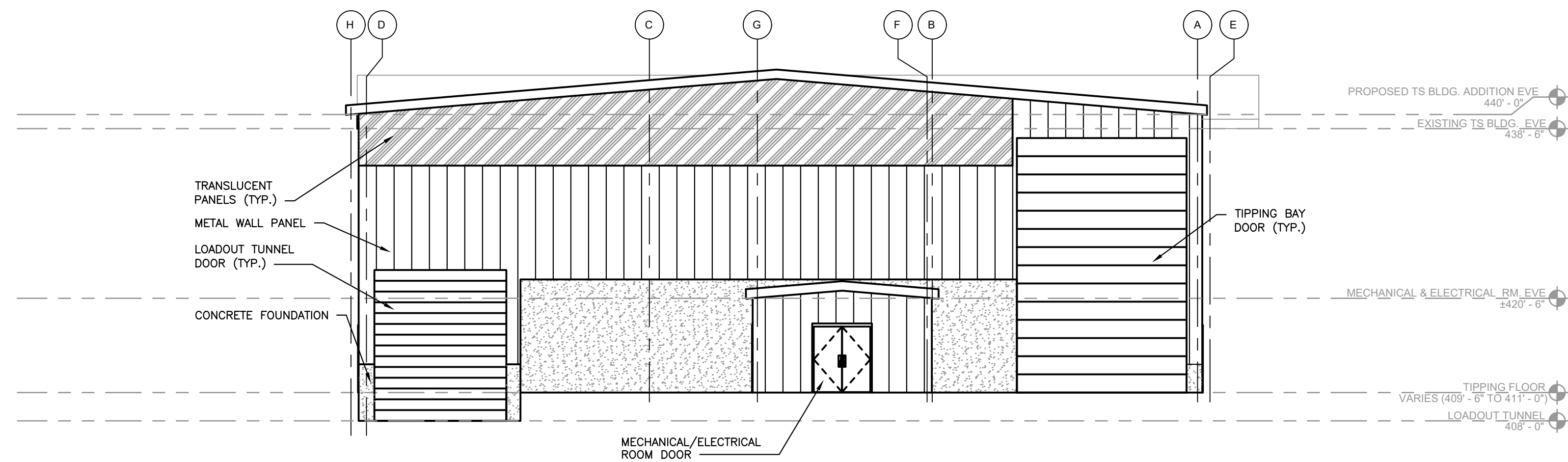
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PROPOSED FACILITY MODIFICATIONS
PROPOSED OPERATIONS FLOOR PLAN

SHEET NO.
10
PROJECT NO.
4223429



NORTH
ELEVATION 1
SCALE: 1"=10'-0"



EAST
ELEVATION 2
SCALE: 1"=10'-0"

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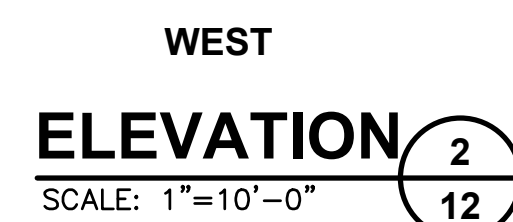
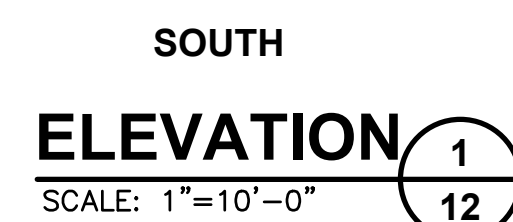
BODHI A. PIEDMONT-LEISCHMANN, P.E.
N.Y.P.E. Lic. No. 099699 Date

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		APPROVED BY	BPF/KMT		KMT	

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GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK
PROPOSED FACILITY MODIFICATIONS
PROPOSED BUILDING ELEVATIONS

SHEET NO.
11
PROJECT NO.
4223429

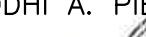


SHEET NO.
12
PROJECT NO.
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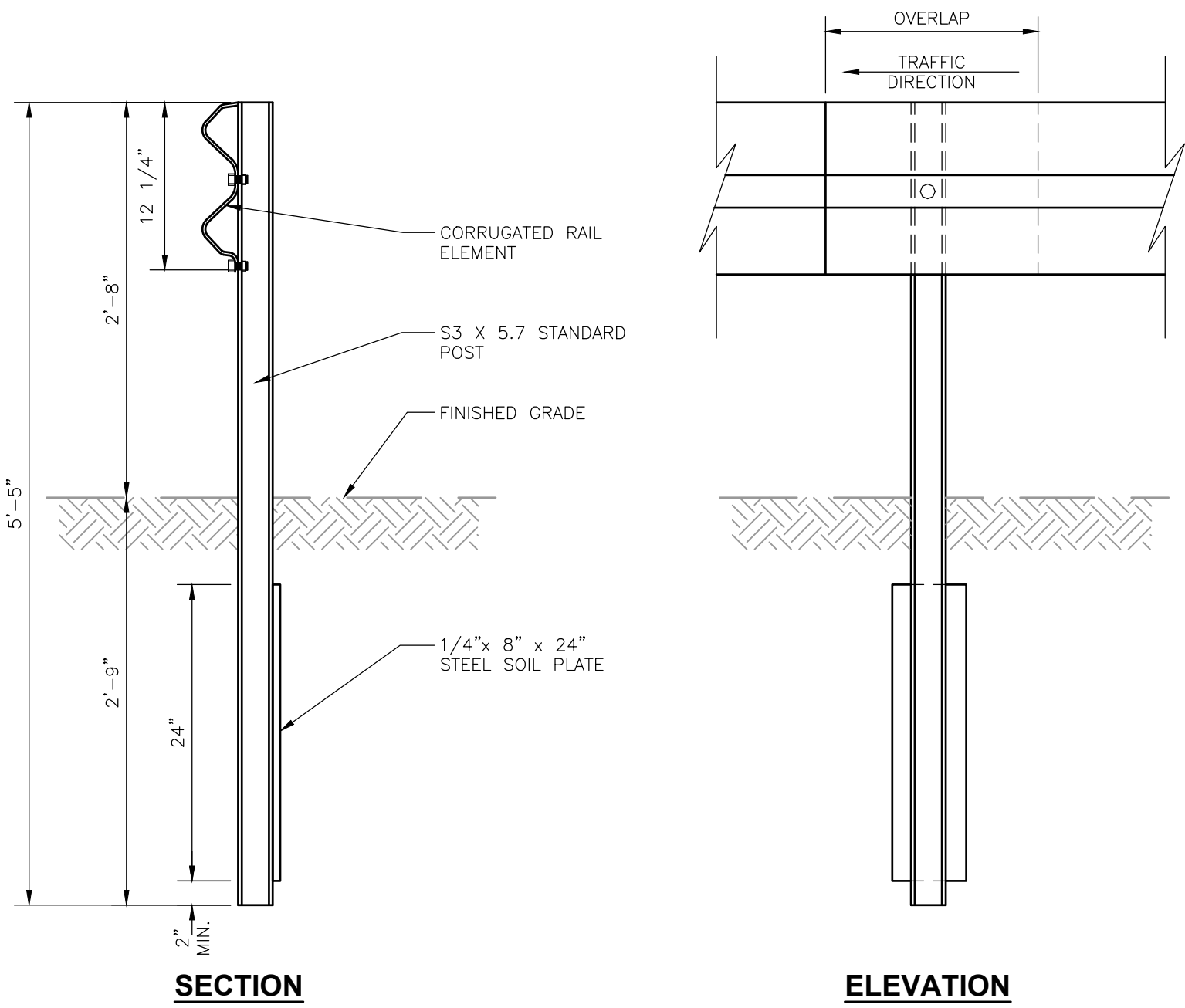
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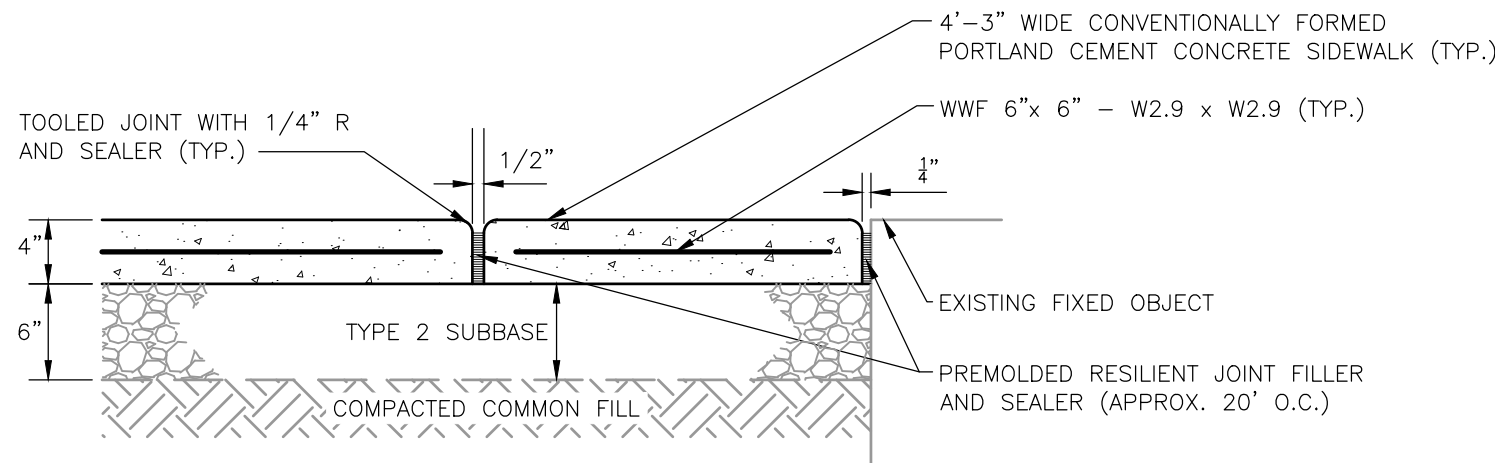
- NOTES:
- GUIDE RAIL SHALL BE IN ACCORDANCE WITH NYSDOT CORRUGATED BEAM GUIDE RAIL, U.S. CUSTOMARY STANDARD SHEET 606-07.
 - GUIDE RAIL SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITION OF THE NYSDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 710-20.
 - ALL RAIL SPLICES TO OVERLAP IN THE DIRECTION OF TRAFFIC FLOW.

W-BEAM GUIDE RAIL

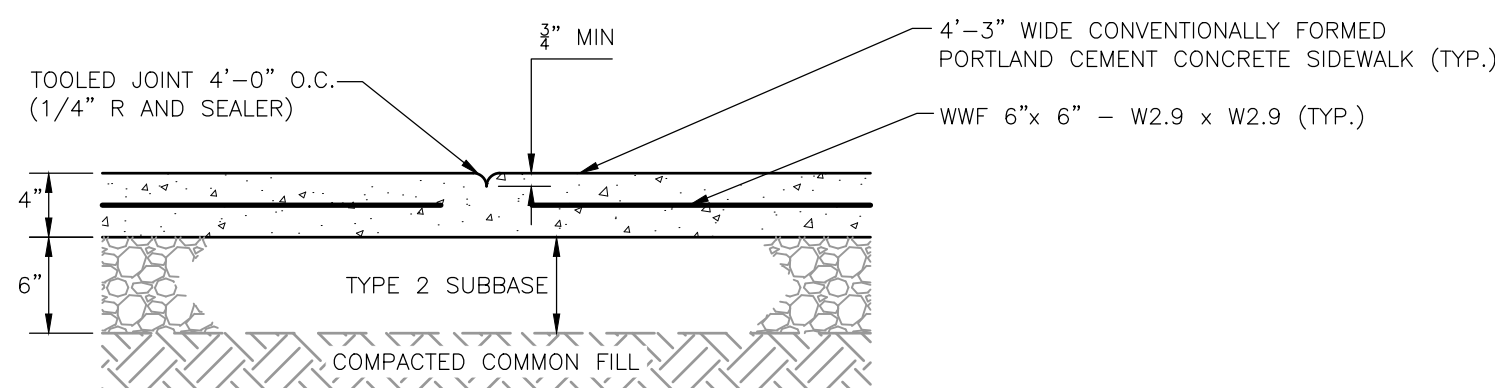
DETAIL

SCALE: 1"=1'

1
13



EXPANSION JOINT



CONTRACTION JOINT

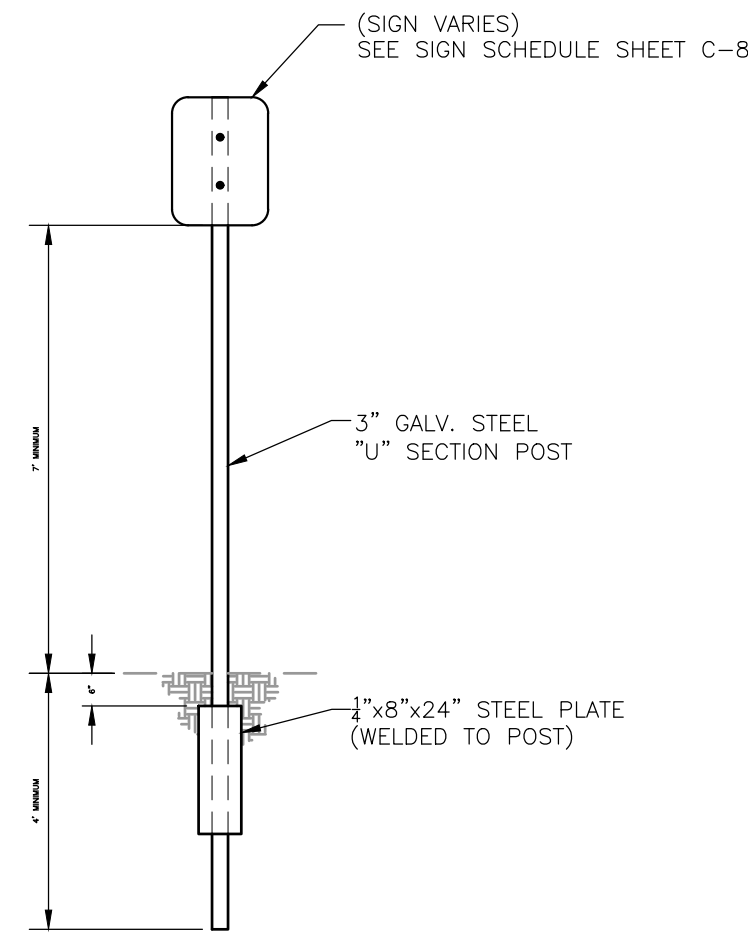
- NOTES:
- MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 12, 2012, AND ALL ADDENDA THERETO; THE ONLY EXCEPTION BEING THAT THE WORK OF THIS CONTRACT SHALL BE MEASURED IN ENGLISH UNITS.
 - SIDEWALK CONSTRUCTION AND MATERIALS SHALL CONFORM WITH SECTION 608 - SIDEWALKS, DRIVEWAYS, BICYCLE PATHS, AND VEGETATION CONTROL STRIPS OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
 - PREMOLDED RESILIENT JOINT FILLER SHALL CONFORM WITH SECTION 705-07 - PREMOLDED RESILIENT JOINT FILLER OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
 - ALL EXPOSED SURFACES TO HAVE BROOMED TEXTURE.
 - JOINTS SHALL NOT BE SAW CUT.

CONCRETE SIDEWALK

DETAIL

SCALE: N.T.S.

6
13



NOTES:

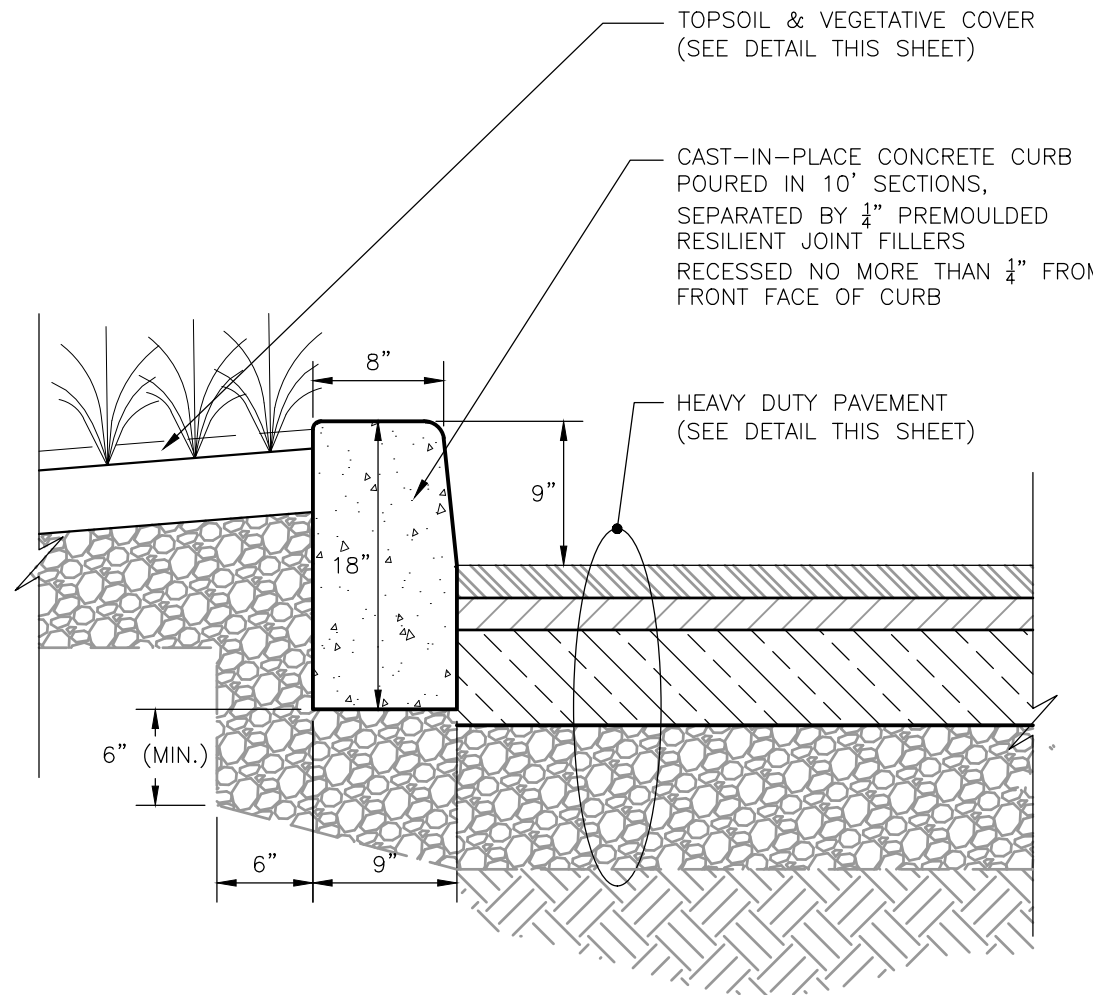
- SIGN MOUNTING HEIGHT SHALL BE A MINIMUM OF 7'. MINIMUM MOUNTING HEIGHT MAY BE ADJUSTED ONLY IN ACCORDANCE WITH PROVISIONS OUTLINED IN THE STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS."
- SIGN POST SHALL BE IN ACCORDANCE W/ NYSDOT STANDARD SHEET 645-01.

SINGLE POST SIGN MOUNTING

DETAIL

SCALE: 1"=3'

2
13



NOTES:

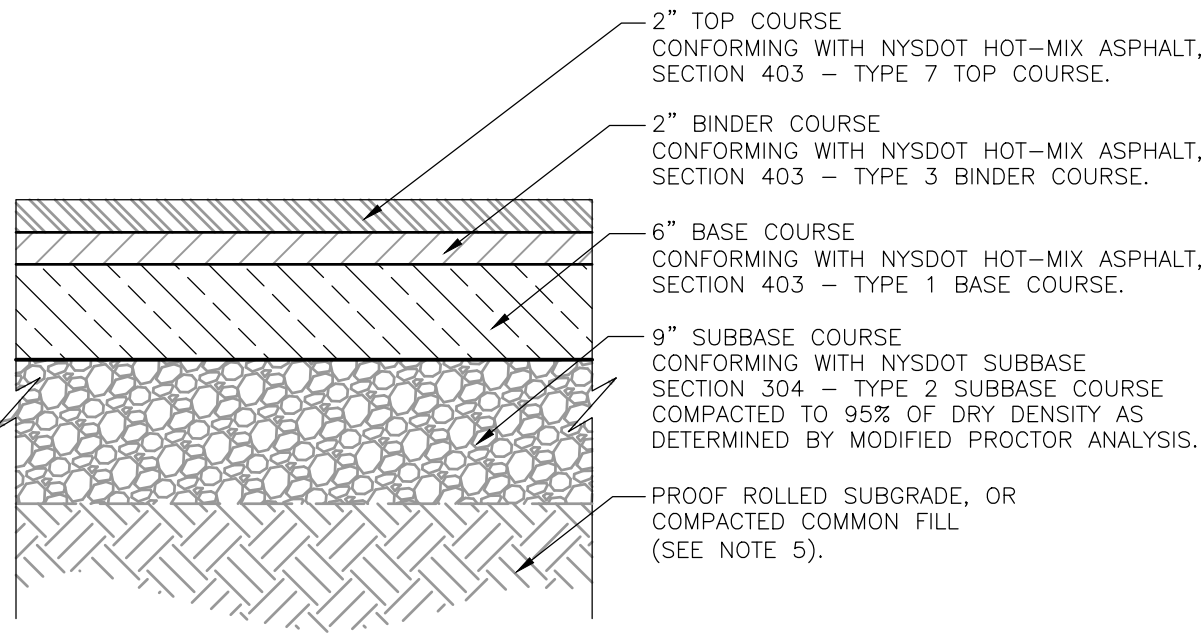
- MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 12, 2012, AND ALL ADDENDA THERETO; THE ONLY EXCEPTION BEING THAT THE WORK OF THIS CONTRACT SHALL BE MEASURED IN ENGLISH UNITS.
- CURB CONSTRUCTION AND MATERIALS SHALL CONFORM WITH SECTION 609 - CURB AND CURB & GUTTER OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
- PREMOLDED RESILIENT JOINT FILLER SHALL CONFORM WITH SECTION 705-07 - PREMOLDED RESILIENT JOINT FILLER OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
- PRECAST CONCRETE CURB MAY BE SUBSTITUTED WHEN ALTERNATE CONSTRUCTION DETAILS ARE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

TYPICAL CONCRETE CURB

DETAIL

SCALE: 1" = 1'

7
13



NOTES:

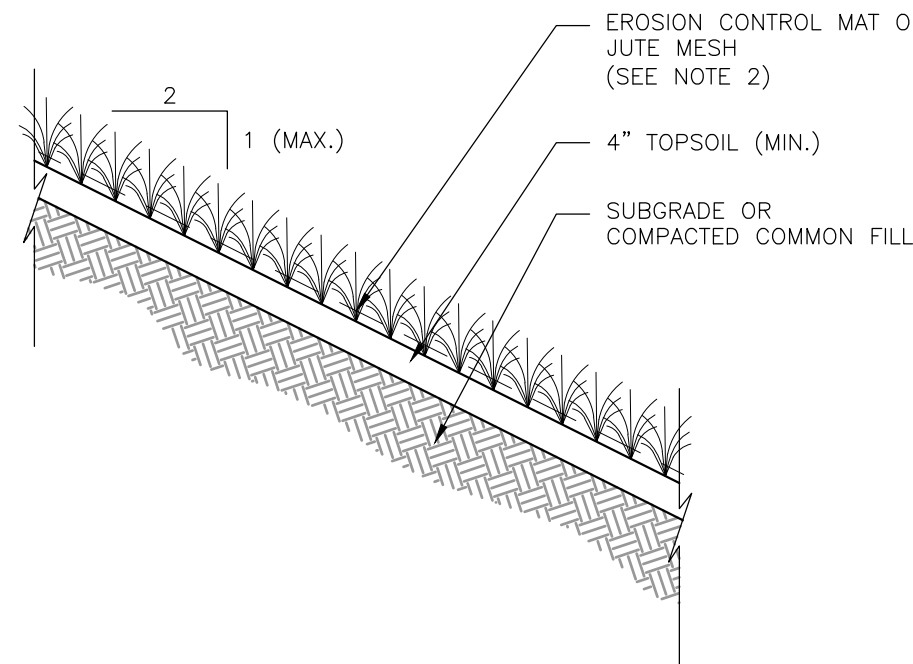
- MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 12, 2012, AND ALL ADDENDA THERETO; THE ONLY EXCEPTION BEING THAT THE WORK OF THIS CONTRACT SHALL BE MEASURED IN ENGLISH UNITS.
- SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 - SUBBASE COURSE OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS.
- HOT MIX ASPHALT PAVEMENT SHALL CONFORM WITH SECTION 400-HOT MIX ASPHALT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS. ALTHOUGH SECTION 400 IN ITS ENTIRETY IS REFERENCED, THE HOT MIX ASPHALT PAVEMENT(S) SPECIFIED FOR THIS CONTRACT SHALL BE AS SPECIFIED UNDER SECTION 403-HOT MIX ASPHALT PAVEMENTS FOR MUNICIPALITIES.
- TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407-TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
- WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203-EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.

HEAVY DUTY PAVEMENT

SECTION

SCALE: 1"=1'

3
13



NOTES:

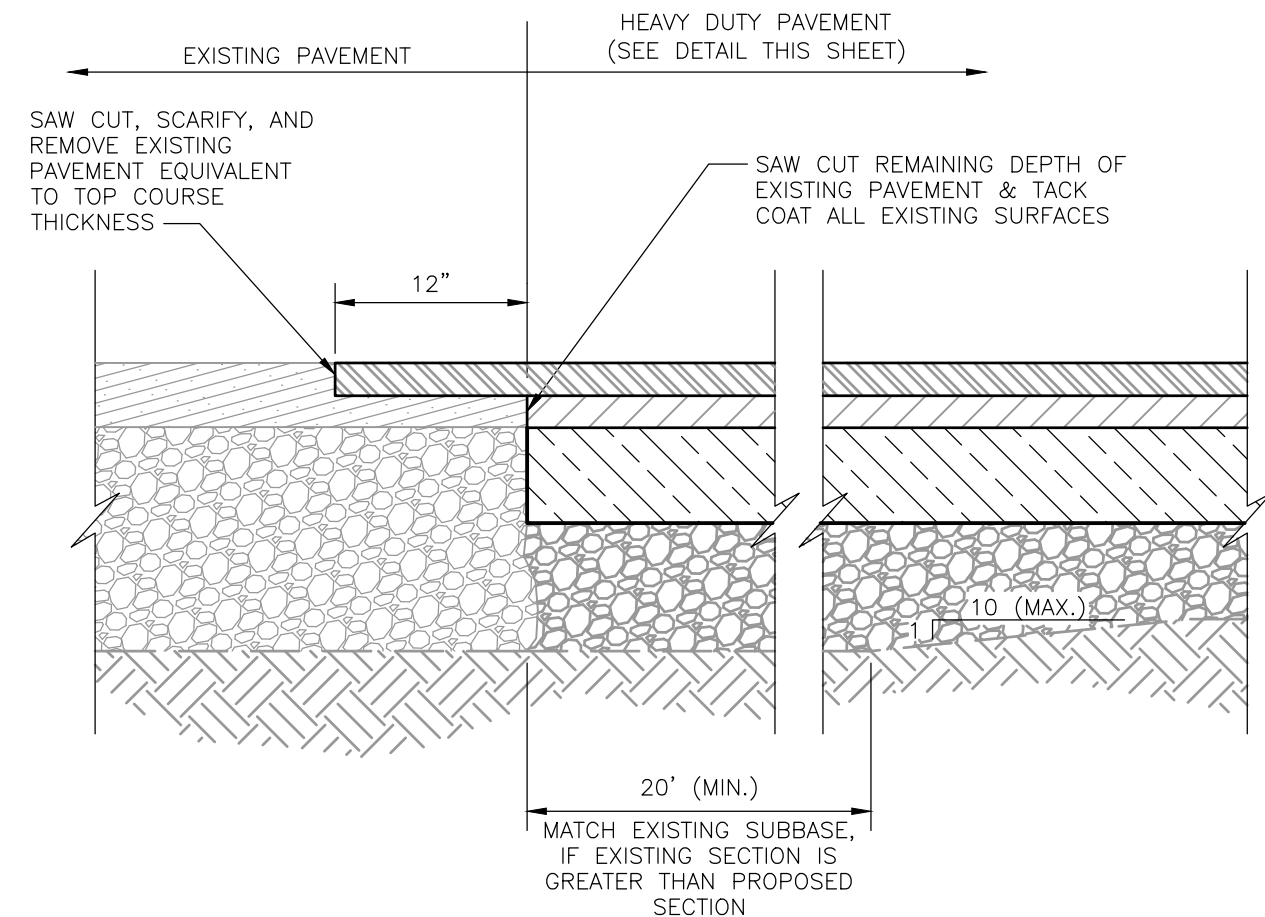
- APPLICATION OF FERTILIZER, SEED, AND MULCH TO BE APPLIED IN ACCORDANCE WITH THE SITE RESTORATION SPECIFICATION AND THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- ON SLOPES STEEPER THAN 10%, EROSION CONTROL MAT TO BE INSTALLED IN COMPLIANCE WITH NYSDOT STANDARD SPECIFICATIONS. ON SLOPES SHALLOWER THAN 10%, JUTE MESH TO BE INSTALLED IN COMPLIANCE WITH NYSDOT STANDARD SPECIFICATIONS.
- ON SLOPES STEEPER THAN 2H:1V, SOIL REINFORCING MAY BE REQUIRED.

TOPSOIL & VEGETATIVE COVER

DETAIL

SCALE: 1"=2'

8
13

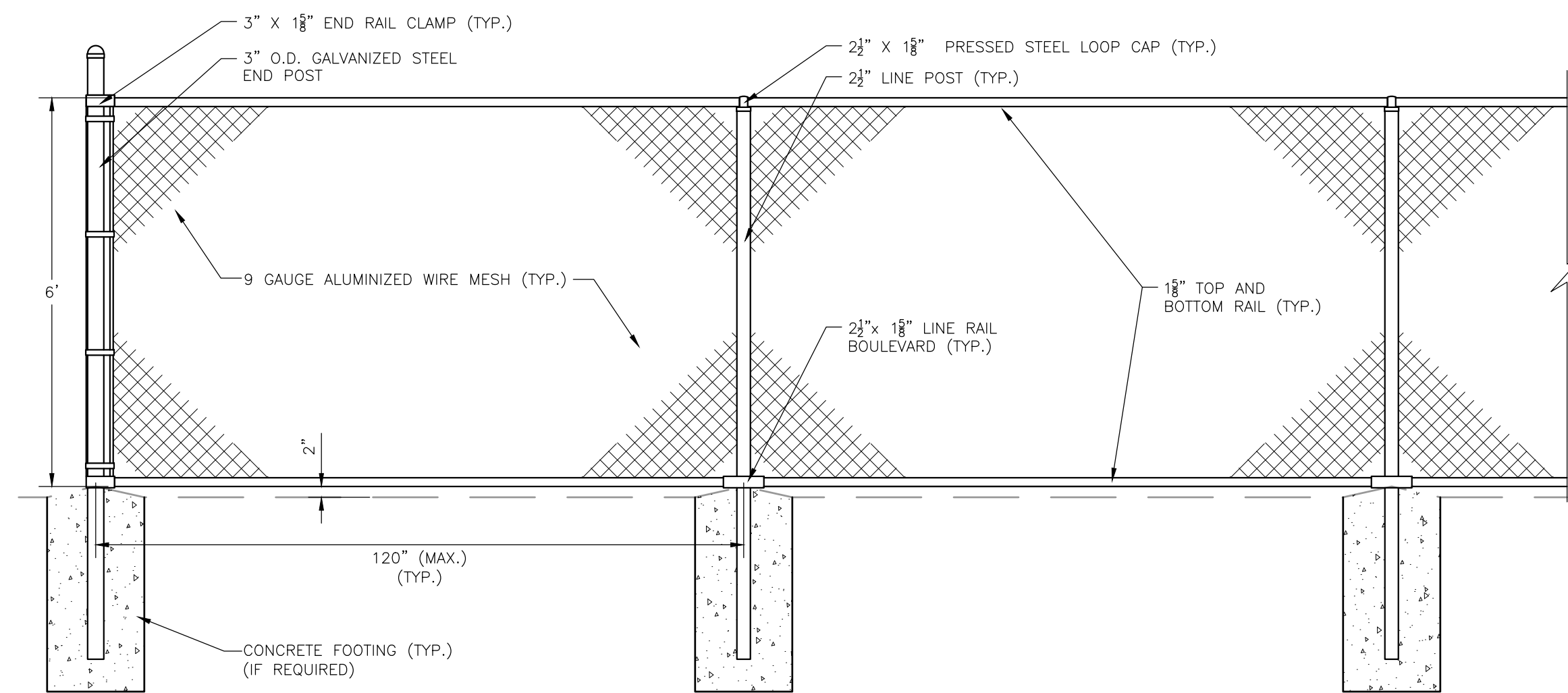


PAVEMENT TRANSITION

SECTION

SCALE: 1"=1'

5
13



CHAIN LINK FENCE

DETAIL

SCALE: 1"=2'

9
13

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GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK

PROPOSED FACILITY MODIFICATIONS
PROPOSED SITE DETAILS

SHEET NO.

13

PROJECT NO.

4223429

KRISTEN M. THORBAHL, P.E.

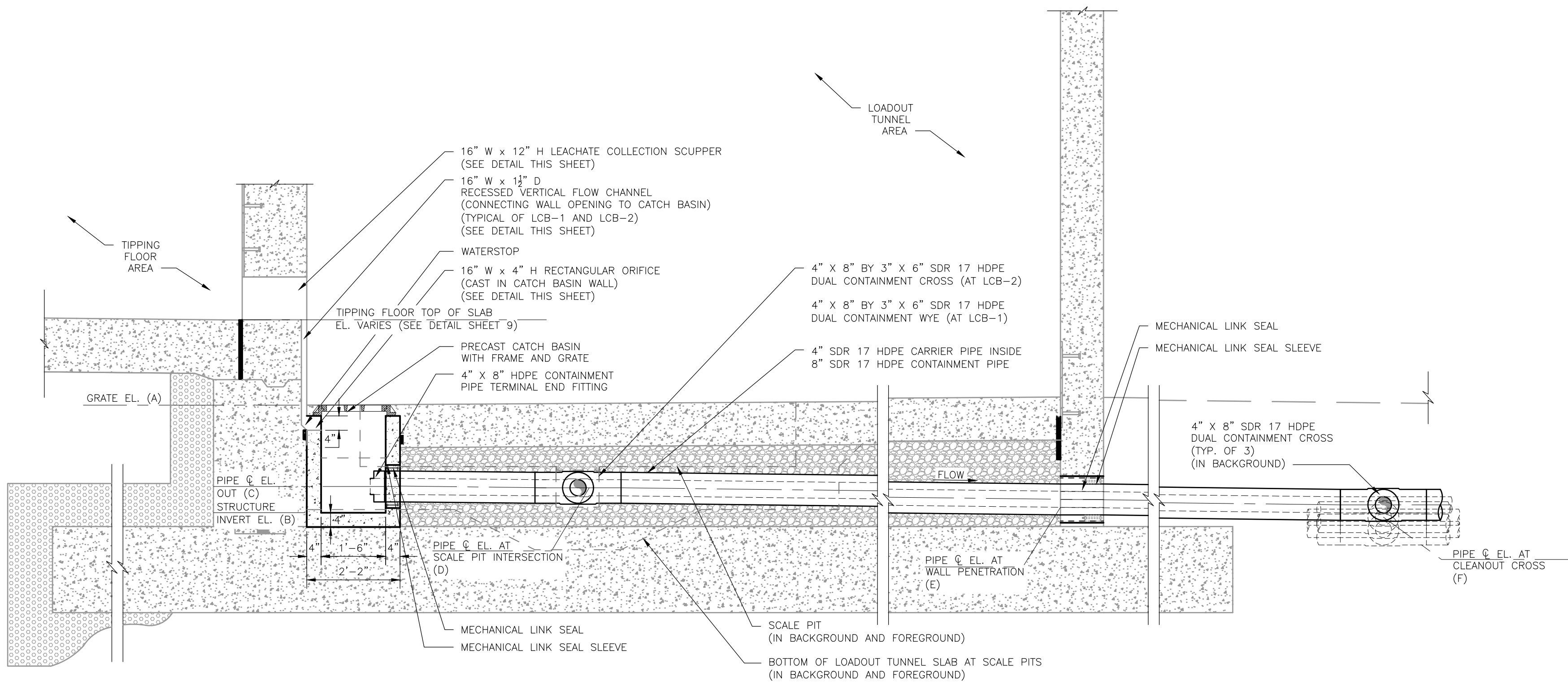
N.Y.P.E. Lic. No. 067294-1 Date

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	MARCH 2024	DATE OF ISSUE				
2		DESIGNED BY	JLB		ACS	
3		CHECKED BY	BPF/KMT		KMT	
4		APPROVED BY				

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STRUCTURE	GRATE EL. (A)	STRUCTURE INVERT EL. (B)	PIPE Ø EL. OUT (C)	PIPE Ø EL. AT SCALE PIT INTERSECTION (D)	PIPE Ø EL. AT WALL PENETRATION (E)	PIPE Ø EL. AT CLEANOUT CROSS (F)
LCB-1	407.75	405.25	405.79	405.70	405.55	405.44
LCB-2	407.75	405.25	404.44	405.70	404.75	404.16

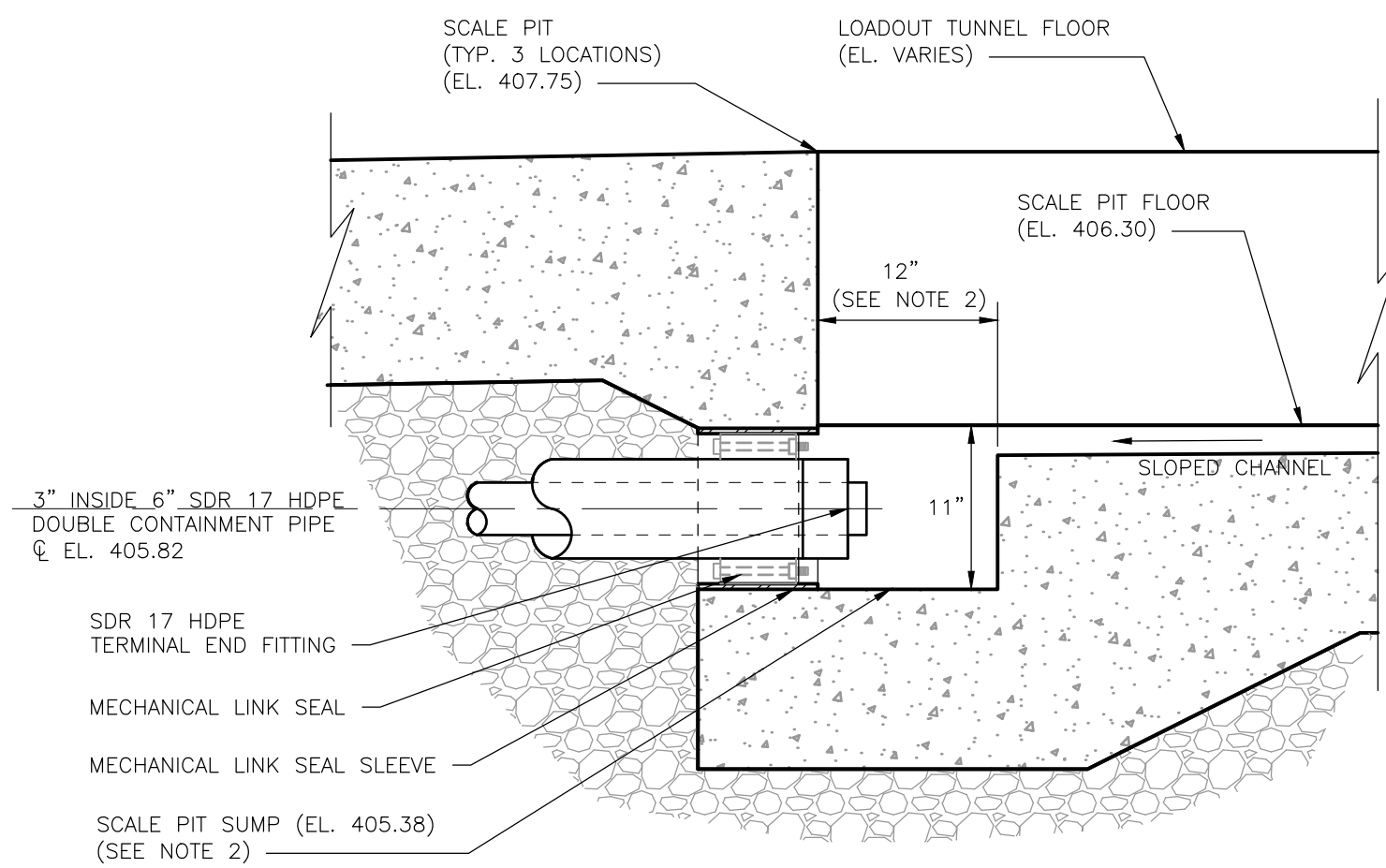
- NOTES:
- FOR FURTHER CLARITY REGARDING HORIZONTAL ALIGNMENT OF STRUCTURES AND LEACHATE PIPING, SEE DETAIL SHEET 9, "PROPOSED GENERAL ARRANGEMENT FLOOR PLAN".
 - DEPICTED CATCH BASIN IS REPRESENTATIVE OF A 18" X 18" CATCH BASIN, MEETING H20 HIGHWAY LOADING.
 - FRAME AND GRATE MODEL 18" X 18", MEETING H20 HIGHWAY LOADING.
 - THE INTERIOR OF THE CATCH BASIN WILL BE INSTALLED WITH A CORROSION RESISTANT COATING OR LINING.

LEACHATE COLLECTION & CATCH BASIN SYSTEM

SECTION

SCALE: 1"= 2'

1
14



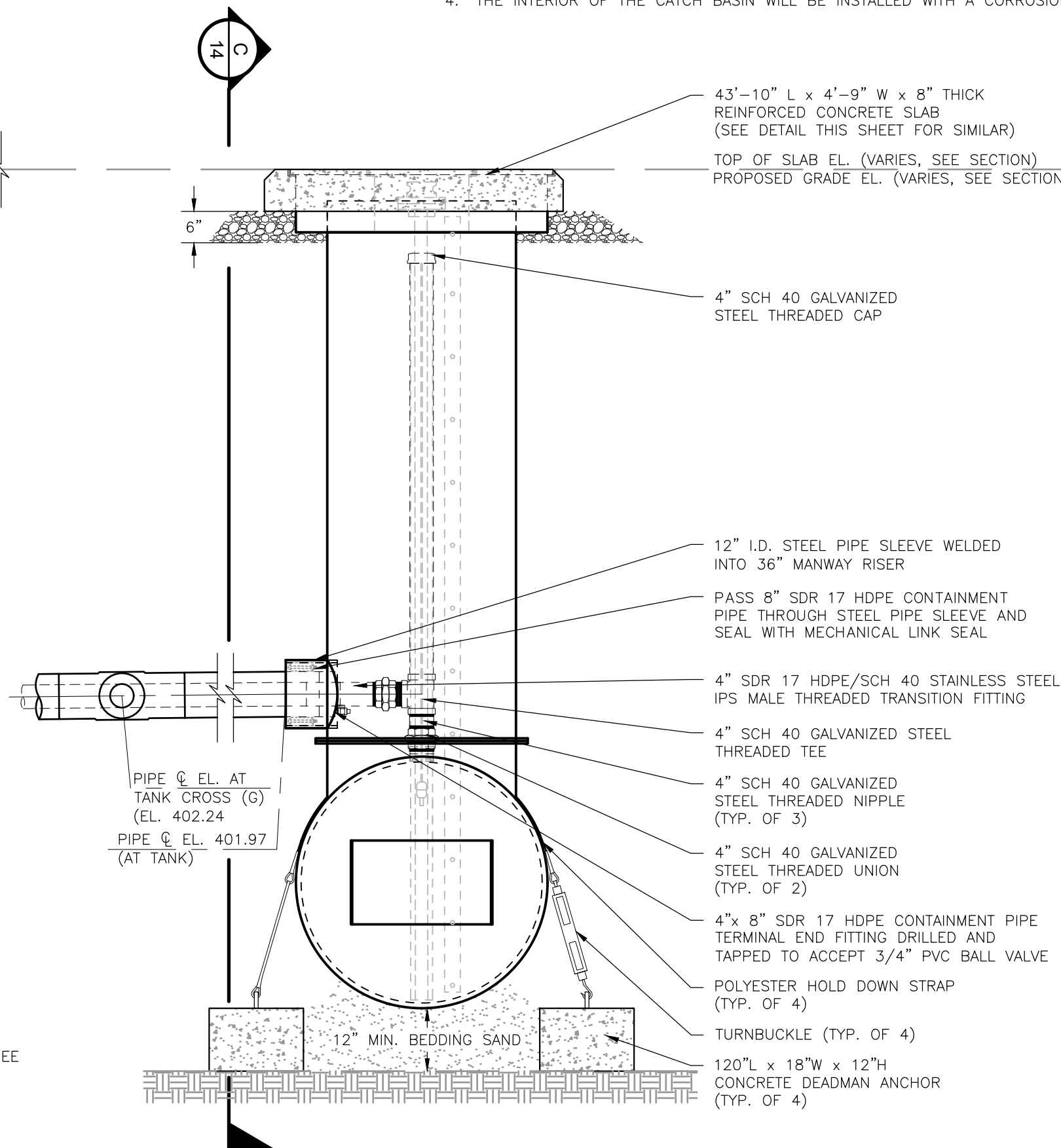
- NOTES:
- FOR FURTHER CLARITY REGARDING HORIZONTAL ALIGNMENT OF STRUCTURES AND LEACHATE CONVEYANCE PIPING, SEE DETAIL SHEET 9, "PROPOSED GENERAL ARRANGEMENT FLOOR PLAN".
 - THE SCALE PIT SUMP SHALL BE 12" WIDE AND 12" LONG (TYP.).

SCALE PIT SUMP & LEACHATE CONVEYANCE PIPE

DETAIL

SCALE: 1"= 1'

2
14

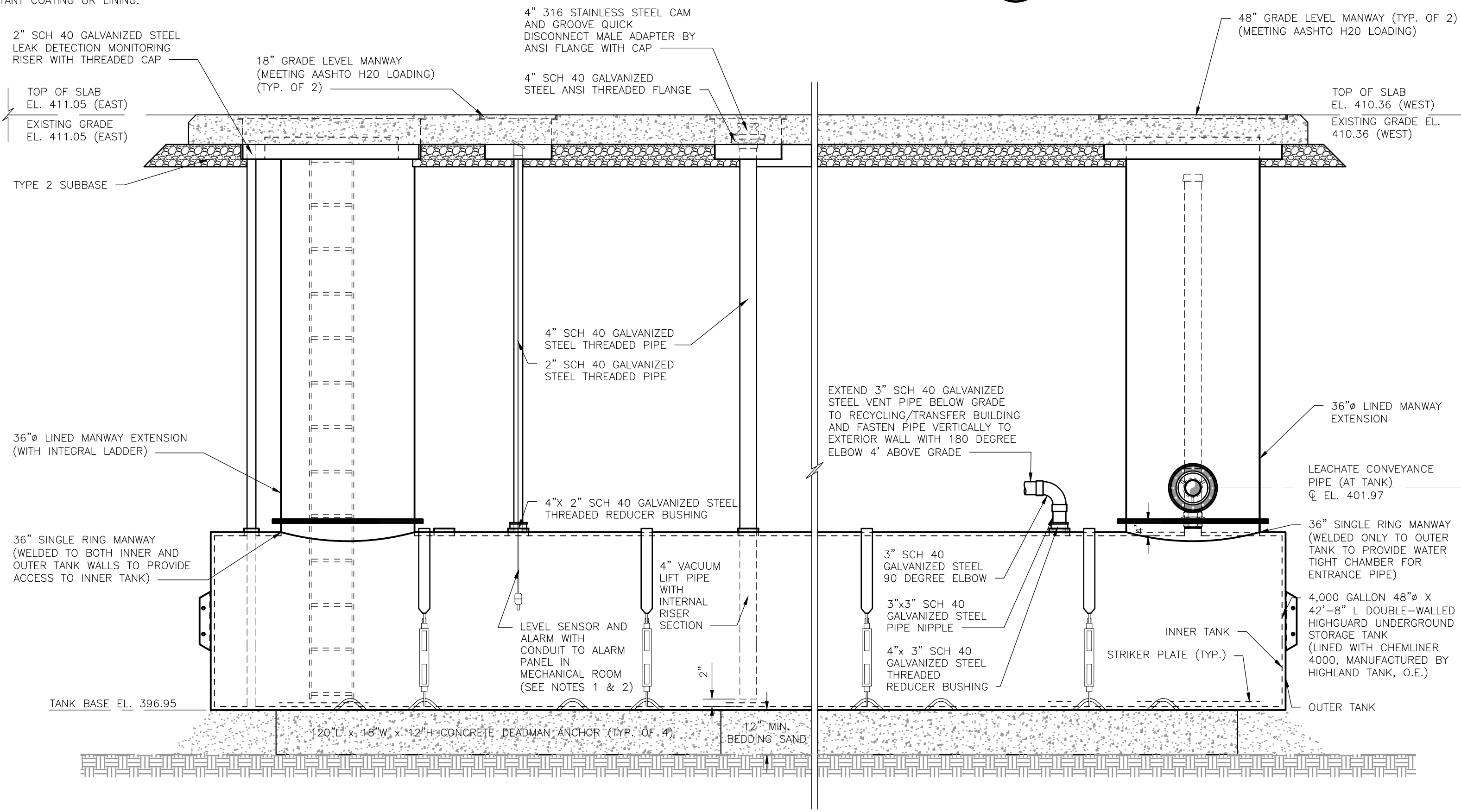


4,000 GALLON DOUBLE-WALLED UNDERGROUND LEACHATE COLLECTION TANK

SECTION

SCALE: 1"= 2'

B
14



- NOTES:
- LEVEL SENSOR TO BE SERIES HTF STANDARD TWO FLOAT SENSOR (AS MANUFACTURED BY HIGHLAND TANK, O.E.). INITIAL FLOAT TO BE INSTALLED AT AN ELEVATION TO TRIGGER A LEVEL ALARM WHEN THE LIQUID LEVEL IN THE TANK REACHES APPROXIMATELY 75% OF TANK CAPACITY BY VOLUME. SECOND FLOAT TO BE INSTALLED AT AN ELEVATION TO TRIGGER A HIGH LEVEL ALARM WHEN THE LIQUID LEVEL IN THE TANK REACHES APPROXIMATELY 90% OF TANK CAPACITY BY VOLUME.
 - LEVEL SENSOR TO BE CONNECTED TO TWO CHANNEL ALARM PANEL.
 - REINFORCED CONCRETE SLAB FOR LEACHATE STORAGE TANK TO BE REINFORCED WITH #5 BARS @ 12" O.C. EACH WAY, WITH TWO (2) ADDITIONAL #5 BARS AROUND OPENINGS.

4,000 GALLON DOUBLE-WALLED UNDERGROUND LEACHATE COLLECTION TANK

SECTION

SCALE: 1"=2'

C
14

PERMIT USE ONLY - NOT FOR CONSTRUCTION

I.W.S. TRANSFER SYSTEMS OF N.Y., INC.
GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK

PROPOSED FACILITY MODIFICATIONS PROPOSED LEACHATE MANAGEMENT DETAILS

SHEET NO.
14
PROJECT NO.
4223429

KRISTEN M. THORBAKE, P.E.
N.Y.P.E. Lic. No. 067294-1 Date

REV	DATE	DESCRIPTION	OWN BY	DES BY	CHK BY	APP BY
1	MARCH 2024	DATE OF ISSUE	DESIGNED BY	JLB	ACS	KMT
2			CHECKED BY			
3			APPROVED BY			

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1. ALL PIPING ABOVE THE FROST DEPTH ELEVATION TO BE HEAT TRACED AND INSULATED.

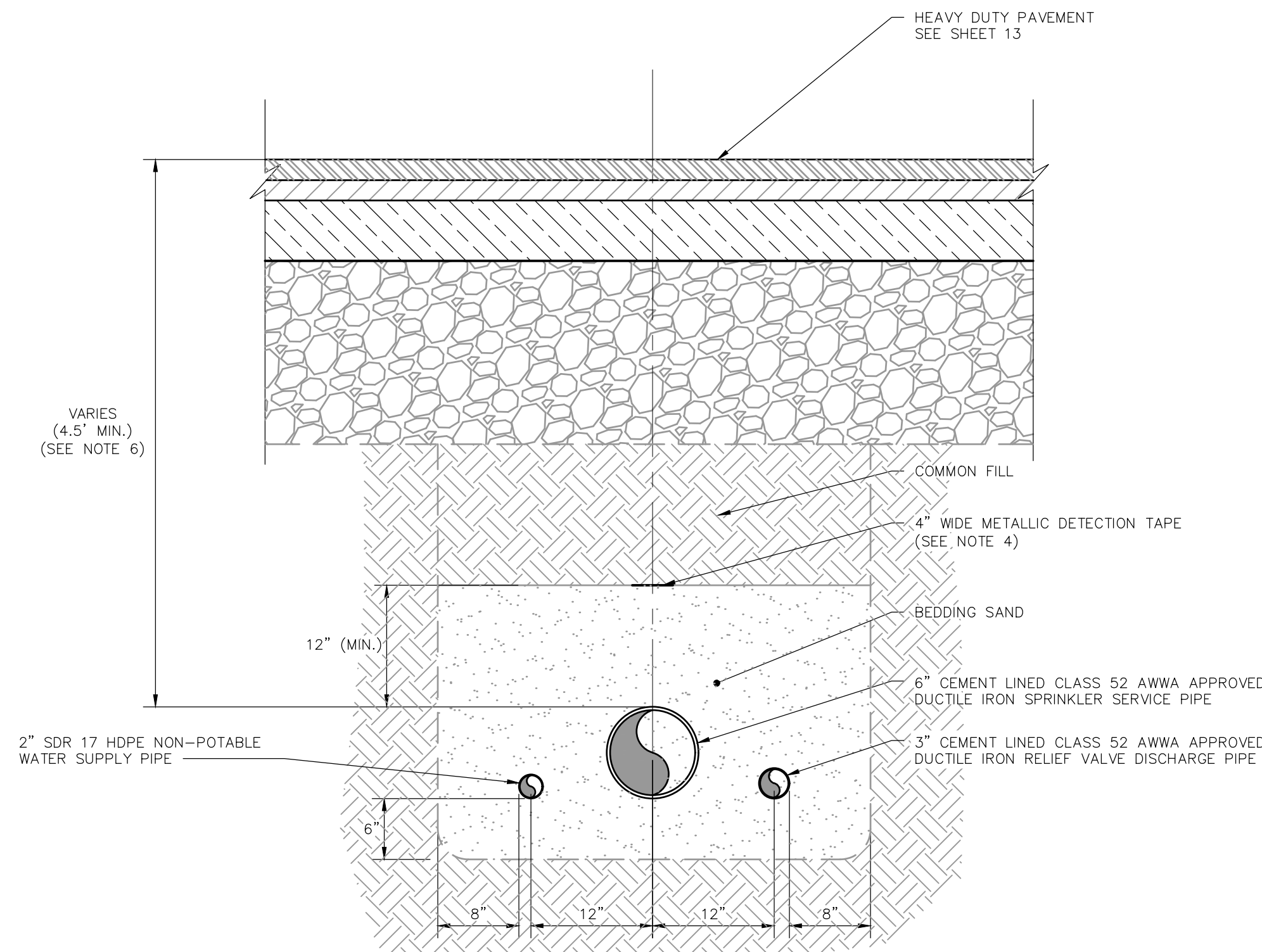
**ABOVE GROUND
WATER STORAGE & SUPPLY TANK**

DETAIL

SCALE: 1" = 4'

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NOTES:

1. BEDDING SAND BE SHALL BE FREE OF ANY SHARP OBJECTS WHICH COULD PUNCTURE OR OTHERWISE CAUSE DAMAGE TO THE STRUCTURES/EQUIPMENT REQUIRING ITS SUPPORT. IT SHALL BE CLEAN SAND WITH SUBANGULAR OR SUBROUNDED GRAINS, AND A MAXIMUM PARTICLE SIZE OF 3/4". THE SOIL SHALL BE ACCEPTABLE TO THE ENGINEER PRIOR TO PLACEMENT AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

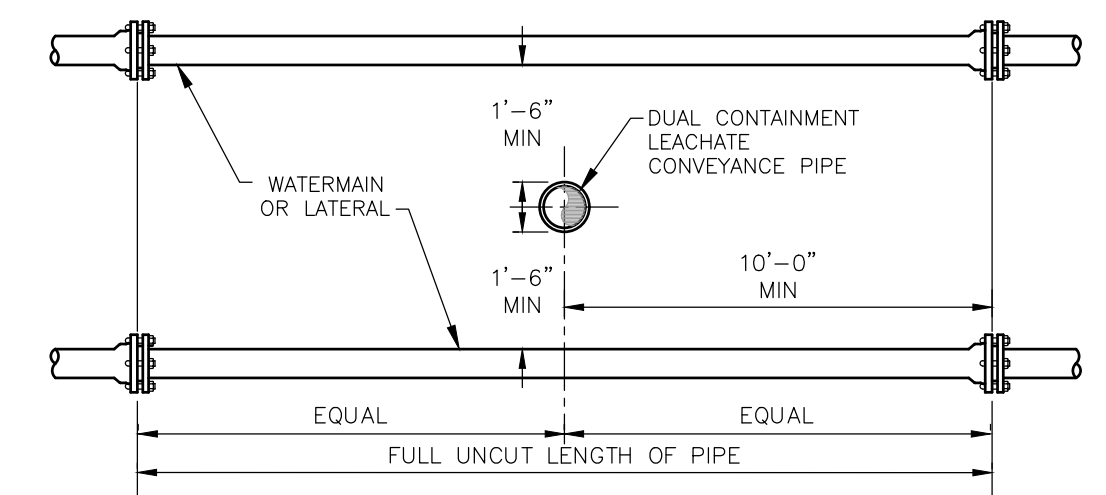
<u>SIEVE DESIGNATION</u>	<u>% PASSING</u>
3/4"	100%
NO. 40	0-70%
NO. 200	0-10%

2. COMMON FILL SHALL BE NATURAL RUN-OF-BANK (R.O.B.) OR EXCAVATED ON-SITE MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS, AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM COARSE TO FINE PARTICLES HAVING NO PARTICLES WITH A DIMENSION IN EXCESS OF SIX INCHES (6"), LESS THAN 50% QUANTITY BY WEIGHT PASSING THE NO. 200 SIEVE, AND LESS THAN 10% BY WEIGHT SMALLER THAN 0.002 MILLIMETERS (CLAY). COMMON FILL GRADEATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
3. CARE SHALL BE TAKEN TO ENSURE THAT FILL IS MADE COMPACT AND TIGHT FROM 6" BELOW THE BOTTOM OF THE PIPE TO A MINIMUM HEIGHT OF 70% OF THE PIPE'S INSIDE DIAMETER. THIS INITIAL BEDDING AND BACKFILL SHALL BE MADE IN 6" MAXIMUM LIFTS AND COMPACTED USING HAND OPERATED EQUIPMENT.
4. INSTALL CONTINUOUS 4" WIDE METALLIC DETECTION TAPE DURING BACKFILLING OF TRENCH. LOCATE TAPE 12" ABOVE PROPOSED PIPE OR DIRECTLY BELOW PAVEMENT.
5. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
6. THE MINIMUM DEPTH TO THE TOP OF THE PIPE MAY BE REDUCED THROUGHOUT THE USE OF APPROPRIATE INSULATION, SHOULD THIS ALTERATION BE SUBMITTED TO THE PROJECT CONTRACTOR SHALL SUBMIT DETAILED PROPOSED DESIGN JUSTIFICATION, WITH DEMONSTRATION OF CONFORMANCE WITH APPLICABLE CODE REQUIREMENTS, FOR REVIEW AND APPROVAL BY THE ENGINEER.

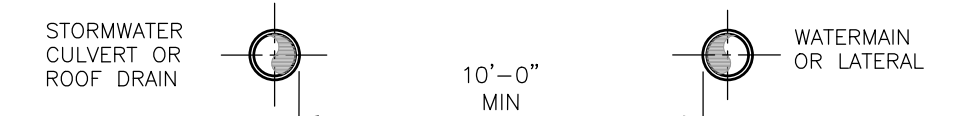
WATER SERVICE PIPING TRENCH & BEDDING

DETAIL

SCALE: NOT TO SCALE



VERTICAL SEPARATION



HORIZONTAL SEPARATION

NOTE:

1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE ORANGE COUNTY DEPARTMENT OF HEALTH. CONCRETE ENCASEMENT OF WATER SERVICE PIPING OR OFFSETTING OF WATER SERVICE PIPING MAY BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.

WATER SERVICE & LEACHATE PIPING SEPARATION

DETAIL

SCALE: NOT TO SCALE

3

15

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I.W.S. TRANSFER SYSTEMS OF N.Y., INC.
GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK

PROPOSED FACILITY MODIFICATIONS

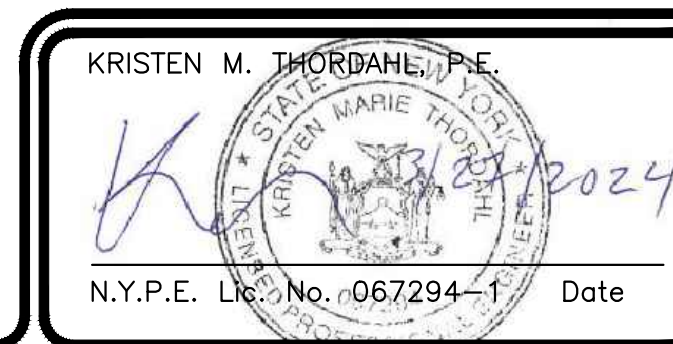
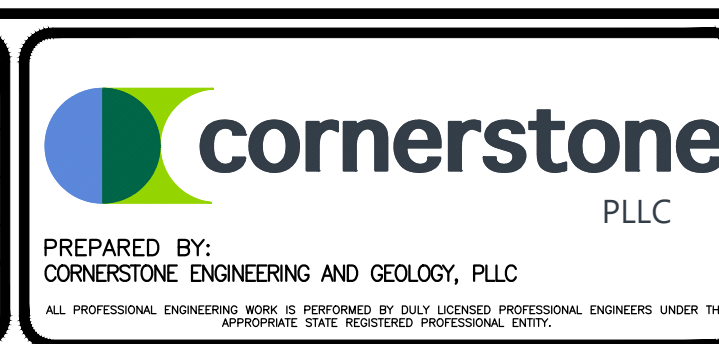
PROPOSED WATER SUPPLY TANK DETAILS

SHEET NO.

15

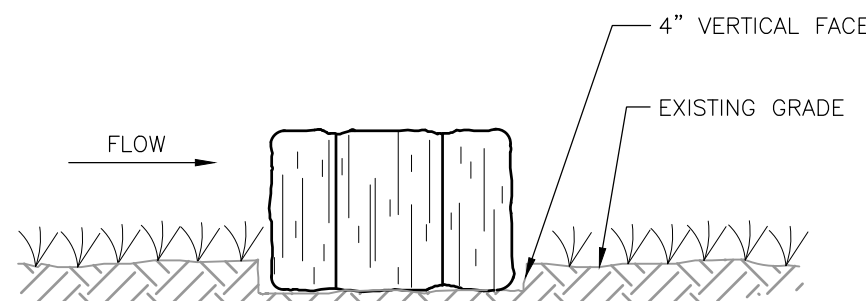
PROJECT NO.

23429

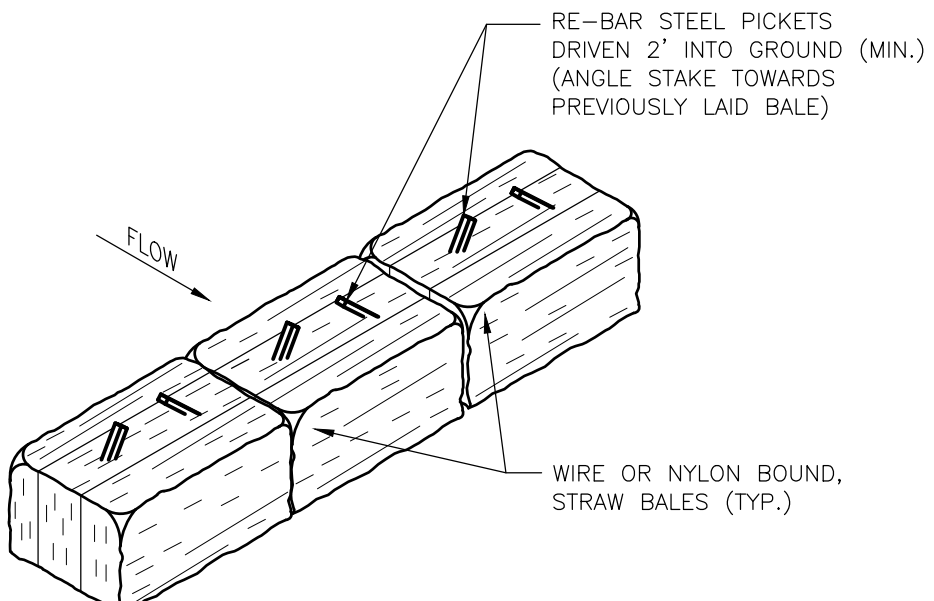
[illegible]

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EMBEDDING VIEW



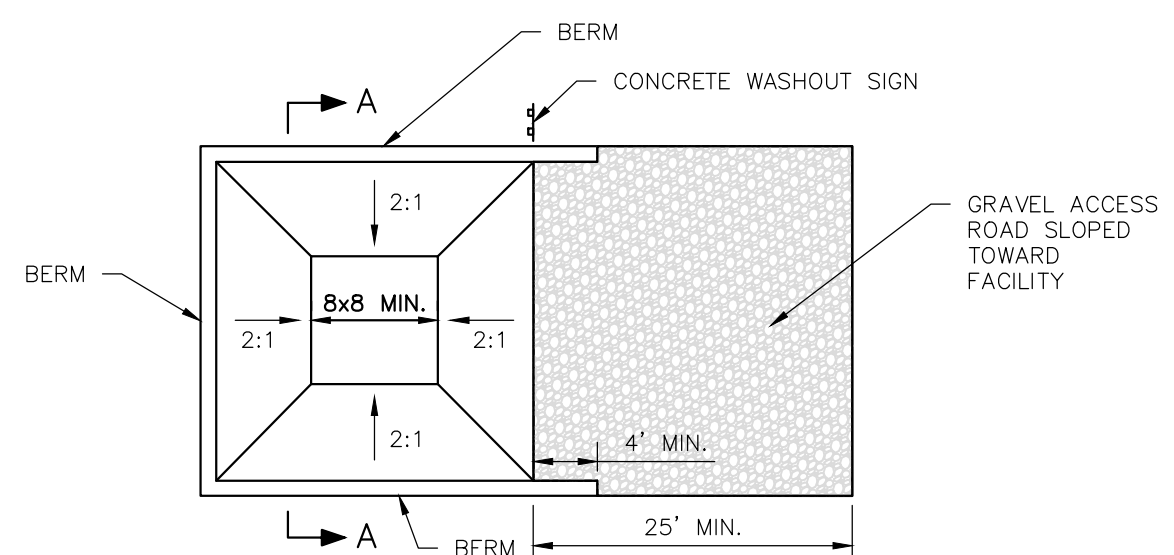
ISOMETRIC VIEW

STRAW BALE

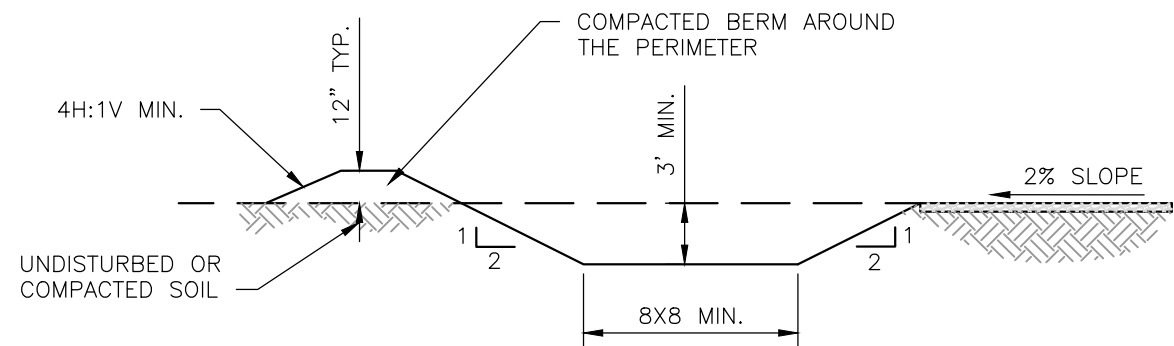
DETAIL

SCALE: N.T.S.

1
16



PLAN



SECTION "A"

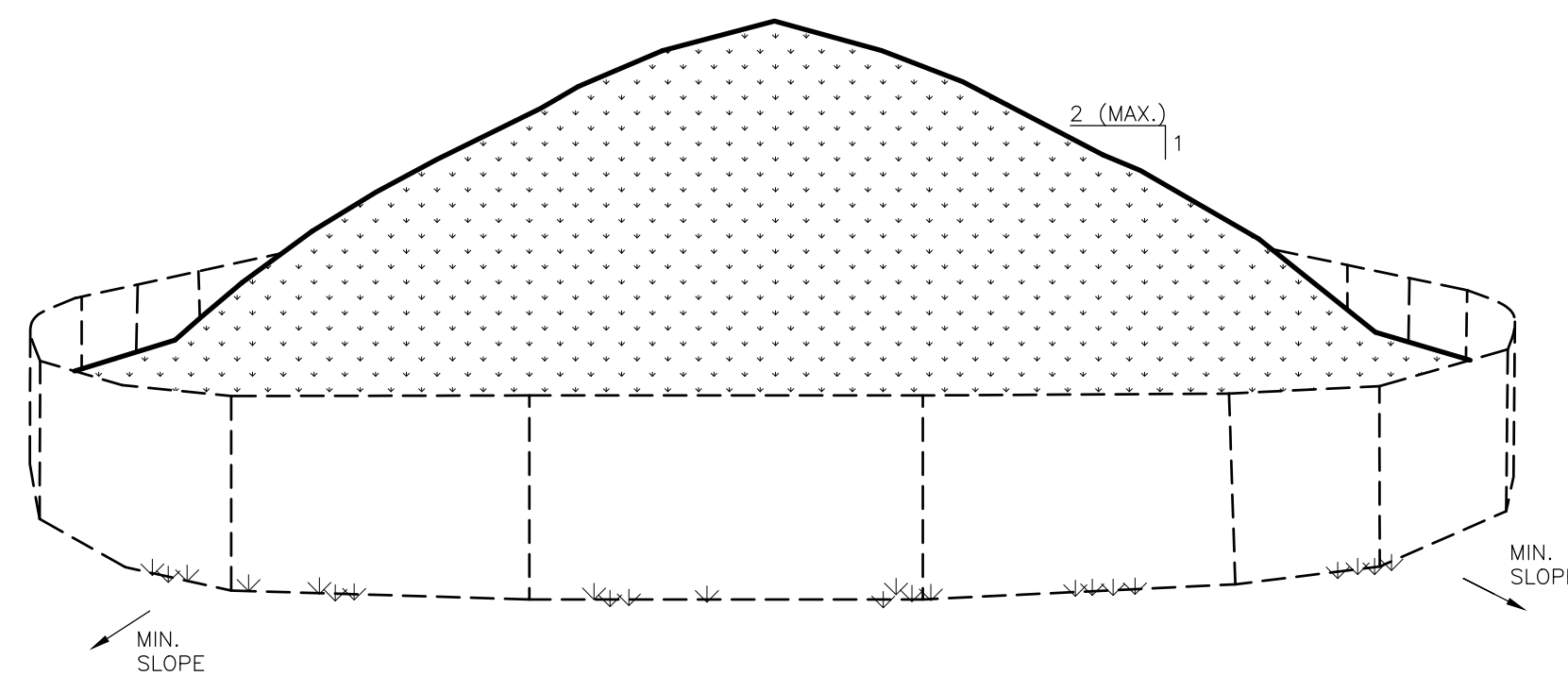
- NOTES:**
1. LOCATE THE FACILITY A MINIMUM OF 100 FEET FROM DRAINAGE SWALES, STORM DRAIN INLETS, WETLANDS, STREAMS AND OTHER SURFACE WATER.
 2. PREVENT SURFACE WATER FROM ENTERING THE STRUCTURE EXCEPT FOR THE ACCESS ROAD.
 3. PROVIDE A GRAVEL ACCESS ROAD TO FACILITY THAT IS SLOPED DOWN TO FACILITY.
 4. SIGNS SHALL BE PLACED TO DIRECT DRIVERS TO THE FACILITY AFTER THEIR LOAD IS DISCHARGED.
 5. ALL WASHOUT FACILITIES SHALL BE LINED TO PREVENT LEACHING OF LIQUIDS INTO THE GROUND. THE LINER SHALL BE PLASTIC SHEETING HAVING A MINIMUM THICKNESS OF 10 MILS WITH NO HOLES OR TEARS, AND ANCHORED BEYOND THE TOP OF THE PIT WITH AN EARTHEN BERM, SAND BAGS, STONE, OR OTHER STRUCTURAL APPURTENANCES EXCEPT AT THE ACCESS POINT.
 6. PREFABRICATED WASHOUT FACILITIES CAN BE USED BUT THEY MUST CAPTURE AND CONTAIN CONCRETE WASH AND BE SIMILARLY SIZED AS SHOWN ABOVE AND LOCATED AS NOTED ABOVE.
 7. WASH WATER IS ESTIMATED TO BE 7 GALLONS PER CHUTE AND 50 GALLONS PER HOPPER OF A PUMP TRUCK AND/OR DISCHARGING DRUM.
- MAINTENANCE:**
1. CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED DAILY.
 2. DAMAGED OR LEAKING FACILITIES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.
 3. EXCESS ACCUMULATED RAINWATER OVER HARDENED CONCRETE SHALL BE PUMPED TO A STABILIZED AREA, SUCH AS A GRASS FILTER STRIP.
 4. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE FACILITY IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF-SITE AT A PERMITTED C&D LANDFILL. NO ONSITE DISPOSAL WILL BE ALLOWED.
 5. THE PLASTIC LINER SHALL BE REPLACED WITH EACH CLEANING OF THE FACILITY.
 6. INSPECT PROJECT SITE FREQUENTLY TO ENSURE THAT NO CONCRETE DISCHARGES ARE TAKING PLACE IN NON-DESIGNATED AREAS.

CONCRETE DELIVERY TRUCK WASHOUT AREA

DETAIL

SCALE: N.T.S.

3
16



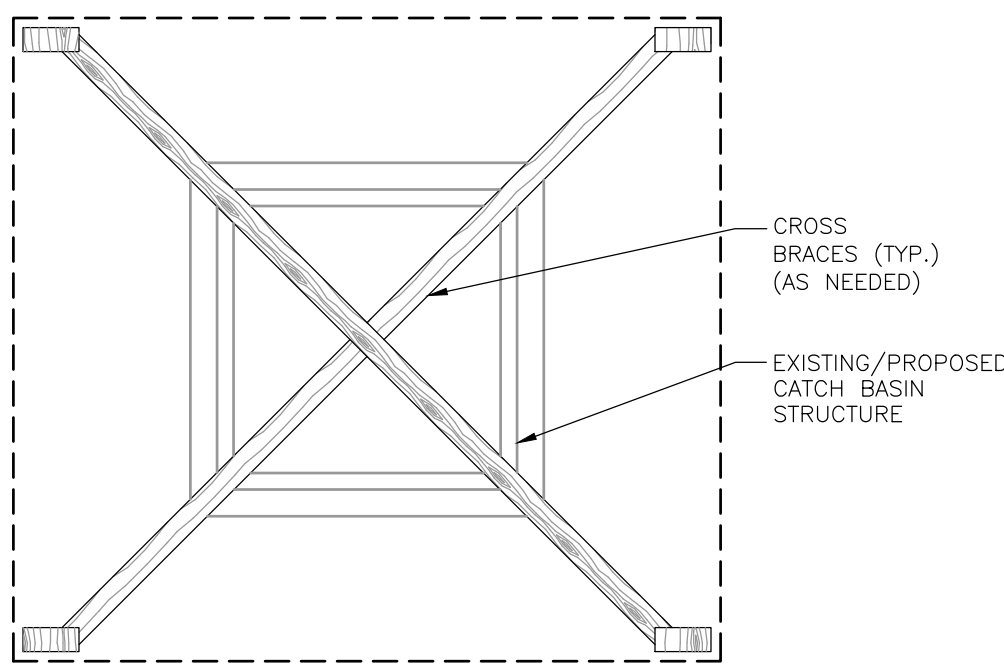
- NOTES:**
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
 2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
 3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED SHOULD THE STOCKPILE REMAIN FOR MORE THAN FOURTEEN (14) DAYS.
 4. PLACEMENT OF THE SURROUNDING SILT FENCE SHALL BE IN ACCORDANCE WITH THE SILT FENCE DETAIL.
 5. STOCKPILE HEIGHT SHOULD NOT EXCEED TWENTY (20) FEET.

TEMPORARY SOIL STOCKPILE

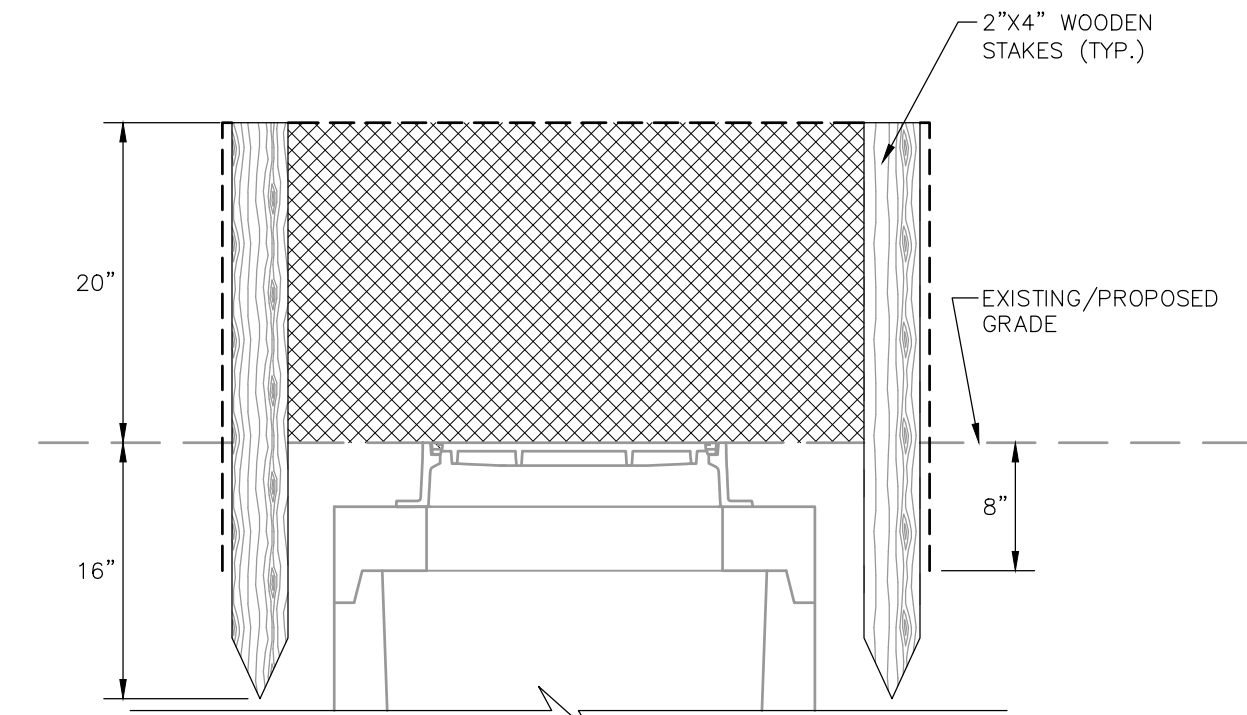
DETAIL

SCALE: N.T.S.

2
16



PLAN VIEW



SIDE VIEW

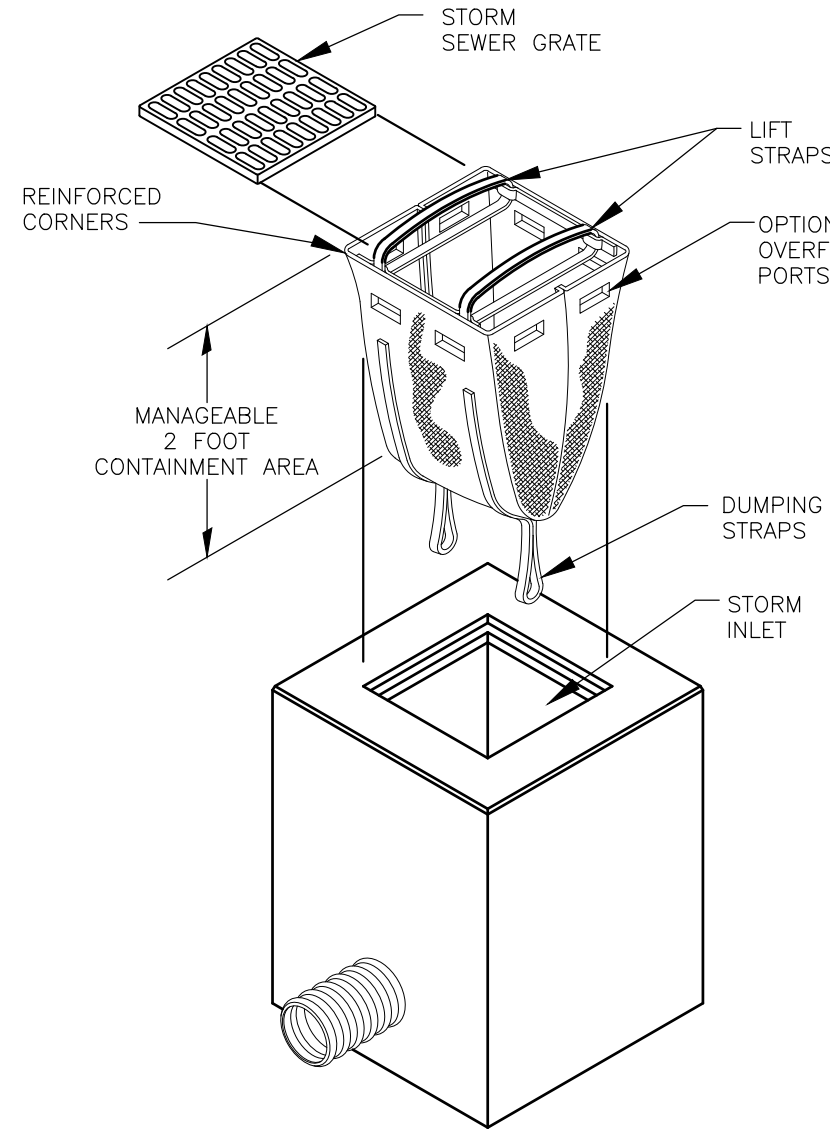
- NOTES:**
1. CUT FABRIC FROM CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED, OVERLAP TO THE NEXT STAKE.
 2. STAKE MATERIALS WILL BE STANDARD 2"x4" WOOD OR EQUIVALENT, WITH A MINIMUM LENGTH OF 3 FEET.
 3. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE MINIMUM 16" DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND FABRIC FOR SUPPORT.
 4. FABRIC SHALL BE EMBEDDED 8" MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
 5. A 2"x4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVERFLOW STABILITY.
 6. INLET PROTECTION SHALL REMAIN IN-PLACE UNTIL SITE HAS BEEN STABILIZED.

CATCH BASIN INLET PROTECTION

DETAIL

SCALE: 1"=1'

5
16

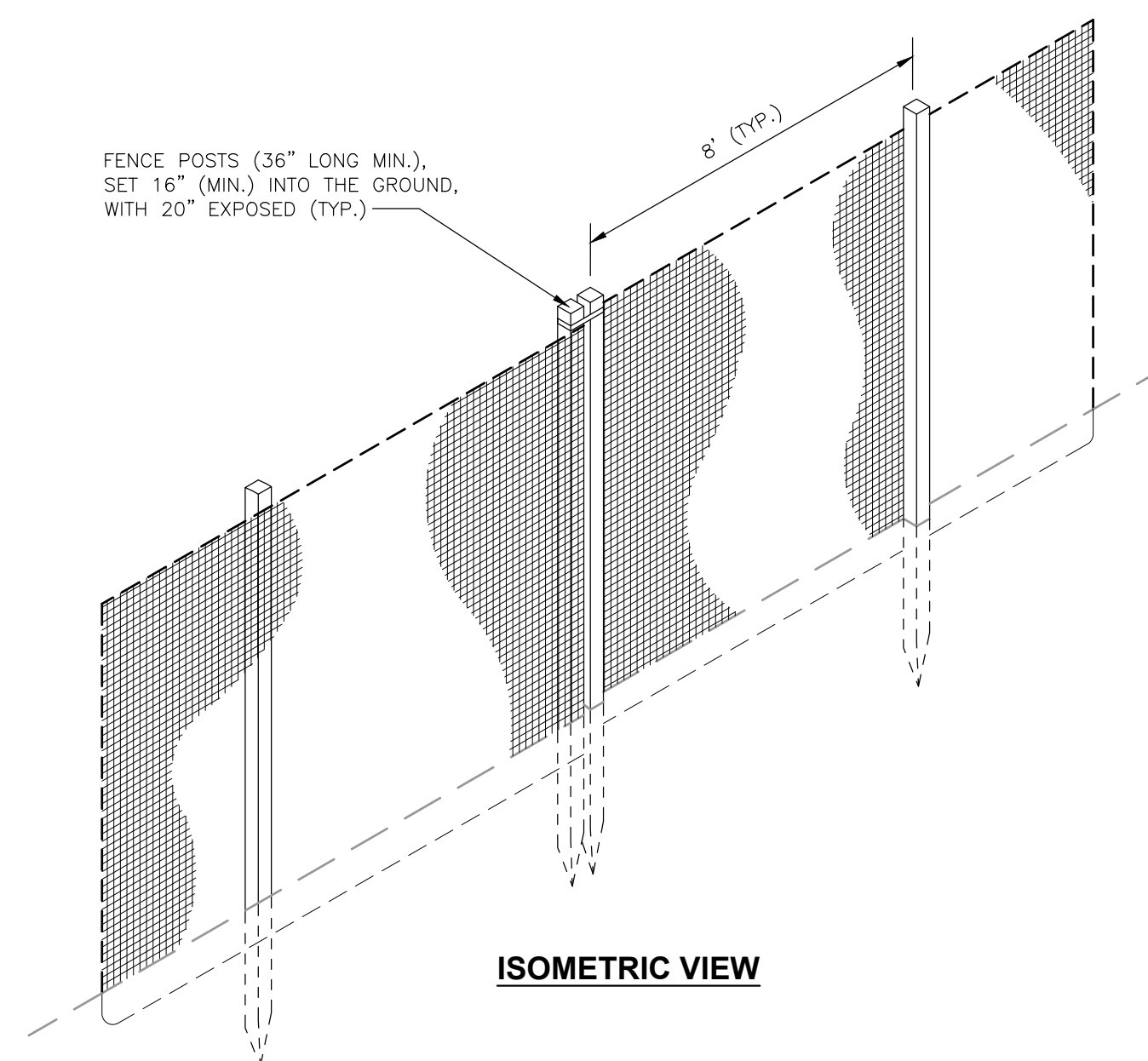


DANDY SACK INLET PROTECTION

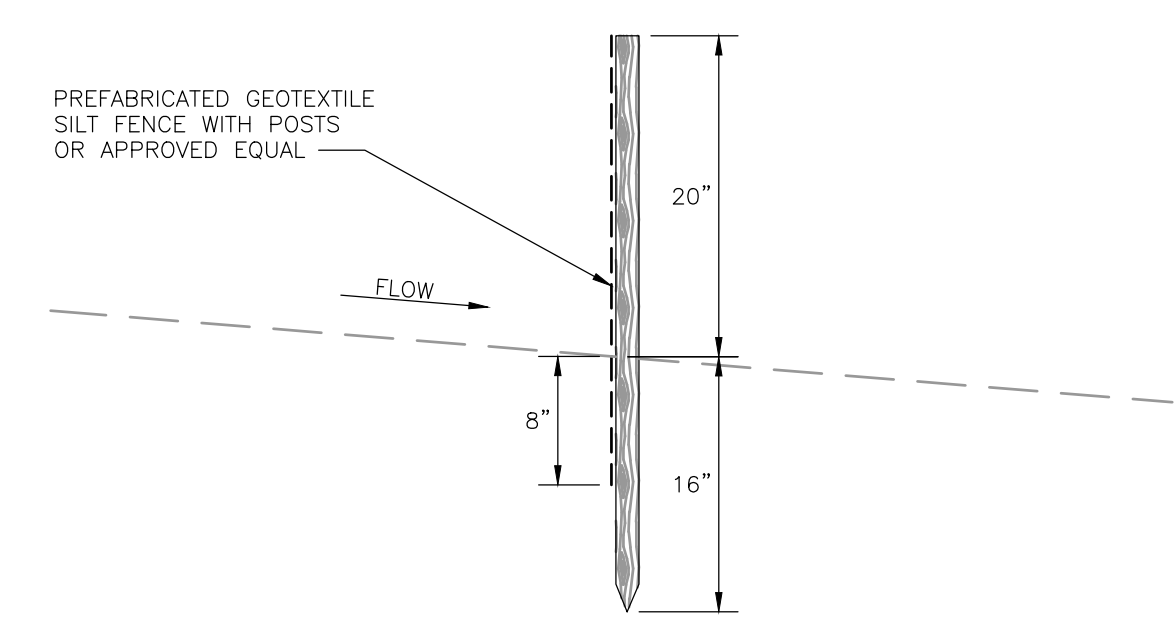
DETAIL

SCALE: N.T.S.

4
16



ISOMETRIC VIEW



SECTION VIEW

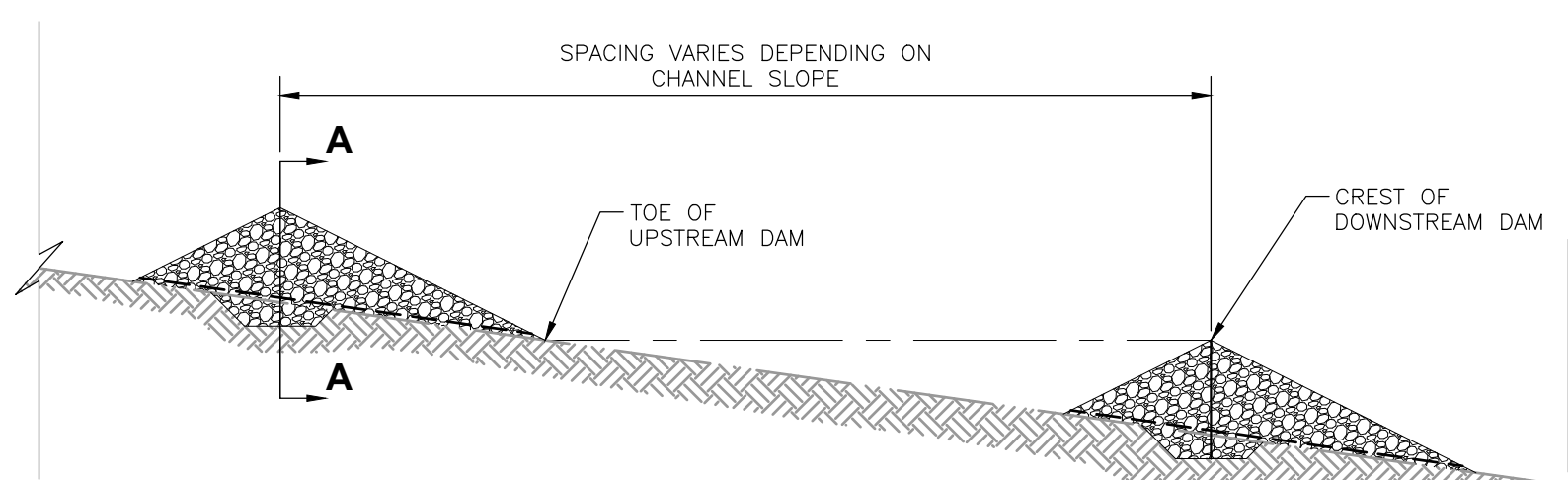
- NOTES:**
1. DUE TO THE DENSE COMPACTION AND PHYSICAL COMPOSITION OF THE IN-SITU SOILS THE CONTRACTOR MAY BE REQUIRED TO UTILIZE ALTERNATE MATERIALS FOR USE AS FENCE POSTS OR PRE-DRILL EMBEDMENT CORES TO ENSURE SATISFACTORY INSTALLATION AND PERFORMANCE OF THE SILT FENCE.
 2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 12" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE.
 4. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED. FILTER CLOTH SHALL BE TENAX 700 OR APPROVED EQUAL.
 5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIALS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
 6. MAXIMUM DRAINAGE AREA FOR OVERLAND FLOW TO A SILT FENCE SHALL NOT EXCEED 1/4 ACRE PER 100 FEET OF FENCE.
 7. SILT FENCE SHALL BE USED WHERE EROSION COULD OCCUR IN THE FORM OF SHEET EROSION.
 8. SILT FENCE SHALL NOT BE USED WHEN A CONCENTRATION OF WATER IS FLOWING TO THE BARRIER.
 9. MAXIMUM ALLOWABLE SLOPE LENGTHS CONTRIBUTING RUN-OFF TO A SILT FENCE ARE:
- | SLOPE STEEPNESS | MAXIMUM SLOPE LENGTH(FT) |
|-----------------|--------------------------|
| 2:1 | 25 |
| 3:1 | 50 |
| 4:1 | 75 |
| 5:1 OR FLATTER | 100 |

REINFORCED SILT FENCE

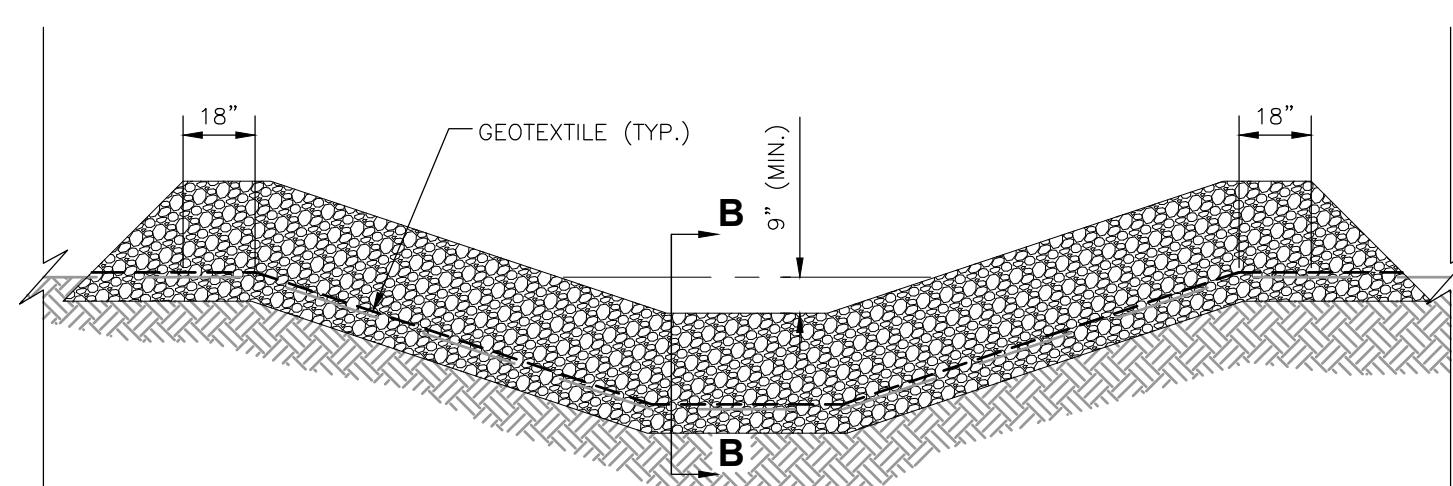
DETAIL

SCALE: N.T.S.

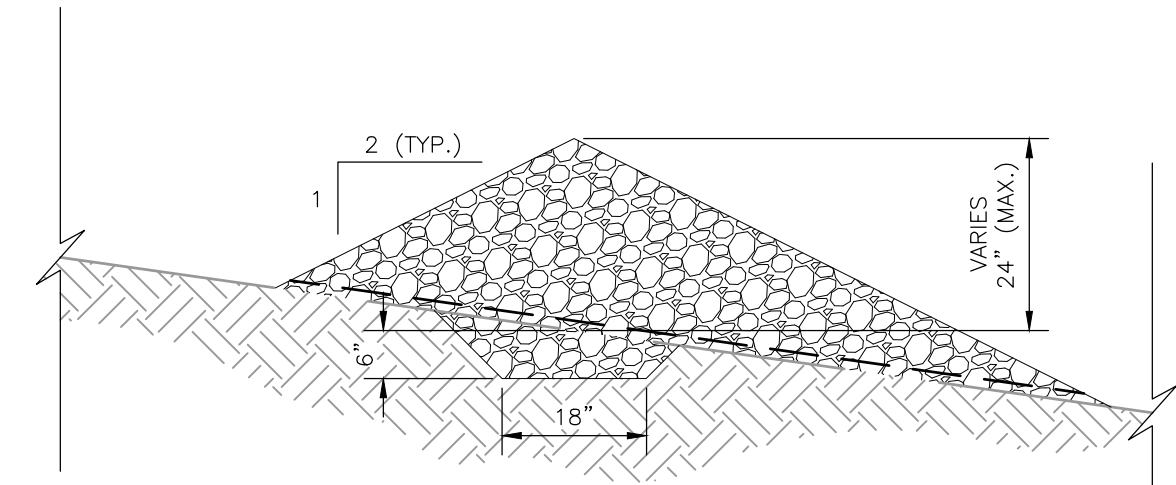
6
16



PROFILE



SECTION A-A



SECTION B-B

- NOTES:**
1. PLACEMENT OF STONE CHECK DAMS WILL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.
 2. STONE SHALL BE PLACED ON A GEOTEXTILE FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN ON THE PLAN AND/OR DETERMINED BY THE ENGINEER DURING CONSTRUCTION.
 3. SET SPACING OF CHECK DAMS SUCH THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM ARE AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
 4. EXTEND THE STONE A MINIMUM OF EIGHTEEN INCHES (18") BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
 5. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR EROSION CONTROL MAT AS APPROPRIATE.
 6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAM ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
 7. MAXIMUM DRAINAGE AREA IS TWO ACRES (2 AC).

STONE CHECK DAM

DETAIL

SCALE: N.T.S.

7
16

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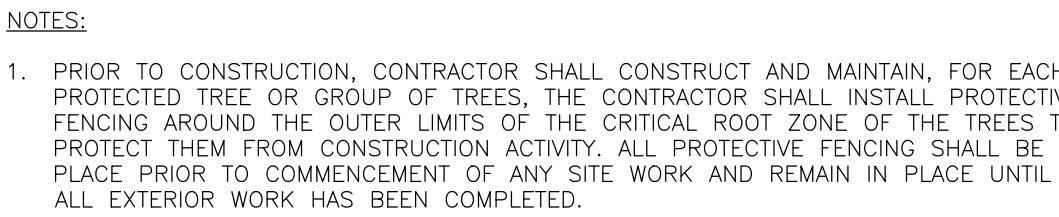
PROPOSED FACILITY MODIFICATIONS
PROPOSED EROSION & SEDIMENT CONTROL DETAILS

SHEET NO.
16
PROJECT NO.
4223429

BODHI A. PIEDMONT-LEISCHMANN, P.E.
N.Y.P.E. Lic. No. 099699 Date

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	MARCH 2024	DATE OF ISSUE				
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3		DESIGNED BY	BPF/KMT		KMT	
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5		APPROVED BY				

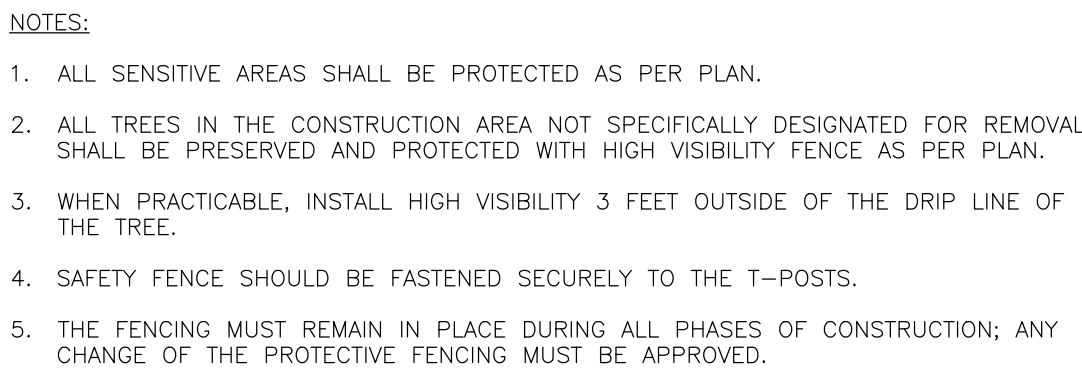
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DETAIL

SCALE: 1"=1'

1
17

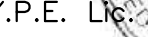


DETAIL

SCALE: NOT TO SCALE

2
17

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 3/27/2024

N.Y.P.E. Lic. No. 099699 Date

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PROPOSED FACILITY MODIFICATIONS
PROPOSED MISCELLANEOUS DETAILS

PROJECT NC
4223429

APPENDIX A

APPLICATION FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT AND RECORD OF COMPLIANCE

DEPARTMENT USE ONLY

ACTIVITY NUMBER(S)

Please read all instructions before completing this application

Reset Form

1. APPLICATION TYPE (CHECK ALL APPLICABLE BOXES):

☐ Initial (New) ☒ Modification ☒ Renewal (Existing permit expiration date: 9/25/2024)

☒ Facility Owner ☒ Facility Operator

☐ YES (Name of municipality: _____) ☐ NO

☐ Check here if facility owner, operator and/or real property owner has changed since last application was submitted.

Email: JAnderson@interstatewaste.com

Email: kristen.thordahl@tetrattech.com

Email: JAnderson@interstatewaste.com

☐ Check here if facility owner is not real property owner.
See instruction page for written permission requirement.

- ☐ Combustion & Thermal Treatment (362-1)
- ☒ C & D Debris Handling & Recovery (361-5)
- ☐ Composting & Other Organics Processing (361-3)
- ☐ Household Hazardous Waste Collection (362-4)
- ☐ Land Application & Associated Storage (361-2)
- ☐ Landfill (363)
- ☐ Regulated Medical Waste (365)
- ☐ Mulch Processing (361-4)
- ☐ Municipal Solid Waste Processing (362-2)

- ☐ Navigational Dredge Material Handling & Recovery (361-9)
- ☐ Nonspecific Facilities (360.17)
- ☐ Recyclables Handling & Recovery (361-1)
- ☐ Research, Development, and Demonstration (360.18)
- ☒ Transfer (362-3)
- ☐ Waste Oil (374-2)
- ☐ Waste Tire Handling & Recovery (361-6)
- ☐ Used Cooking Oil & Yellow Grease (361-8)

10. NAME(S) OF ALL MUNICIPALITIES IN SERVICE AREA:

Municipalities in Orange County, New York

11. SOLID WASTE ACCEPTED: *Identify facility capacity and throughput of each waste type, as applicable*

The Facility will accept up to 670 TPD of MSW and C&D Debris when operating under Part 362-3 or a maximum of 570 TPD of MSW and a maximum of 100 TPD of C&D when operating under both Part 362-3 and Part 361-5.

FOR MODIFICATION APPLICATION ONLY**12. DOES THE MODIFICATION APPLICATION INVOLVE (CHECK ALL APPLICABLE BOXES):** Transfer Station Building Addition☐ New waste type ☐ New equipment ☐ Waste acceptance rate increase ☐ Facility expansion (including landfill)**SKIP QUESTION #13 AND #14 IF APPLYING FOR RENEWAL ONLY****13. APPLICATION DESCRIPTION***Include a brief description of new or modification request*

The Facility is requesting that 70 TPD of source-separated recyclables be converted to MSW and C&D Debris. The Facility will accept up to 670 TPD of MSW and C&D Debris when operating under Part 362-3 or a maximum of 570 TPD of MSW and a maximum of 100 TPD of C&D when operating under both Part 362-3 and Part 361-5.

14. FACILITY SIZEa. Facility size proposed (acres) 3.0b. Total site area (acres) 3.0**For modification application ONLY**c. Associated facility size change (acres) 0.23**For Landfill ONLY**

d. Facility size ultimately planned (acres) _____

e. Existing landfill area on this site and adjacent properties (acres) _____

f. Ultimate facility height above ground level (feet) _____

15. IS A VARIANCE REQUESTED FROM ANY PROVISION OF 6 NYCRR PART 360 SERIES?☐ Yes ☒ No If yes, submit an application for variance and cite specific provision(s) here: _____**16. REAL PROPERTY OWNER CERTIFICATION**☐ Corporation ☐ Partnership ☐ Sole Proprietorship ☐ Municipality/other government entity ☒ Other: Incorporation

I hereby attest that I am the owner of the real property on which the facility is located or the proposed or modified facility will be located and am signing in my individual capacity.

Or if signing in a representative capacity: I hereby attest that I am the (indicate title or capacity) _____, an authorized representative of the owner of the real property on which the facility is located or the proposed or modified facility will be located. I am duly authorized on behalf of said owner to sign make this certification on this application.

I grant permission for the applicant to apply for the permit, and construct and operate the facility described in the application in accordance with a final DEC permit or approval. I also grant permission for the department to access the above-described real property, including any adjacent areas, during all reasonable times (including but not limited to 7:00 am to 7:00 pm Monday through Friday, and additional facility hours of operation, and as appropriate during emergencies and similar exigent circumstances) without the property owner, applicant or other representative of the property owner or facility present. If the property is posted with "keep out" signs or fenced with an unlocked gate, department staff may still enter the property. Department staff may traverse the property, inspect the facility, take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the property, and conduct other activities necessary to evaluate the permit application or assess the facility's compliance with the permit and any other applicable statutory or regulatory requirements.

I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Signature: Michael DiBella Print Name: Michael DiBella Date: 3/12/2024

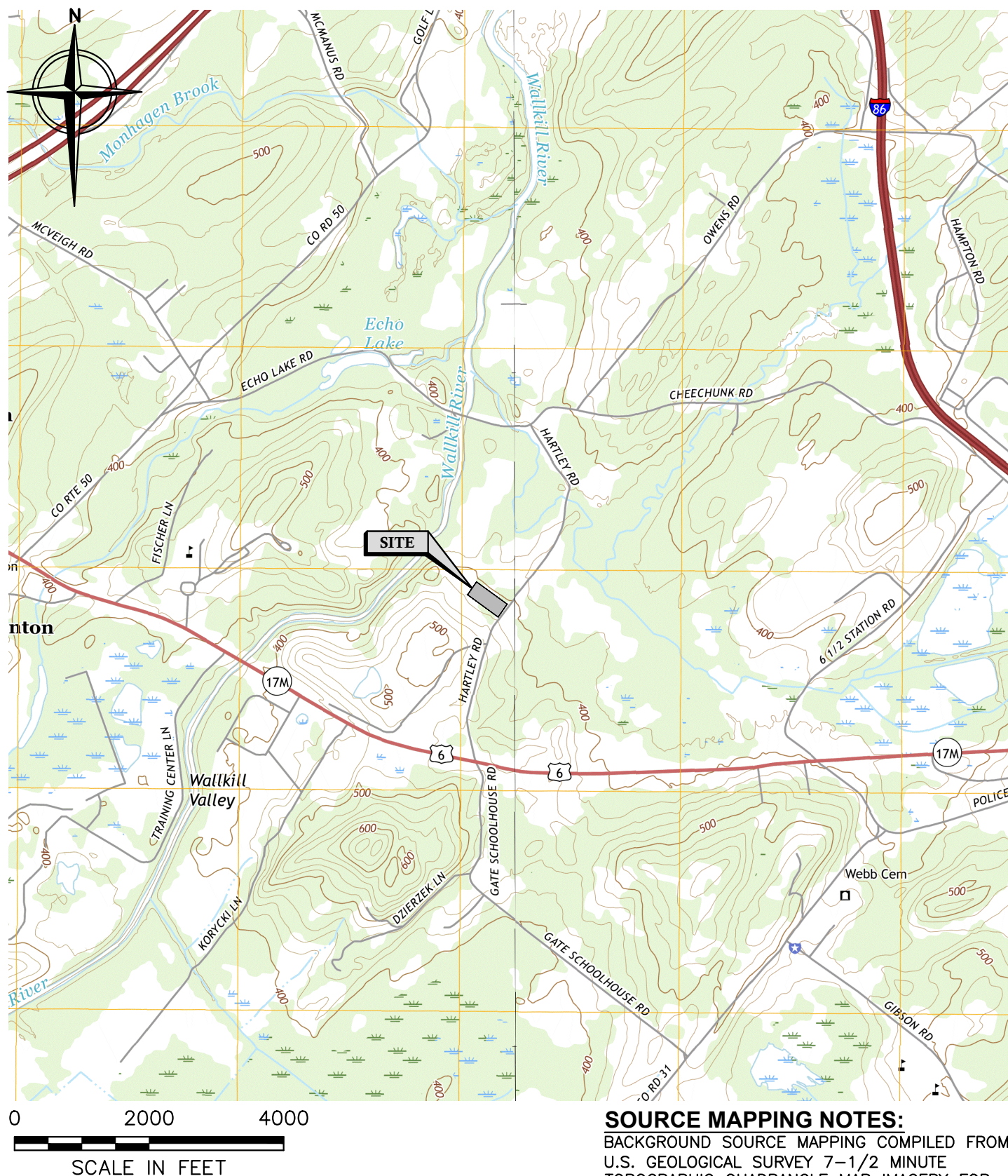
Title or Representation if signing in a representative capacity: _____

17. APPLICANT CERTIFICATION☐ Corporation ☐ Partnership ☐ Sole Proprietorship ☐ Municipality/other government entity ☒ Other: Incorporation

I hereby attest that I am the (check one) ☐ President/Vice President ☐ General Partner ☐ Sole Proprietor ☐ Duly Authorized Municipal Representative of (APPLICANT) _____ and the legally responsible party for this application as presented to NYSDEC. I affirm that the statements and information provided on this application and all attachments submitted herewith are true, accurate, and complete.

I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. I accept full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agree to indemnify and hold harmless the State from any and all causes of action in law or equity, resulting from the said project.

Signature: Michael DiBella Print Name: Michael DiBella Date: 3/11/2024



This drawing represents intellectual property of Cornerstone. Any modification to the original by other than Cornerstone personnel violates its original purpose and as such is rendered void. Cornerstone will not be held liable for any changes made to this document without express written consent of the originator.

SOURCE MAPPING NOTES:

BACKGROUND SOURCE MAPPING COMPILED FROM U.S. GEOLOGICAL SURVEY 7-1/2 MINUTE TOPOGRAPHIC QUADRANGLE MAP IMAGERY FOR GOSHEN (2016), AND MIDDLETOWN (2016).

Unauthorized alteration or addition to this plan bearing a licensed professional's seal is a violation of Section 7209, Sub-Division 2, of the New York Education Law. Only copies from the original of this plan marked with an original professional's seal shall be considered to be valid true copies.



PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

IWS TRANSFER SYSTEMS OF NY, INC.
GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK 10924

SITE LOCATION MAP

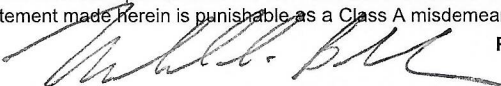
FIGURE NO.

1

PROJECT NO.
4233429

RECORD OF COMPLIANCE-Permit Application Supplement

Please read all instructions on reverse side before completing this application

1. FULL NAME OF APPLICANT Interstate Waste Services, Inc.		
2. MAILING ADDRESS (Principal Place of Business) Street 300 Frank W. Burr Blvd., Ste. 39	3. NEW YORK STATE MAILING ADDRESS (If different) Street	
City/State/Zip Code Teaneck, NJ 07666	City/State/Zip Code	
4. TYPE OF ORGANIZATION ☐ Individual ☐ Partnership ☐ Company ☐ Corporation ☒ Other Incorporation		If other than individual, provide Federal Taxpayer ID Number 32-0620266
5. Does the applicant currently hold any permit issued under the Environmental Conservation Law? ☐ Yes ☒ No		
6. a. Has the applicant been denied a permit or has the applicant had a permit revoked or suspended under the Environmental Conservation Law? or b. Is the applicant currently the subject of an enforcement action under the Environmental Conservation Law? a. ☐ Yes ☒ No b. ☐ Yes ☒ No		
7. If any answer to questions 5, 6(a), or 6(b) is YES, provide details on a separate page and attach it to this form.		
8. Has the applicant, and if the applicant is a corporation, has any officer, director, or large stockholder (owner of 25 percent or more of not publicly-traded stock) of the corporation, within the last ten (10) years, been: a. found in an administrative, civil or criminal proceeding to have violated any provision of the Environmental Conservation Law (ECL), any related order or determination of the Commissioner, any regulation promulgated pursuant to the ECL, the condition of any permit issued thereunder, or any similar statute, regulation, order or permit condition of any other state or federal government agency? ☐ Yes ☒ No b. an officer, director or large stockholder (owner of 25% or more of not publicly-traded stock) of a corporation which-during the time such person was an officer, director or large stockholder-was determined in an administrative, civil or criminal proceeding to have violated any provision of the Environmental Conservation Law (ECL), any related order or determination of the Commissioner, any regulation promulgated pursuant to the ECL, the condition of any permit issued thereunder, or any similar statute, regulation, order or permit condition of any other state or federal government agency? ☐ Yes ☒ No c. convicted of a criminal offense under the laws of any state or federal government agency, which involves environmental statutes or regulations, or fraud, bribery, perjury, theft or an offense against public administration as that term is used in Article 195 of the Penal Law, or an offense involving false written statements as those terms are defined in Article 175 of the Penal Law? Out-of-state history may be limited to misdemeanors, felonies and civil penalties assessed at \$25,000 or more. ☐ Yes ☒ No d. an officer, director or large stockholder (owner of 25% or more of not publicly-traded stock) of a corporation which-during the time such person was an officer, director or large stockholder-was convicted of a criminal offense under the laws of any state or federal government agency, which involves environmental statutes or regulations or fraud, bribery , perjury, theft, or an offense against public administration as that term is used in Article 195 of the Penal Law, or an offense involving false written statements as those terms are defined in Article 175 of the Penal Law? Out-of-state history may be limited to misdemeanors, felonies and civil penalties assessed at \$25,000 or more. ☐ Yes ☒ No		
9. If any answer to questions 8a through 8d is YES, provide details on a separate page and attach it to this form.		
10. Does the applicant currently owe any regulatory fees pursuant to Article 72 of the Environmental Conservation Law to the Department of Environmental Conservation? ☐ Yes, amount \$ ☒ No Under dispute for year(s) Amount \$		
11. CERTIFICATION (By Applicant who is an Individual) I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Date: <u>3/11/2021</u> Signature: <u></u> Print Name: <u>Michael DiBella</u>		
ITEMS 12 THROUGH 15 TO BE COMPLETED BY AN APPLICANT OTHER THAN AN INDIVIDUAL		
12. SPECIFY UNDER WHAT LAW APPLICANT WAS ORGANIZED Delaware General Corporation Law	13. STATE DE	14. DATE OF ORGANIZATION 1/14/2020
15. CERTIFICATION (By an Applicant Other Than an Individual) I hereby affirm under penalty of perjury that I am CEO (title) of Interstate Waste Services, Inc. (entity); that I am authorized by that entity to make this application; that this application was prepared by me or under my supervision and direction; and that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Date: Signature: Print Name:		



**Department of
Environmental
Conservation**

This form is for Interstate Waste Services, Inc. which owns 100% of The Action Environmental Group, Inc. and I.W.S. Transfer Systems of NY, Inc.

DEPARTMENT USE ONLY	
DEC APPLICATION NO.	
ACTIVITY NUMBER(S)	

**New York State Department of Environmental Conservation
RECORD OF COMPLIANCE SUPPLEMENTAL INFORMATION FORM**

1. APPLICANT NAME: <u>I.W.S. Transfer Systems of N.Y., Inc.</u>
2. ADDRESS: <u>300 Frank W. Burr Blvd., Ste. 39</u> CITY: <u>Teaneck</u> STATE/ZIP: <u>NJ 07666</u>
3. PLEASE LIST ALL OF THE OWNERS/PARTNERS OF THE FACILITY THAT IS APPLYING FOR THE PERMIT*, INCLUDING ANY OTHER NAME THEY ARE CURRENTLY OR HAVE EVER BEEN KNOWN BY: I.W.S. Transfer Systems of N.Y., Inc. has one shareholder, The Action Environmental Group, Inc. which company also has one shareholder, Interstate Waste Services, Inc. The majority of ownership is with private equity firms which are professional investors that invest in businesses from funds raised from institutions such as pension funds, insurance companies and high net worth individuals. I.W.S. Transfer Systems of NY, Inc. has been owned by private equity firms since its inception in 2010.

4. PLEASE LIST THE NAMES OF ALL OTHER COMPANIES THAT ARE OWNED OR PARTLY OWNED BY THE PEOPLE LISTED ABOVE. Also list the companies that own or control or are related to the applicant company, all subsidiaries, parent companies, sister companies. Also include ADDRESSES, WEBSITE ADDRESSES, and WHAT EACH LISTED COMPANY DOES (BUSINESS FIELD, e.g., "Solid Waste Transfer" or "Cement Plant" or "Real Estate Holding Co").**

RELATED COMPANY NAME	COMPANY ADDRESS	COMPANY WEBSITE	BUSINESS FIELD
The Action Group, Inc.	300 Frank W. Burr Blvd., Ste. 39, Teaneck, NJ 07666	None	Corporate
I.W.S. Transfer Systems of NY, Inc.	89 Black Meadow Road, Chester, NY 10918	None	Solid Waste

5. CERTIFICATION BY APPLICANT: I certify that the above information is true to the best of my knowledge. I am aware that any false and/or misleading statements may be subject to prosecution under NYS Penal law.

Signature:  Date: 3/11/2004 Email address: mdibella@interstatewaste.com

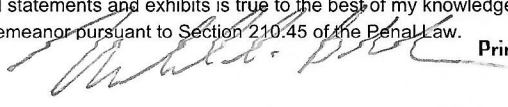
Name (Print or type): Michael DiBella Title (Print or type): CEO

* This form is applicable not only to the immediate entity but to any other corporation, partnership, association or organization in which the applicant holds or has held a substantial interest or in which it has acted as a high managerial agent or director or any other individual, corporation, partnership or organization which holds a substantial interest or the position of high managerial agent or director in the applicant.

** If the applicant company is owned by another company, corporation, partnership, association or organization, then the companies that need to be listed are all of the companies owned or controlled by the largest parent organization involved.

RECORD OF COMPLIANCE-Permit Application Supplement

Please read all instructions on reverse side before completing this application

1. FULL NAME OF APPLICANT The Action Environmental Group, Inc.		
2. MAILING ADDRESS (Principal Place of Business) Street 300 Frank W. Burr Blvd., Ste. 39		3. NEW YORK STATE MAILING ADDRESS (If different) Street
City/State/Zip Code Teaneck, NJ 07666		City/State/Zip Code
4. TYPE OF ORGANIZATION ☐ Individual ☐ Partnership ☐ Company ☐ Corporation ☒ Other Incorporation		If other than individual, provide Federal Taxpayer ID Number 27-3091166
5. Does the applicant currently hold any permit issued under the Environmental Conservation Law? ☐ Yes ☒ No		
6. a. Has the applicant been denied a permit or has the applicant had a permit revoked or suspended under the Environmental Conservation Law? or b. Is the applicant currently the subject of an enforcement action under the Environmental Conservation Law? a. ☐ Yes ☒ No b. ☐ Yes ☒ No		
7. If any answer to questions 5, 6(a), or 6(b) is YES, provide details on a separate page and attach it to this form.		
8. Has the applicant, and if the applicant is a corporation, has any officer, director, or large stockholder (owner of 25 percent or more of not publicly-traded stock) of the corporation, within the last ten (10) years, been: a. found in an administrative, civil or criminal proceeding to have violated any provision of the Environmental Conservation Law (ECL), any related order or determination of the Commissioner, any regulation promulgated pursuant to the ECL, the condition of any permit issued thereunder, or any similar statute, regulation, order or permit condition of any other state or federal government agency? ☐ Yes ☒ No b. an officer, director or large stockholder (owner of 25% or more of not publicly-traded stock) of a corporation which-during the time such person was an officer, director or large stockholder-was determined in an administrative, civil or criminal proceeding to have violated any provision of the Environmental Conservation Law (ECL), any related order or determination of the Commissioner, any regulation promulgated pursuant to the ECL, the condition of any permit issued thereunder, or any similar statute, regulation, order or permit condition of any other state or federal government agency? ☐ Yes ☒ No c. convicted of a criminal offense under the laws of any state or federal government agency, which involves environmental statutes or regulations, or fraud, bribery, perjury, theft or an offense against public administration as that term is used in Article 195 of the Penal Law, or an offense involving false written statements as those terms are defined in Article 175 of the Penal Law? Out-of-state history may be limited to misdemeanors, felonies and civil penalties assessed at \$25,000 or more. ☐ Yes ☒ No d. an officer, director or large stockholder (owner of 25% or more of not publicly-traded stock) of a corporation which-during the time such person was an officer, director or large stockholder-was convicted of a criminal offense under the laws of any state or federal government agency, which involves environmental statutes or regulations or fraud, bribery , perjury, theft, or an offense against public administration as that term is used in Article 195 of the Penal Law, or an offense involving false written statements as those terms are defined in Article 175 of the Penal Law? Out-of-state history may be limited to misdemeanors, felonies and civil penalties assessed at \$25,000 or more. ☐ Yes ☒ No		
9. If any answer to questions 8a through 8d is YES, provide details on a separate page and attach it to this form.		
10. Does the applicant currently owe any regulatory fees pursuant to Article 72 of the Environmental Conservation Law to the Department of Environmental Conservation? ☐ Yes, amount \$ ☒ No Under dispute for year(s) Amount \$		
11. CERTIFICATION (By Applicant who is an Individual) I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Date: Signature: Print Name:		
ITEMS 12 THROUGH 15 TO BE COMPLETED BY AN APPLICANT OTHER THAN AN INDIVIDUAL		
12. SPECIFY UNDER WHAT LAW APPLICANT WAS ORGANIZED Delaware General Corporation Law	13. STATE DE	14. DATE OF ORGANIZATION 7/14/2010
15. CERTIFICATION (By an Applicant Other Than an Individual) I hereby affirm under penalty of perjury that I am CEO (title) of The Action Environmental Group, Inc. (entity); that I am authorized by that entity to make this application; that this application was prepared by me or under my supervision and direction; and that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Date: 2/1/2004 Signature:  Print Name: Michael DiBella		



Department of
Environmental
Conservation

This form is for The Action
Environmental Group, Inc.

DEPARTMENT USE ONLY

DEC APPLICATION NO. _____

ACTIVITY NUMBER(S) _____

**New York State Department of Environmental Conservation
RECORD OF COMPLIANCE SUPPLEMENTAL INFORMATION FORM**

1. **APPLICANT NAME:** I.W.S. Transfer Systems of N.Y., Inc.

2. **ADDRESS:** 300 Frank W. Burr Blvd., Ste. 39
CITY: Teaneck **STATE/ZIP:** NJ 07666

3. **PLEASE LIST ALL OF THE OWNERS/PARTNERS OF THE FACILITY THAT IS APPLYING FOR THE PERMIT*, INCLUDING ANY OTHER NAME THEY ARE CURRENTLY OR HAVE EVER BEEN KNOWN BY:**

I.W.S. Transfer Systems of N.Y., Inc. has one shareholder, The Action Environmental Group, Inc. which company also has one shareholder, Interstate Waste Services, Inc. The majority of ownership is with private equity firms which are professional investors that invest in businesses from funds raised from institutions such as pension funds, insurance companies and high net worth individuals. I.W.S. Transfer Systems of NY, Inc. has been owned by private equity firms since its inception in 2010.

4. **PLEASE LIST THE NAMES OF ALL OTHER COMPANIES THAT ARE OWNED OR PARTLY OWNED BY THE PEOPLE LISTED ABOVE**. Also list the companies that own or control or are related to the applicant company, all subsidiaries, parent companies, sister companies. Also include ADDRESSES, WEBSITE ADDRESSES, and WHAT EACH LISTED COMPANY DOES (BUSINESS FIELD, e.g., "Solid Waste Transfer" or "Cement Plant" or "Real Estate Holding Co").**

RELATED COMPANY NAME	COMPANY ADDRESS	COMPANY WEBSITE	BUSINESS FIELD
I.W.S. Transfer Systems of NY, Inc.	89 Black Meadow Road, Chester, NY 10918	None	Solid Waste

5. **CERTIFICATION BY APPLICANT:** I certify that the above information is true to the best of my knowledge. I am aware that any false and/or misleading statements may be subject to prosecution under NYS Penal law.

Signature:  Date: 3/11/2024 Email address: mdibella@interstatewaste.com

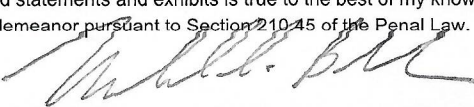
Name (Print or type): Michael DiBella Title (Print or type): CEO

* This form is applicable not only to the immediate entity but to any other corporation, partnership, association or organization in which the applicant holds or has held a substantial interest or in which it has acted as a high managerial agent or director or any other individual, corporation, partnership or organization which holds a substantial interest or the position of high managerial agent or director in the applicant.

** If the applicant company is owned by another company, corporation, partnership, association or organization, then the companies that need to be listed are all of the companies owned or controlled by the largest parent organization involved.

RECORD OF COMPLIANCE-Permit Application Supplement

Please read all instructions on reverse side before completing this application

1. FULL NAME OF APPLICANT I.W.S. Transfer Systems of N.Y., Inc.		
2. MAILING ADDRESS (Principal Place of Business) Street 300 Frank W. Burr Blvd., Ste. 39	3. NEW YORK STATE MAILING ADDRESS (If different) Street	
City/State/Zip Code Teaneck, NJ 0666	City/State/Zip Code	
4. TYPE OF ORGANIZATION ☐ Individual ☐ Partnership ☐ Company ☐ Corporation ☒ Other Incorporation		If other than individual, provide Federal Taxpayer ID Number 20-0434670
5. Does the applicant currently hold any permit issued under the Environmental Conservation Law? ☒ Yes ☐ No		
6. a. Has the applicant been denied a permit or has the applicant had a permit revoked or suspended under the Environmental Conservation Law? or b. Is the applicant currently the subject of an enforcement action under the Environmental Conservation Law? a. ☐ Yes ☒ No b. ☐ Yes ☒ No		
7. If any answer to questions 5, 6(a), or 6(b) is YES, provide details on a separate page and attach it to this form.		
8. Has the applicant, and if the applicant is a corporation, has any officer, director, or large stockholder (owner of 25 percent or more of not publicly-traded stock) of the corporation, within the last ten (10) years, been: a. found in an administrative, civil or criminal proceeding to have violated any provision of the Environmental Conservation Law (ECL), any related order or determination of the Commissioner, any regulation promulgated pursuant to the ECL, the condition of any permit issued thereunder, or any similar statute, regulation, order or permit condition of any other state or federal government agency? ☐ Yes ☒ No		
b. an officer, director or large stockholder (owner of 25% or more of not publicly-traded stock) of a corporation which-during the time such person was an officer, director or large stockholder-was determined in an administrative, civil or criminal proceeding to have violated any provision of the Environmental Conservation Law (ECL), any related order or determination of the Commissioner, any regulation promulgated pursuant to the ECL, the condition of any permit issued thereunder, or any similar statute, regulation, order or permit condition of any other state or federal government agency? ☐ Yes ☒ No		
c. convicted of a criminal offense under the laws of any state or federal government agency, which involves environmental statutes or regulations, or fraud, bribery, perjury, theft or an offense against public administration as that term is used in Article 195 of the Penal Law, or an offense involving false written statements as those terms are defined in Article 175 of the Penal Law? Out-of-state history may be limited to misdemeanors, felonies and civil penalties assessed at \$25,000 or more. ☐ Yes ☒ No		
d. an officer, director or large stockholder (owner of 25% or more of not publicly-traded stock) of a corporation which-during the time such person was an officer, director or large stockholder-was convicted of a criminal offense under the laws of any state or federal government agency, which involves environmental statutes or regulations or fraud, bribery, perjury, theft, or an offense against public administration as that term is used in Article 195 of the Penal Law, or an offense involving false written statements as those terms are defined in Article 175 of the Penal Law? Out-of-state history may be limited to misdemeanors, felonies and civil penalties assessed at \$25,000 or more. ☐ Yes ☒ No		
9. If any answer to questions 8a through 8d is YES, provide details on a separate page and attach it to this form.		
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11. CERTIFICATION (By Applicant who is an Individual) I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Date: Signature: Print Name:		
ITEMS 12 THROUGH 15 TO BE COMPLETED BY AN APPLICANT OTHER THAN AN INDIVIDUAL		
12. SPECIFY UNDER WHAT LAW APPLICANT WAS ORGANIZED Domestic Business Corporation	13. STATE NY	14. DATE OF ORGANIZATION 11/24/2003
15. CERTIFICATION (By an Applicant Other Than an Individual) I hereby affirm under penalty of perjury that I am CEO (title) of I.W.S. Transfer Systems of N.Y., Inc. (entity); that I am authorized by that entity to make this application; that this application was prepared by me or under my supervision and direction; and that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Date: 8/11/2004 Signature:  Print Name: Michael DiBella		



Department of
Environmental
Conservation

DEPARTMENT USE ONLY	
DEC APPLICATION NO.	
ACTIVITY NUMBER(S)	

New York State Department of Environmental Conservation
RECORD OF COMPLIANCE SUPPLEMENTAL INFORMATION FORM

1. APPLICANT NAME: <u>I.W.S. Transfer Systems of N.Y., Inc.</u>
2. ADDRESS: <u>300 Frank W. Burr Blvd., Ste. 39</u> CITY: <u>Teaneck</u> STATE/ZIP: <u>NJ 07666</u>
3. PLEASE LIST ALL OF THE OWNERS/PARTNERS OF THE FACILITY THAT IS APPLYING FOR THE PERMIT*, INCLUDING ANY OTHER NAME THEY ARE CURRENTLY OR HAVE EVER BEEN KNOWN BY: I.W.S. Transfer Systems of N.Y., Inc. has one shareholder, The Action Environmental Group, Inc. which company also has one shareholder, Interstate Waste Services, Inc. The majority of ownership is with private equity firms which are professional investors that invest in businesses from funds raised from institutions such as pension funds, insurance companies and high net worth individuals. I.W.S. Transfer Systems of NY, Inc. has been owned by private equity firms since its inception in 2010.

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RELATED COMPANY NAME	COMPANY ADDRESS	COMPANY WEBSITE	BUSINESS FIELD

5. CERTIFICATION BY APPLICANT: I certify that the above information is true to the best of my knowledge. I am aware that any false and/or misleading statements may be subject to prosecution under NYS Penal law.

Signature:  Date: 3/11/2024 Email address: mdibella@interstatewaste.com

Name (Print or type): Michael DiBella Title (Print or type): CEO

* This form is applicable not only to the immediate entity but to any other corporation, partnership, association or organization in which the applicant holds or has held a substantial interest or in which it has acted as a high managerial agent or director or any other individual, corporation, partnership or organization which holds a substantial interest or the position of high managerial agent or director in the applicant.

** If the applicant company is owned by another company, corporation, partnership, association or organization, then the companies that need to be listed are all of the companies owned or controlled by the largest parent organization involved.

APPENDIX B

SEQR DOCUMENTS

The Facility was deemed to have no significant adverse environmental impact and a Negative Declaration was declared in June 2023. A copy of the SEQR documents will be included in Appendix B once finalized by the Town of Goshen.

APPENDIX C

THROUGHPUT CAPACITY CALCULATIONS

To: File

Cc: I.W.S. Transfer Systems of N.Y., Inc.

Date: March 18, 2024

Subject: Goshen Transfer Station
Proposed Facility Modifications
Throughput Capacity Calculations
(for NYS DEC Part 360 Solid Waste Management Facility Permit Modification Application)

These Throughput Capacity Calculations, including a Tipping Vehicle Queuing Analysis and a Tipping Floor Material Processing Capacity Analysis, have been prepared as part of the NYSDEC Part 360 Solid Waste Management Facilities Permit (SWMF Permit) Modification and Renewal Application for the I.W.S. Transfer Systems of N.Y., Inc. (IWS) in support of the proposed Goshen Transfer Station Modification (Facility).

The current NYSDEC SWMF Permit allows the Facility to accept Construction and Demolition Debris (C&D debris) and Municipal Solid Waste (MSW) at a maximum combined rate of 600 tons per day. The Facility may also accept Source Separated Recyclables (SSR) at a maximum of 70 tons per day.

It is a priority of IWS to continue to reduce solid waste volumes scheduled for landfill disposal through methods of recycling. With the construction of the proposed addition to the Existing TS Building and the elimination of the currently permitted 70 TPD of SSR, the Facility is requesting a SWMF Permit modification so the Facility can be permitted to accept up to 670 TPD of MSW and C&D debris, resulting in no change to the total maximum of 670 TPD of waste material.

The overall description of proposed Facility function and desired capacity is based on maintaining the currently permitted capacity of 670 tons per day of municipal solid waste and construction and demolition debris.

Summary

The enclosed Tipping Vehicle Queuing Analysis and Tipping Floor Material Processing Capacity Analysis utilized historic data and observations at the Facility, supplemented by extensive knowledge of numerous similar facilities, to model the proposed operations at the overall permitted capacity of 670 TPD. These calculations incorporate conservatively calculated or historically validated variables for the Tipping Vehicle arrival distribution, dwell time at the Existing Truck Scale, unloading time within the Proposed Transfer Station Building configuration, and Transfer Trailer loadout rate.

The proposed Facility has been designed based on industry standards for efficient operations, including a Loadout Tunnel that incorporates a Loadout Tunnel Scale that will eliminate the need for Transfer Trailers (*e.g. tractors coupled to flatbeds with rail cans, dump trailers, etc.*) to maneuver over the existing Truck Scale. The Loadout Tunnel will also be equipped with a tether style, fall protection system which will allow the Transfer Trailers to tarp inside the Proposed Transfer Station Building.

Based on the efficient Facility design and conservative operating metrics used in the analysis, this Throughput Capacity Calculations Memo demonstrates that the proposed Facility modification can easily manage in excess of the permitted capacity.

Historic Tipping Records

The data used to initiate the Throughput Capacity Calculations were obtained from historic scale records from the Facility for December 26, 2023, December 27, 2023 and January 2, 2024 which represent recent peak days. These scale records were utilized to determine the hourly distribution and average tonnage per vehicle for typical Tipping Vehicles delivering MSW and C&D materials. The average of the aggregate number of Tipping Vehicles and total tonnage for these three (3) days were utilized for this analysis. This analysis established a typical average inbound tonnage per Tipping Vehicle of 5.5 tons/truck for an average of 588 TPD. The average number of Tipping Vehicles and total tonnage was then extrapolated to the projected capacity scenario (670 TPD).

To assist with the capacity calculations, the peak hour number of inbound loads was identified from Attachment 1 and presented in the calculated design variables summary. The design peak hour for the 670 TPD will utilize seventeen (17) vehicles within the peak hour ($\pm 93\text{tons}$).

Analysis of On-Site Queuing

The Tipping Vehicle Queuing Analysis (*Attachments 2 and 3*) demonstrates the Facility's capacity to process Tipping Vehicles accessing the Facility, from pre-scale queuing through unloading within the Transfer Station Building. This analysis included the following two (2) analyses to demonstrate fully permitted operations at a capacity of 670 TPD:

- Pre-Scale Tipping Vehicle Queuing Analysis (*before the Existing Truck Scale*)
- Post-Scale Tipping Vehicle Queuing Analysis (*after the Existing Truck Scale/On-site Dwell Time*)

The Tipping Vehicle travel paths and available queuing locations are depicted on Figure 1, "Queuing – Operational Site Plan".

The Pre-Scale Tipping Vehicle Queuing Analysis uses a one (1) minute cycle time which represents a conservative approach in this analysis because the process and technologies utilized during scale operations allows for quicker transaction times than one (1) minute but utilizing a higher cycle time and having sufficient space on site for queuing ensures that the Existing Truck Scale would not be the limiting factor for Facility operations. As shown within Attachment 2, the Pre-Scale Tipping Vehicle Queuing Analysis results in a maximum of two (2) Tipping Vehicles in the queue before the Existing Truck Scale, one (1) of which can stage on the Existing Truck Scale. As shown on Figure 1, "Queuing – Operational Site Plan", there is ample space at the Facility for Tipping Vehicles to queue east of the Existing Truck Scale.

The Post-Scale Tipping Vehicle Queuing Analysis was then completed for the Tipping Vehicles that have finished the inbound scaling transaction. The Historic Tipping Vehicle Scale Records for December 26, 2023, December 27, 2023 and January 2, 2024 were utilized to obtain the on-site dwell time needed for a loaded Tipping Vehicle to travel from the Existing Truck Scale, enter a tipping bay in the Transfer Station Building, tip its contents, and exit the Transfer Station Building. Based upon historic scale records, the average dwell time from completing the inbound scaling to completing the outbound transaction is less than ten (10) minutes. Therefore, ten (10) minutes was used for the on-site dwell time in these calculations.

The Post-Scale Tipping Vehicle Queuing Analysis was performed for the extrapolated maximum seventeen (17) Tipping Vehicles per hour arrival rate utilizing the four (4) tipping slots in the Proposed Transfer Station Building.

As demonstrated within Attachment 3, seventeen (17) Tipping Vehicles arriving per hour utilizing the four (4) available tipping bays with a ten (10) minute cycle time results in a maximum of ten (10) Tipping Vehicles after the inbound scaling transaction at any time, by applying a Poisson Distribution. Four (4) of these Customer Vehicles will be located within the tipping slots within the Transfer Station Building. There is sufficient space available for the remaining six (6) Tipping Vehicles to queue in the area directly following the Existing Truck Scale. In the event of a contingency where these areas are not available for Tipping Vehicle queuing, there is sufficient space on the

southeastern side of the Maintenance Shop/Office Building for additional Tipping Vehicles to stage on/prior to the Existing Truck Scale.

The Queuing Analyses demonstrate the Facility's ability to process Tipping Vehicles accessing the Facility, from pre-scale queuing through unloading within the Transfer Station Building. The primary queuing area is in the area adjacent to the Transfer Station Building after the Existing Truck Scale. Supplementary queuing areas are available on the opposite side of the Maintenance Shop/Offices Building, however the analysis does not demonstrate a need to utilize this area. The Tipping Vehicle travel paths and available queuing locations are depicted on the Figure 1, "Queuing – Operational Site Plan".

After Tipping Vehicles have deposited their payload within the Transfer Station Building, the majority have established and recorded tare weights which allow for bypassing of the Existing Truck Scale before departing the Facility as shown on the "Proposed Vehicle Circulation Plan" (*Sheet 7 of the Engineering Drawings*). In addition, the Facility has been designed to have Transfer Trailers utilize the Proposed Loadout Tunnel Scales which will be certified for trade, further reducing use of the Existing Truck Scale compared to current operations.

Tipping Floor Material Processing Capacity Analysis

The Tipping Floor Material Processing Capacity Analysis (*Attachment 4*) was completed to determine if the Facility could adequately process and transfer the materials. This analysis was performed for the overall permitted capacity of 670 TPD.

Using historic operational information for loadout quantities, the Tipping Floor Material Processing Capacity Analysis applies an estimated average loading rate of fifty-seven tons per hour (57 TPH), assuming one (1) loadout slot and a twenty (20) minute loadout time to reach a Transfer Trailer payload of approximately nineteen (19) tons.

In order to complete the Tipping Floor Material Processing Capacity Analysis, the on-floor waste density of materials on the Tipping Floor or the Transfer Station Building needed to be determined. Using the weight conversions provided on the Transfer Facility Annual Report form provided by NYSDEC, mixed C&D Debris has a density of 0.25 Tons/CY and MSW has an average density of 0.3 Tons/CY. The Facility's historic records document that approximately 20% of the materials received are C&D and approximately 80% of the materials received are MSW. This equates to a weighted average MSW and C&D Debris material density of five hundred eighty pounds per cubic yard (580 lbs/cy). To provide contingency for potential variations in materials received an on-floor density of five hundred-sixty pounds per cubic yard (560 lbs/cy) was utilized for the Tipping Floor Material Processing Capacity Analysis.

The historic data summarized in Attachment 1 was also utilized for this Analysis, applying the same material composition and historic arrival rates to extrapolate to the 670 TPD permitted capacity.

As summarized within Attachment 4, material arriving under a 670 TPD acceptance scenario results in a maximum calculated "surge pile" on the Tipping Floor equaling approximately 180 tons or 642 cubic yards. Attachment 4 presents the material processing calculations and included within these Tables are representations of a three (3) day operating cycle, illustrating that surge piles will not be carried over from the previous day. As noted, the inbound material is still expected to arrive within the traditional acceptance hours of 7:00 AM to 3:30 PM Monday through Friday and until 12:00 PM on Saturday. The Facility will continue to process material until 6:00 PM Monday through Friday and until 12:00 PM on Saturday.

Note that while these calculations indicate a minimally anticipated surge pile during the normal operating capacity, this analysis is not intended to represent that additional material will not be stored in the Tipping Floor during normal operations. I.W.S. may elect to load material at a rate less than fifty-seven tons per hour (57 TPH) and utilize storage space available within the Transfer Station Building to manage operations in accordance with their Facility permit. Material storage quantity and duration will continue to be governed by applicable NYSDEC regulations and applied to support efficient Facility operations.

Emergency Storage Area Calculations

The emergency storage area within the Tipping Floor of the Transfer Station Building provides more than adequate storage for an entire volume of daily inbound waste at the Facility under an emergency condition.

Conclusion

Analyzing Facility capacity through the application of historically documented and conservative waste receiving and loading rates demonstrates that overall permitted capacity of 670 TPD can be successfully managed utilizing I.W.S.'s proposed equipment, site configuration, and permitted hours of operation at the Facility.

LIST OF ATTACHMENTS

Attachment 1 – Inbound Tipping Vehicle Arrival Rates and Extrapolation

Attachment 2 – Pre-Scale Tipping Vehicle Queuing Analysis (670 Tons Per Day) (Scale Time)

Attachment 3 – Post-Scale Tipping Vehicle Queuing Analysis (670 Tons Per Day) (Unloading Time)

Attachment 4 – Tipping Floor Material Processing Capacity Analysis (670 Tons Per Day)

Figure 1 – Queuing – Operational Site Plan

Figure 2 – Tipping Floor Operational Surge Pile Volume

Figure 3 – Tipping Floor Emergency Storage Pile Volume

Attachment 1: Inbound Tipping Vehicle Arrival Rates and Extrapolation

Attachment 1

Client Name:	I.W.S. Transfer Systems of NY, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	Inbound Tipping Vehicle Arrival Rates and Extrapolation	Project #:	209-4223429
Designed By:	KMT	2/9/2024	Checked By: JCP & ACS 3/18/2024
			Page No. 1 of 1

Capacity	670	Average Inbound Tonnage per Truck:	5.50	tons/truck
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Interval	Historic Distribution (MSW & C&D)		Extrapolate to	
	588 TPD		670 TPD	
	# of Loads	Tons/Hour	# of Loads	Tons/Hour
0:00 - 01:00	-	-	-	-
01:00 - 02:00	-	-	-	-
02:00 - 03:00	-	-	-	-
03:00 - 04:00	-	-	-	-
04:00 - 05:00	-	-	-	-
05:00 - 06:00	-	-	-	-
06:00 - 07:00	-	-	-	-
07:00 - 08:00	6	30.22	7	38.50
08:00 - 09:00	12	67.16	14	76.99
09:00 - 10:00	13	73.03	15	82.49
10:00 - 11:00	11	50.34	12	66.00
11:00 - 12:00	11	54.88	12	66.00
12:00 - 13:00	11	69.50	13	71.50
13:00 - 14:00	14	64.48	16	87.99
14:00 - 15:00	15	92.36	17	93.49
15:00 - 16:00	14	86.49	16	87.99
16:00 - 17:00	-	-	-	-
17:00 - 18:00	-	-	-	-
18:00 - 19:00	-	-	-	-
19:00 - 20:00	-	-	-	-
20:00 - 21:00	-	-	-	-
21:00 - 22:00	-	-	-	-
22:00 - 23:00	-	-	-	-
23:00 - 24:00	-	-	-	-
TOTAL:	107	588	122	671
MAXIMUM:	15	92	17	93

Calculated Design Variables
671 TPD
17 Peak Hour # of Loads

**Attachment 2:
Pre-Scale Tipping Vehicle Queuing Analysis
(670 Tons Per Day) (Scale Time)**

Attachment 2

Client Name:	I.W.S. Transfer Systems of NY, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	1 Scale Queue - 670 TPD	Project #:	4223429

Designed By:	KMT	2/12/2024	Checked By:	JCP & ACS	3/18/2024
					Page No. 1 of 2

1 Slot Tipping Queue Model - Calculation

Purpose: Determine the number of vehicles in system for 1 active tipping slot

shaded cell represents values to be input

shaded cells are calculated values

Description: Uses Poisson Model to determine the probability of having "n" number of vehicles in a queue
For use when only 1 tipping slot is utilized

Method:

$$E(m) = \frac{P(0)p^{(K+1)}}{(K!K)} \times \frac{1}{1 - \frac{p}{K}} \quad E(w) = \frac{P+E(m)}{y} - \frac{1}{u} \quad p = \frac{y}{u}$$

$E(m)$	average queue length
$P(n)$	probability of "n" units in system
K	number of active slots
p	utilization factor
y	peak arrival rate
u	average slot rate
$1/u$	average slot time; includes travel from scale to departure of slot
n	number of units in system; includes tipping slot and queue

Parameters:

Percent of Tipping Vehicles using slots	100%	
Arrival Rate	17	veh/hr
Slots Active (K)	1	
Tipping Vehicle Cycle time	1	min/veh
p/K is < 1?	0.283	*

* p/K MUST be less than 1 for equations to be valid. If p/K is greater than 1, queue length will grow infinitely.
To correct infinite queuing either increase number of slots or decrease cycle time.

Conclusion:

100%	Percent of Tipping Vehicles using slots	2	Vehicles in System (MAXIMUM)
17	Tipping Vehicles per Hour		
1	Active Tipping Slots		
1.00	Tipping Vehicle Cycle Time (minutes)		

References:

Average Queue Length and Average Wait Time formulas shown are based on exponentially distributed interarrival and service times.

Theory and formulas derived from the Institute of Transportation Engineers' "Transportation and Traffic Engineering Handbook," Second Edition.

Attachment 2			
Client Name:	I.W.S. Transfer Systems of NY, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	1 Scale Queue - 670 TPD	Project #:	4223429

Designed By:	KMT	Date:	2/12/2024	Checked By:	JCP & ACS	Date:	3/18/2024
						Page No.	2 of 2

1 Slot Tipping Queue Model - Table

	Average Slot Rate u (veh/min)	Average Slot Time 1/u (min/veh)	Peak Arrival Rate (avg) y (veh/min)	Utilization Factor p = y/u	Avg. Queue Length $E(m)=P(0)p^{(K+1)}/(K!K)x(1/(1-p/K)^2)$ (veh)	Avg. Waiting Time $E(w) = ((p+E(m))/\gamma)-(1/u)$ (min)
	1.00	1.00	0.28	0.28	0.11	0.40
Probability of "n" Units in System						
	n= 0		n= 1		n= 2	
1/u (min/veh)	P(0) $1/(E(p^n/n!)+p^K/(K!(1-p/K)))$		P(1) $p^n/n!*P(0)$	P(n<=1) $P(0)+P(1)$	P(2) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=2) $P(2)+P(<=1)$
1.00	71.7%		20.3%	92.0%	5.8%	97.7%
	n= 3		n= 4		n= 5	
1/u (min/veh)	P(3) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=3) $P(3)+P(<=2)$	P(4) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=4) $P(4)+P(<=3)$	P(5) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=5) $P(5)+P(<=4)$
1.00	1.6%	99.4%	0.5%	99.8%	0.1%	99.9%
	n= 6		n= 7		n= 8	
1/u (min/veh)	P(6) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=6) $P(6)+P(<=5)$	P(7) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=7) $P(7)+P(<=6)$	P(8) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=8) $P(8)+P(<=7)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 9		n= 10		n= 11	
1/u (min/veh)	P(9) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=9) $P(9)+P(<=8)$	P(10) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=10) $P(10)+P(<=9)$	P(11) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=11) $P(11)+P(<=10)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 12		n= 13		n= 14	
1/u (min/veh)	P(12) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=12) $P(12)+P(<=11)$	P(13) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=13) $P(13)+P(<=12)$	P(14) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=14) $P(14)+P(<=13)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 15		n= 16		n= 17	
1/u (min/veh)	P(15) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=15) $P(15)+P(<=14)$	P(16) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=16) $P(16)+P(<=15)$	P(17) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=17) $P(17)+P(<=16)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 18		n= 19		n= 20	
1/u (min/veh)	P(18) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=18) $P(18)+P(<=17)$	P(19) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=19) $P(19)+P(<=18)$	P(20) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=20) $P(20)+P(<=19)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 21		n= 22		n= 23	
1/u (min/veh)	P(21) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=21) $P(21)+P(<=20)$	P(22) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=22) $P(22)+P(<=21)$	P(23) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=23) $P(23)+P(<=22)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 24		n= 25		n= 26	
1/u (min/veh)	P(24) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=24) $P(24)+P(<=23)$	P(25) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=25) $P(25)+P(<=24)$	P(26) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=26) $P(26)+P(<=25)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 27		n= 28		n= 29	
1/u (min/veh)	P(27) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=27) $P(27)+P(<=26)$	P(28) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=28) $P(28)+P(<=27)$	P(29) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=29) $P(29)+P(<=28)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	n= 30		n= 31		n= 32	
1/u (min/veh)	P(30) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=30) $P(30)+P(<=29)$	P(31) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=31) $P(31)+P(<=30)$	P(32) $p^n/(K^{(n-K)}*K!)*P(0)$	P(n<=32) $P(32)+P(<=31)$
1.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%

**Attachment 3:
Post-Scale Tipping Vehicle Queuing Analysis
(670 Tons Per Day) (Unloading Time)**

Attachment 3

Client Name:	I.W.S. Transfer Systems, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	4 Slots - 670 TPD	Project #:	4223429

Designed By:	KMT	Date:	2/28/2024	Checked By:	JCP & ACS	Date:	3/18/2024
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4 Slot Tipping Queue Model - Calculation

Purpose: Determine the number of vehicles in system for 4 active tipping slots

shaded cell represents values to be input

shaded cells are calculated values

Description: Uses Poisson Model to determine the probability of having "n" number of vehicles in a queue
For use when 4 tipping slots are utilized

Method:

$$E(m) = \frac{P(0)p^{(K+1)}}{(K!K)} \times \frac{1}{1 - p/K^2} \quad E(w) = \frac{P+E(m)}{y} - \frac{1}{u} \quad p = \frac{y}{u}$$

$E(m)$	average queue length
$P(n)$	probability of "n" units in system
K	number of active slots
p	utilization factor
y	peak arrival rate
u	average slot rate
$1/u$	average slot time; includes travel from scale to departure of slot
n	number of units in system; includes tipping slots and queue

Parameters:	Percent of Tipping Vehicles using slots	100%	
	Arrival Rate	17	veh/hr
	Slots Active (K)	4	
	Tipping Vehicle Cycle time	10	min/veh
	p/K is < 1?	0.708	*

* p/K MUST be less than 1 for equations to be valid. If p/K is greater than 1, queue length will grow infinitely.
To correct infinite queuing either increase number of slots or decrease cycle time.

Conclusion:

100%	Percent of Tipping Vehicles using slots	10	Vehicles in System (MAXIMUM)
17	Tipping Vehicles per Hour		
4	Active Tipping Slots		
10.00	Tipping Vehicle Cycle Time (minutes)		

References:

Average Queue Length and Average Wait Time formulas shown are based on exponentially distributed interarrival and service times.

Theory and formulas derived from the Institution of Transportation Engineer's "Transportation and Traffic Engineering Handbook," Second Edition.

Attachment 3			
Client Name:	I.W.S. Transfer Systems, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	4 Slots - 670 TPD	Project #:	4223429

Designed By:	KMT	Date:	2/28/2024	Checked By:	JCP & ACS	Date:	3/18/2024
						Page No.	2 of 2

4 Slot Tipping Queue Model - Table

	Average Slot Rate u (veh/min)	Average Slot Time 1/u (min/veh)	Peak Arrival Rate (avg) y (veh/min)	Utilization Factor p = y/u	Avg. Queue Length $E(m)=P(0)p^{(K+1)}/(K!K)x(1/(1-p/K)^2)$ (veh)	Avg. Waiting Time $E(w) = ((p+E(m))/y)-(1/u)$ (min)
	0.10	10.00	0.28	2.83	1.07	3.79
Probability of "n" Units in System						
1/u (min/veh)	n= 0		n= 1		n= 2	
	P(0)		P(1)	P(n<=1)	P(2)	P(n<=2)
	$1/(Ep^n/n!+(p^k/k!(1-p/K)))$		$p^nn/n!*P(0)$		$p^nn/n!*P(0)$	
10.00	4.8%		13.6%	18.4%	19.3%	37.6%
1/u (min/veh)	n= 3		n= 4		n= 5	
	P(3)	P(n<=3)	P(4)	P(n<=4)	P(5)	P(n<=5)
	$p^nn/n!*P(0)$		$p^nn/n!*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	18.2%	55.8%	12.9%	68.7%	9.1%	77.8%
1/u (min/veh)	n= 6		n= 7		n= 8	
	P(6)	P(n<=6)	P(7)	P(n<=7)	P(8)	P(n<=8)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	6.5%	84.3%	4.6%	88.9%	3.2%	92.1%
1/u (min/veh)	n= 9		n= 10		n= 11	
	P(9)	P(n<=9)	P(10)	P(n<=10)	P(11)	P(n<=11)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	2.3%	94.4%	1.6%	96.0%	1.2%	97.2%
1/u (min/veh)	n= 12		n= 13		n= 14	
	P(12)	P(n<=12)	P(13)	P(n<=13)	P(14)	P(n<=14)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	0.8%	98.0%	0.6%	98.6%	0.4%	99.0%
1/u (min/veh)	n= 15		n= 16		n= 17	
	P(15)	P(n<=15)	P(16)	P(n<=16)	P(17)	P(n<=17)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	0.3%	99.3%	0.2%	99.5%	0.1%	99.6%
1/u (min/veh)	n= 18		n= 19		n= 20	
	P(18)	P(n<=18)	P(19)	P(n<=19)	P(20)	P(n<=20)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	0.1%	99.7%	0.1%	99.8%	0.1%	99.9%
1/u (min/veh)	n= 21		n= 22		n= 23	
	P(21)	P(n<=21)	P(22)	P(n<=22)	P(23)	P(n<=23)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	0.0%	99.9%	0.0%	99.9%	0.0%	100.0%
1/u (min/veh)	n= 24		n= 25		n= 26	
	P(24)	P(n<=24)	P(25)	P(n<=25)	P(26)	P(n<=26)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
1/u (min/veh)	n= 27		n= 28		n= 29	
	P(27)	P(n<=27)	P(28)	P(n<=28)	P(29)	P(n<=29)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
1/u (min/veh)	n= 30		n= 31		n= 32	
	P(30)	P(n<=30)	P(31)	P(n<=31)	P(32)	P(n<=32)
	$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$		$p^nn/(K^{(n-K)}*K!)*P(0)$	
10.00	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%

**Attachment 4:
Tipping Floor Material Processing Capacity Analysis
(670 Tons Per Day)**

Attachment 4

Client Name:	IWS Transfer Systems of NY, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	Material Processing (670 tpd)	Project #:	4223429

Designed By:	KMT	Date:	2/22/2024	Checked By:	JCP & ACS	Date:	3/18/2024
						Page No.	1 of 4

Purpose: Determine the daily surge pile size on a tipping floor

shaded cell represents values to be input

shaded cells are calculated values

Description: Uses truck arrival rate and processing rate to determine the size of the surge pile on tipping floor
Can be used to calculate the hourly tonnage for a specific interval based on average tonnage

Note: This calculation sheet can be adjusted for new scenarios by adding new types of trucks to the list of "truck types" below. Remember to adjust the formulas for the output cells "Weighted Average Tonnage" (found in parameters section below) and "Average Tonnage per Truck" (found in the conclusion section below) to fit the new format.

Parameters:

Inbound Truck Type	Total Inbound Trucks/Day	Average Tonnage/Truck	Operating Hour	% of Total Daily Tonnage	Trucks/Hr	Hourly Tonnage
Misc.	122	5.50	0-1	0.0%	0	0
Total Trucks	122		1-2	0.0%	0	0
			2-3	0.0%	0	0
Number of Loadouts	Tonnage/ Outbound Truck	Minutes/ Outbound Truck Loadout	3-4	0.0%	0	0
1	18.86	20	4-5	0.0%	0	0
			5-6	0.0%	0	0
			6-7	0.0%	0	0
			7-8	5.7%	7	38.50
			8-9	11.5%	14	77.00
Weighted Average Tonnage per Day		671	9-10	12.3%	15	82.50
Max Outbound Processing Rate (ton/hr)		57	10-11	9.8%	12	66.00
On Floor Waste Density (lbs/cy)		560	11-12	9.8%	12	66.00
			12-13	10.7%	13	71.50
			13-14	13.1%	16	88.00
			14-15	13.9%	17	93.50
			15-16	13.1%	16	88.00
			16-17	0.0%	0	0
			17-18	0.0%	0	0
			18-19	0.0%	0	0
			19-20	0.0%	0	0
			20-21	0.0%	0	0
			21-22	0.0%	0	0
			22-23	0.0%	0	0
			23-24	0.0%	0	0

Conclusion: 100.0% Percent of total daily tonnage
122 Total daily vehicles

671 Total Daily Tonnage
5.5 Average Tonnage per Truck

Attachment 4

Client Name:	IWS Transfer Systems of NY, Inc	Project Name:	Goshen Transfer Station Permit Modification
Subject:	Material Processing (670 tpd)	Project #:	4223429

Designed By:	KMT	Date:	2/22/2024	Checked By:	JCP & ACS	Date:	3/18/2024
						Page No.	2 of 4

Tipping Floor Surge Capacity - Table
 671
 Tons Per Day

180	Max. Req'd Surge Capacity (Tons)	671	Total Daily Tonnage (tons per day)
642	Max. Req'd Surge Capacity (Cu .Yd)	57	Max Processing Rate (ton/hr)
		5.5	Avg. Tons / Tipping Vehicle
		560	On Floor Waste Density (lbs/cy)

Hour	Incoming Waste			Processing Rate	Waste Storage (Surge Capacity)		
	% by Hour	Hourly Tonnage (1)	Loads Incoming (2)	Tonnage Out (3)	Tonnage Accum. / hr (4)	Tons on Floor (5)	Cu. Yd On Floor (6)
12:00 AM to 1:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
1:00 AM to 2:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
2:00 AM to 3:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
3:00 AM to 4:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
4:00 AM to 5:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
5:00 AM to 6:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
6:00 AM to 7:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
7:00 AM to 8:00 AM	5.74%	38.5	7	38.5	0.0	0.0	0
8:00 AM to 9:00 AM	11.48%	77.0	14	56.6	20.4	20.4	73
9:00 AM to 10:00 AM	12.30%	82.5	15	56.6	25.9	46.3	166
10:00 AM to 11:00 AM	9.84%	66.0	12	56.6	9.4	55.8	199
11:00 AM to 12:00 PM	9.84%	66.0	12	56.6	9.4	65.2	233
12:00 PM to 1:00 PM	10.66%	71.5	13	56.6	14.9	80.1	286
1:00 PM to 2:00 PM	13.11%	88.0	16	56.6	31.4	111.5	398
2:00 PM to 3:00 PM	13.93%	93.5	17	56.6	36.9	148.4	530
3:00 PM to 4:00 PM	13.11%	88.0	16	56.6	31.4	179.9	642
4:00 PM to 5:00 PM	0.00%	0.0	0	56.6	0.0	123.3	440
5:00 PM to 6:00 PM	0.00%	0.0	0	56.6	0.0	66.7	238
6:00 PM to 7:00 PM	0.00%	0.0	0	56.6	0.0	10.1	36
7:00 PM to 8:00 PM	0.00%	0.0	0	10.1	0.0	0.0	0
8:00 PM to 9:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
9:00 PM to 10:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
10:00 PM to 11:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
11:00 PM to 12:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
12:00 AM to 1:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
1:00 AM to 2:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
2:00 AM to 3:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
3:00 AM to 4:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
4:00 AM to 5:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
5:00 AM to 6:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
6:00 AM to 7:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
7:00 AM to 8:00 AM	5.74%	38.5	7	38.5	0.0	0.0	0
8:00 AM to 9:00 AM	11.48%	77.0	14	56.6	20.4	20.4	73
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8:00 PM to 9:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
9:00 PM to 10:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
10:00 PM to 11:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
11:00 PM to 12:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
12:00 AM to 1:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
1:00 AM to 2:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
2:00 AM to 3:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
3:00 AM to 4:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
4:00 AM to 5:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
5:00 AM to 6:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
6:00 AM to 7:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0
7:00 AM to 8:00 AM	5.74%	38.5	7	38.5	0.0	0.0	0
8:00 AM to 9:00 AM	11.48%	77.0	14	56.6	20.4	20.4	73
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7:00 PM to 8:00 PM	0.00%	0.0	0	10.1	0.0	0.0	0
8:00 PM to 9:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
9:00 PM to 10:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
10:00 PM to 11:00 PM	0.00%	0.0	0	0.0	0.0	0.0	0
11:00 PM to 12:00 AM	0.00%	0.0	0	0.0	0.0	0.0	0

Notes: Waste flows based on average conditions. Actual data may vary based on normal daily fluctuations and seasonal conditions.

LEGEND

- (1) Tonnage delivered each hour to the facility by Tipping vehicles. Delivery patterns will be random, but are calculated as immediate.
- (2) Number of Tipping vehicles tipping per hour. Calculated by: (2) = (1) / Avg. Tons / Tipping Vehicle input.
- (3) Tonnage out is calculated as a function of Hourly Tonnage (1), Tons on Floor (5), and Max Processing Rate (input).
- (4) Tonnage Accumulated/hr represents Hourly Tonnage (1) less Max Processing Rate (input)
- (5) Tonnage on Floor is calculated as a function of Hourly Tonnage (1), Tonnage Accumulation/hr (4), and Max Processing Rate (input).
- (6) Total potential yardage on floor, calculated from Tonnage on Floor (5) and On Floor Waste Density (input).

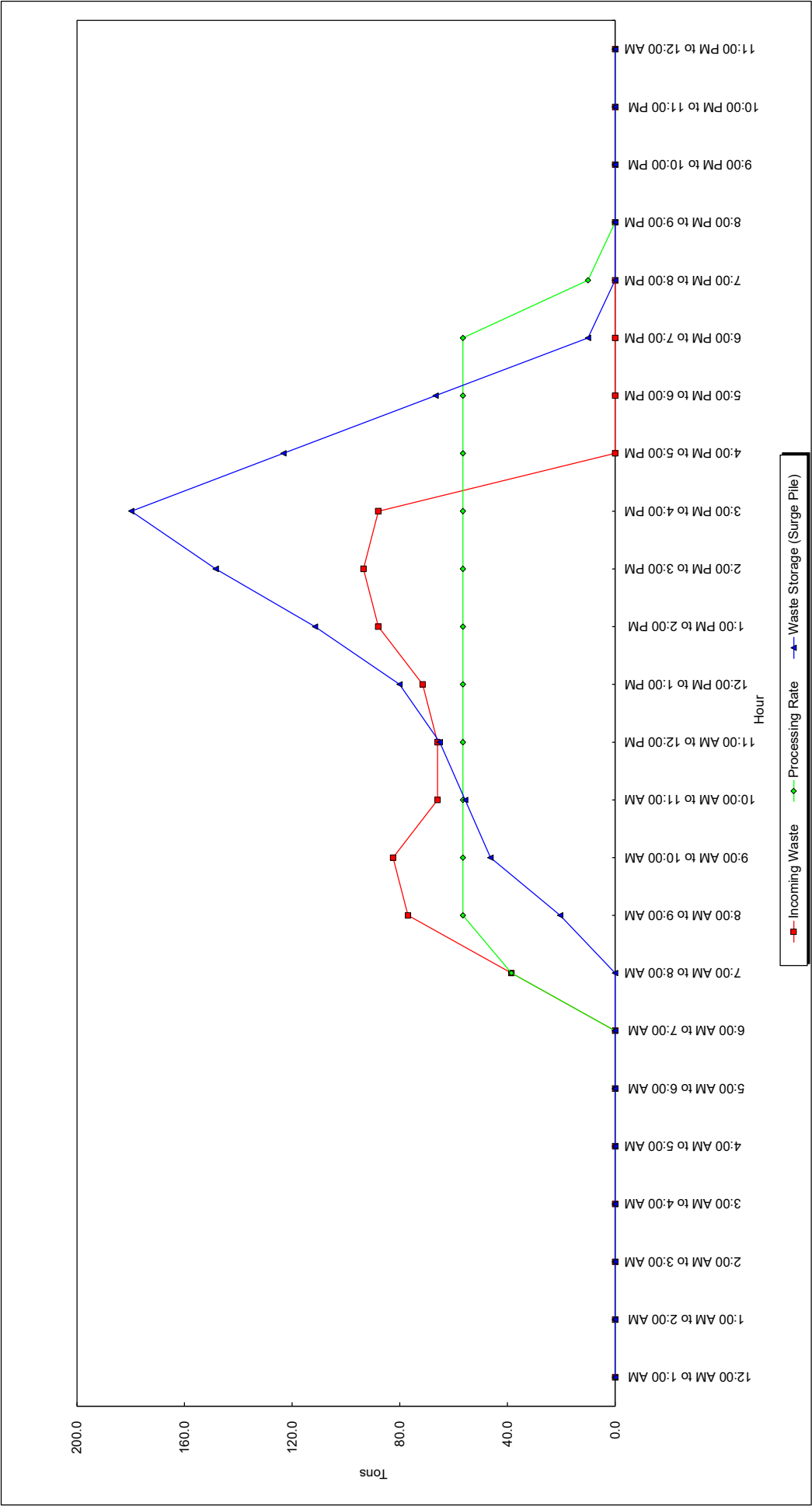


Client Name:	IWS Transfer Systems of NY, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	Material Processing (670 tpd)	Project #:	4223429

Designed By:	KMT	Date:	2/22/2024	Checked By:	JCP & ACS	Date:	3/18/2024
				Page No.	3 of 4		

Tipping Floor Surge Capacity - Graph 1

1 Day Operating Scenario Incoming Waste Flow of 671 Ton Per Day



Attachment 4

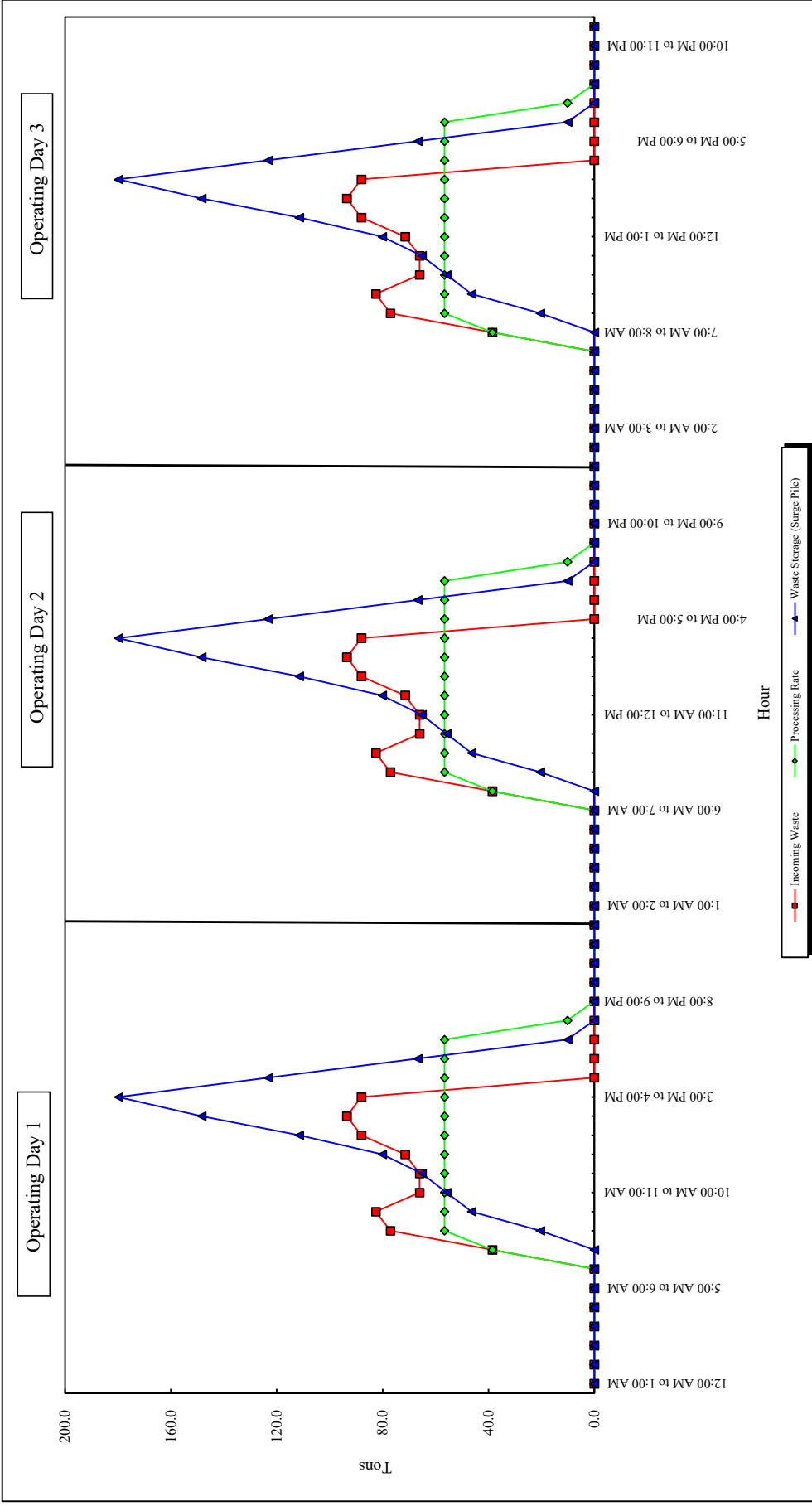


Client Name:	IWS Transfer Systems of NY, Inc.	Project Name:	Goshen Transfer Station Permit Modification
Subject:	Material Processing (670 tpd)	Project #:	4223429

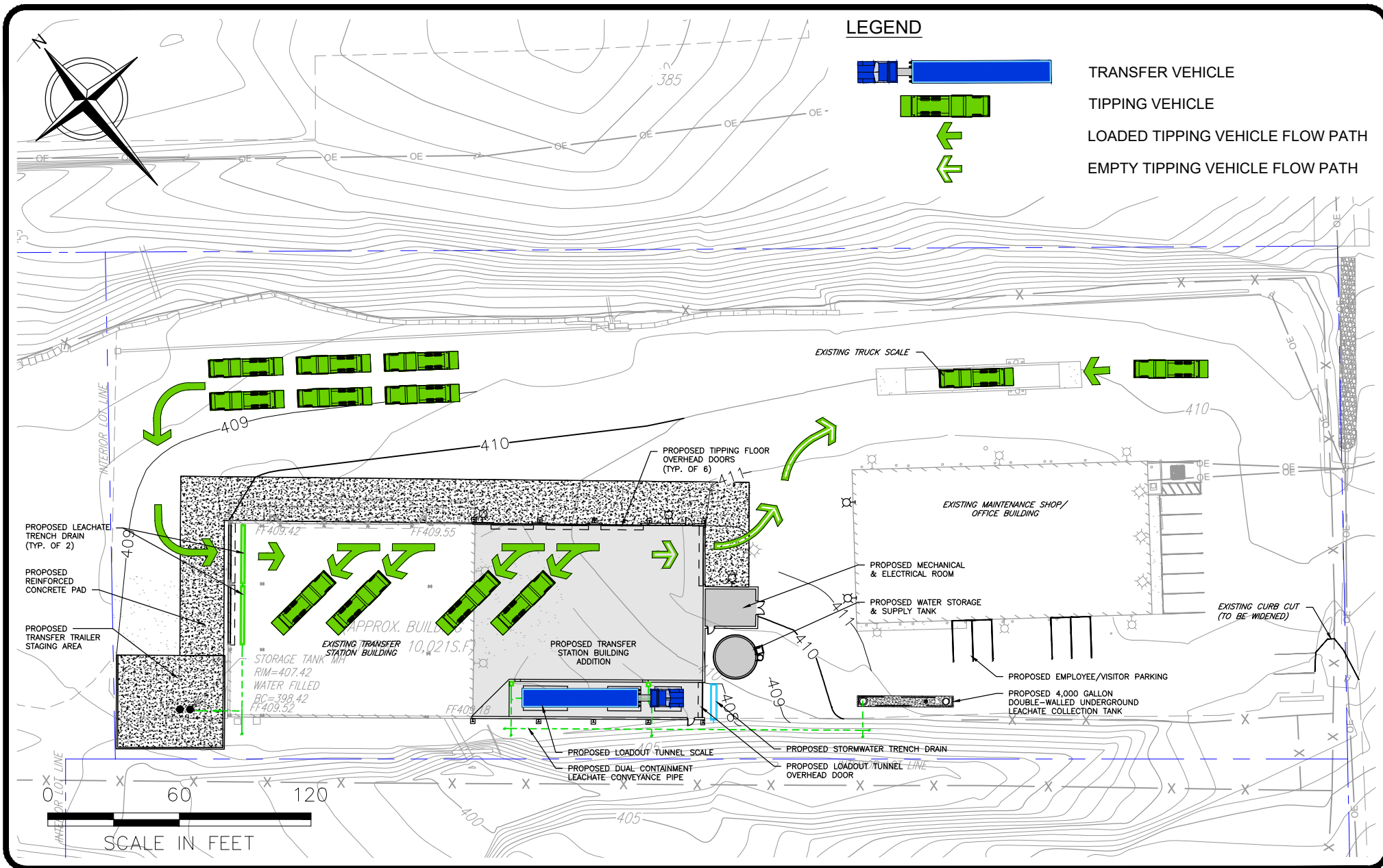
Designed By:	KMT	Date:	2/22/2024	Checked By:	JCP & ACS	Date:	3/18/2024
				Page No.	4 of 4		

Tipping Floor Surge Capacity - Graph 2

Incoming Waste Flow of 671 Ton Per Day



Figures



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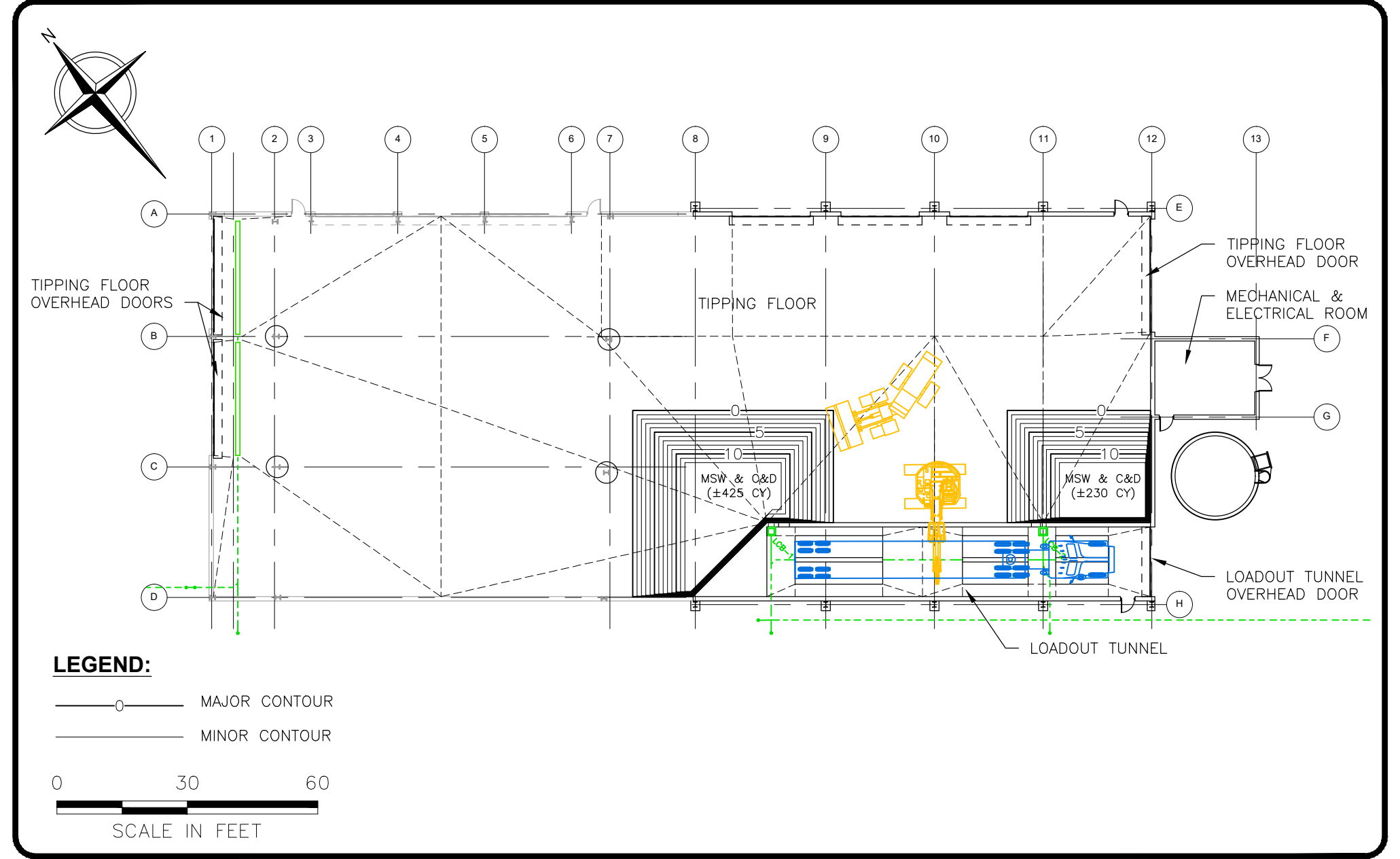
I.W.S. TRANSFER SYSTEMS OF N.Y., INC.
 GOSHEN TRANSFER STATION
 95 HARTLEY ROAD, GOSHEN, NEW YORK

**PROPOSED FACILITY MODIFICATIONS
 QUEUING - OPERATIONAL SITE PLAN**

FIGURE NO.

1

PROJECT NO.
 4223429



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GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK

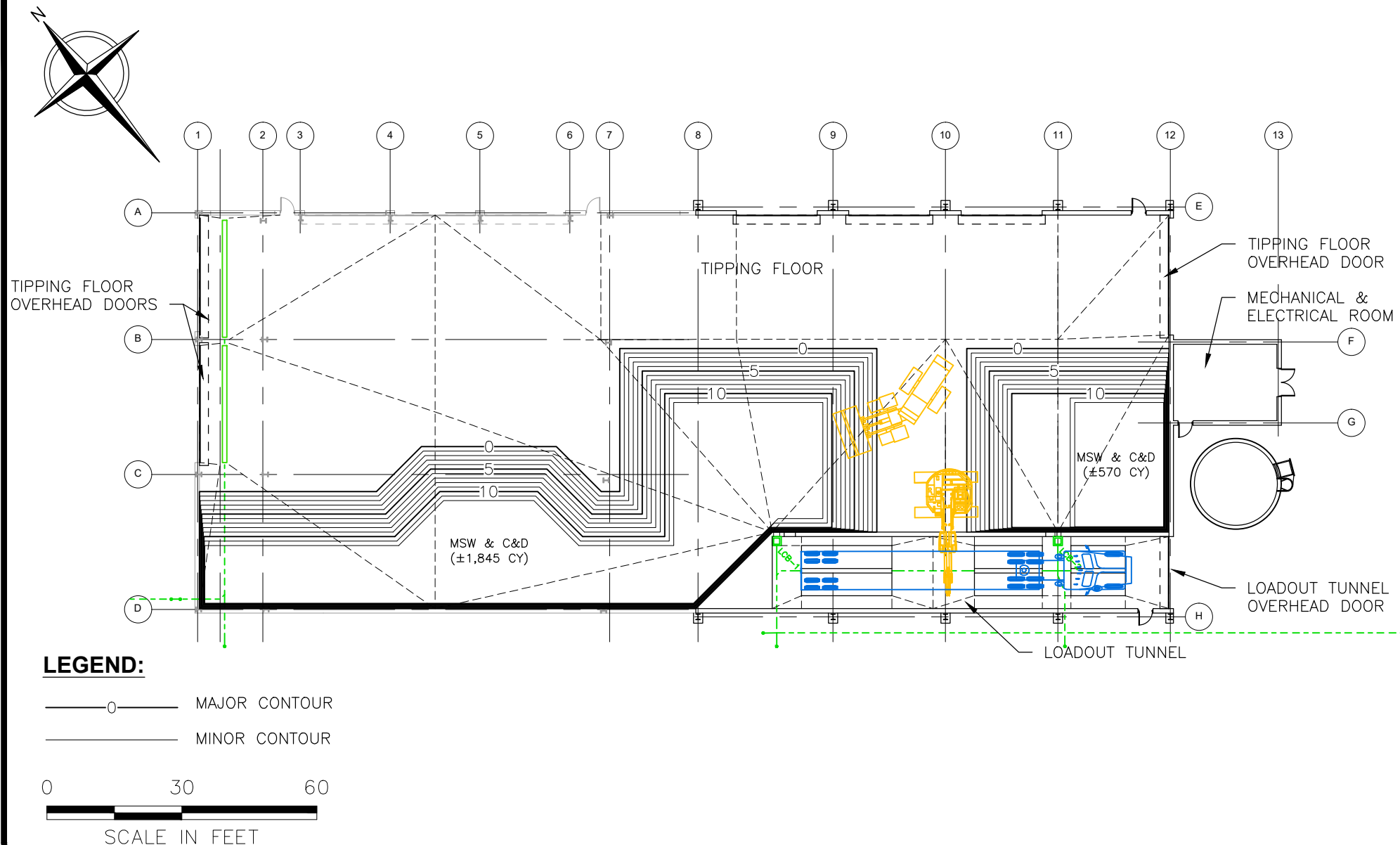
PROPOSED FACILITY MODIFICATIONS
TIPPING FLOOR OPERATIONAL SURGE PILE VOLUME

FIGURE NO.

2

PROJECT NO.

4223429



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I.W.S. TRANSFER SYSTEMS OF N.Y., INC.
GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK

PROPOSED FACILITY MODIFICATIONS
TIPPING FLOOR EMERGENCY STORAGE PILE VOLUME

FIGURE NO.

3

PROJECT NO.
4223429

APPENDIX D

AIR EXCHANGE CALCULATIONS



**Goshen Transfer Station
IWS Transfer Systems of N.Y., Inc.
Air Exchange System**

By: KMT Date: 2/13/2024
Check: _____ Date: _____

Wall Mounted Air Exchange Fan Unit Specifications (Or Equivalent)

Manufacturer	Model	Flowrate (CFM)	Qty	Total Flowrate (CFM)
Greenheck	SBS-2L48-30	20,000	4	80,000

Building Volume Air Changes Per Hour

Fan Flowrate (CF/hr)	Building Volume (CF) (<i>See Below for Volume Calculations</i>)	Building Volume Air Changes/hr
4,800,000	600,346	8.0

The Air Exchange System specified for installation in the Construction Bid Documents will utilize the equipment noted above or equivalent to provide a minimum of six (6) building volume air changes per hour.

**Building Volume Calculations
Tipping Area and Proposed Loadout Tunnel**

Existing Tipping Area Volume V_1 (CF)	Proposed Tipping Area and Loadout Tunnel Volume V_2 (CF)	Total Volume (CF)
310,651	289,695	600,346

Note:

1. The locations of air exchange fan units and inlet louvres are depicted on the Engineering Drawings.

Model: SBS-3L48-30

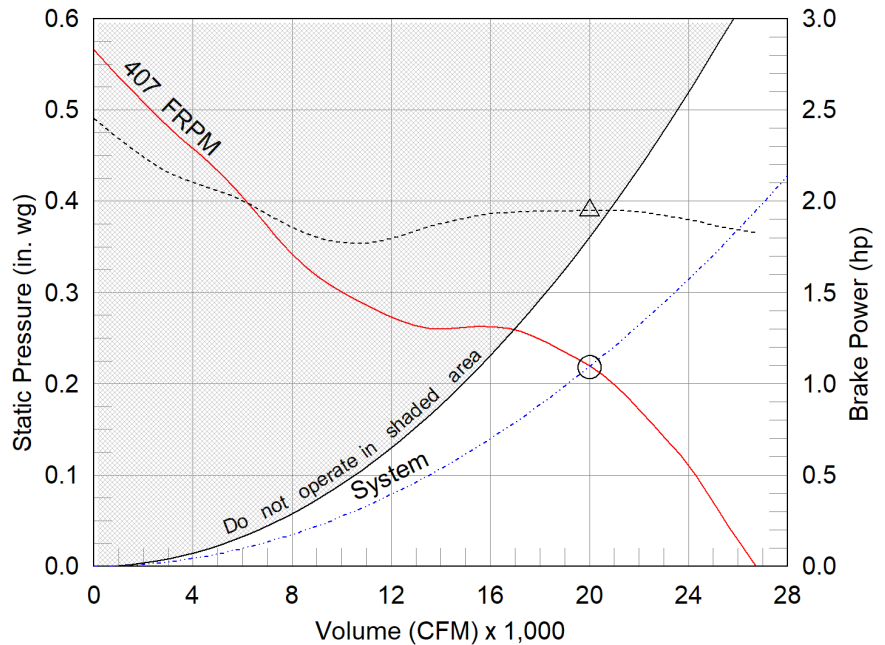
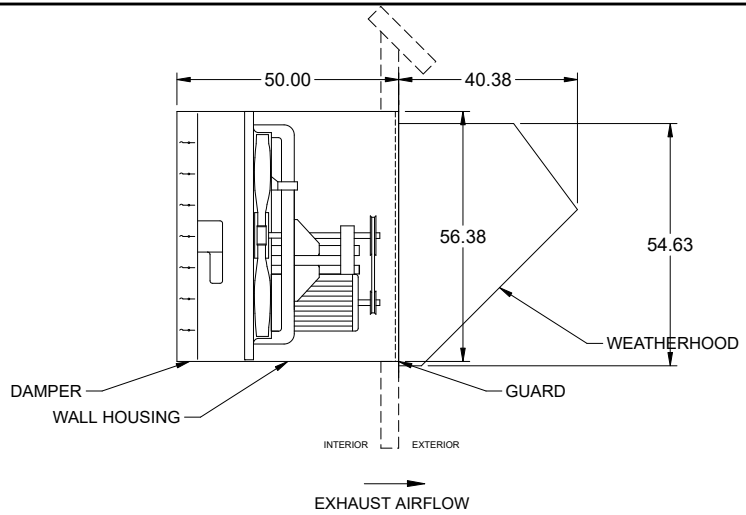
Sidewall Belt Drive Fan

Motor Access From Ext. of Bldg.

Dimensional	
Quantity	4
Weight w/o Acc's (lb)	302
Weight w/ Acc's (lb)	778
Max T Motor Frame Size	215
Optional Damper (in.)	50 x 50
Wall Opening (in.)	57.75 x 57.75

Performance	
Requested Volume (CFM)	20,000
Actual Volume (CFM)	20,000
Total External SP (in. wg)	0.218
Fan RPM	407
Operating Power (hp)	1.95
Elevation (ft)	341
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	4.9
Tip Speed (ft/min)	5,111
Static Eff. (%)	37

Motor	
Motor Mounted	Yes
Size (hp)	3
Voltage/Cycle/Phase	208/60/3
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	NEMA Premium
Windings	1
NEC FLA* (Amps)	10.6



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

Static Pressure Calculations

External SP	0.125 in. wg
Damper	0.047 in. wg
Wall Housing	0.046 in. wg
Total External SP	0.218 in. wg

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	87	84	79	77	74	71	67	60	80	68	17.1

Notes:

All dimensions shown are in units of in.
*NEC FLA, MCA and MOP are for reference only – based on tables 430.248 or 430.25 of National Electric Code 2020. Actual motor FLA may vary, for sizing thermal overload, consult factory. MCA and MOP values shown only account for the motor, not accessories (damper actuator, field supplied VFD, etc).
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2



Model: SBS-3L48-30

Sidewall Belt Drive Fan

Standard Construction Features:

- Galvanized steel fan panel - Die formed, galvanized steel drive frame assembly
- Fabricated steel propeller for Levels 1 and 2, welded and painted steel for Level 3
- Adjustable motor pulley - Ball bearing motors - Fan shaft mounted in ball bearing pillow blocks - Static resistant belts - Corrosion resistant fasteners

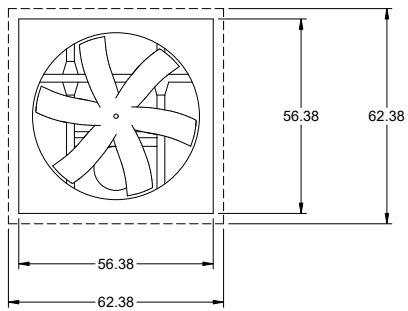
Selected Options & Accessories:

NEMA Premium Efficient Motor - meets NEMA Table 12-12
Motor VFD Rated without Shaft Grounding Protection
UL/cUL 705 Listed - "Power Ventilators"
Airflow Direction: Exhaust
Long Wall Hsg, Flush Exterior, w/ OSHA Grd.
Motor Access: From Ext. of Bldg.
Weatherhood, Aluminum 45 deg. with Bird Screen
Extended Bearing Lube Lines
Bearings with Grease Fittings
One Point Wiring
Unit Warranty: 1 Yr (Standard)
Damper Mounted, VCD-23-PB-50X50, Not Coated
Damper Actuator (AFBUP), 208 VAC Actuated w/ 115 VAC Transformer

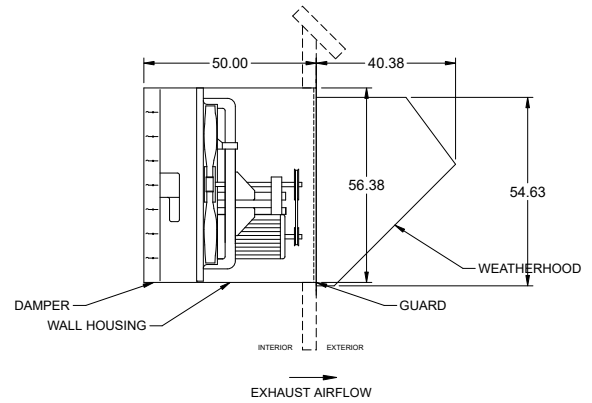
Assembly Drawing

Type: Sidewall Belt Drive Fan

DRAWING VIEWED FROM INTERIOR



END VIEW DIMENSIONS ARE FOR HOUSING NOT FAN PANEL
WALL OPENING 57.75 SQ.
MOTOR IS ACCESSIBLE FROM EXTERIOR OF BUILDING
THIS IS AN EXHAUST FAN DUE TO MOTOR ORIENTATION

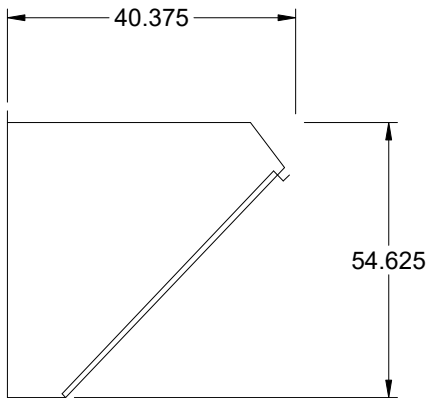


Notes: All dimensions shown are in units of in..

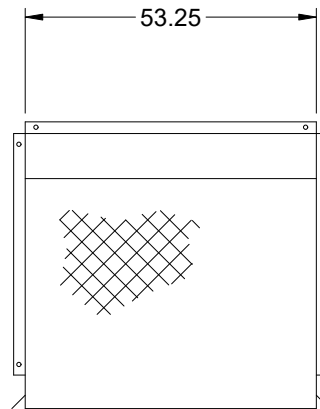
45 Degree Weatherhood

Standard Construction Features:

Galvanized Steel or aluminum construction. 0.5 welded wire birdscreen. Prepunched mounting holes. Field assembled.



SIDE VIEW

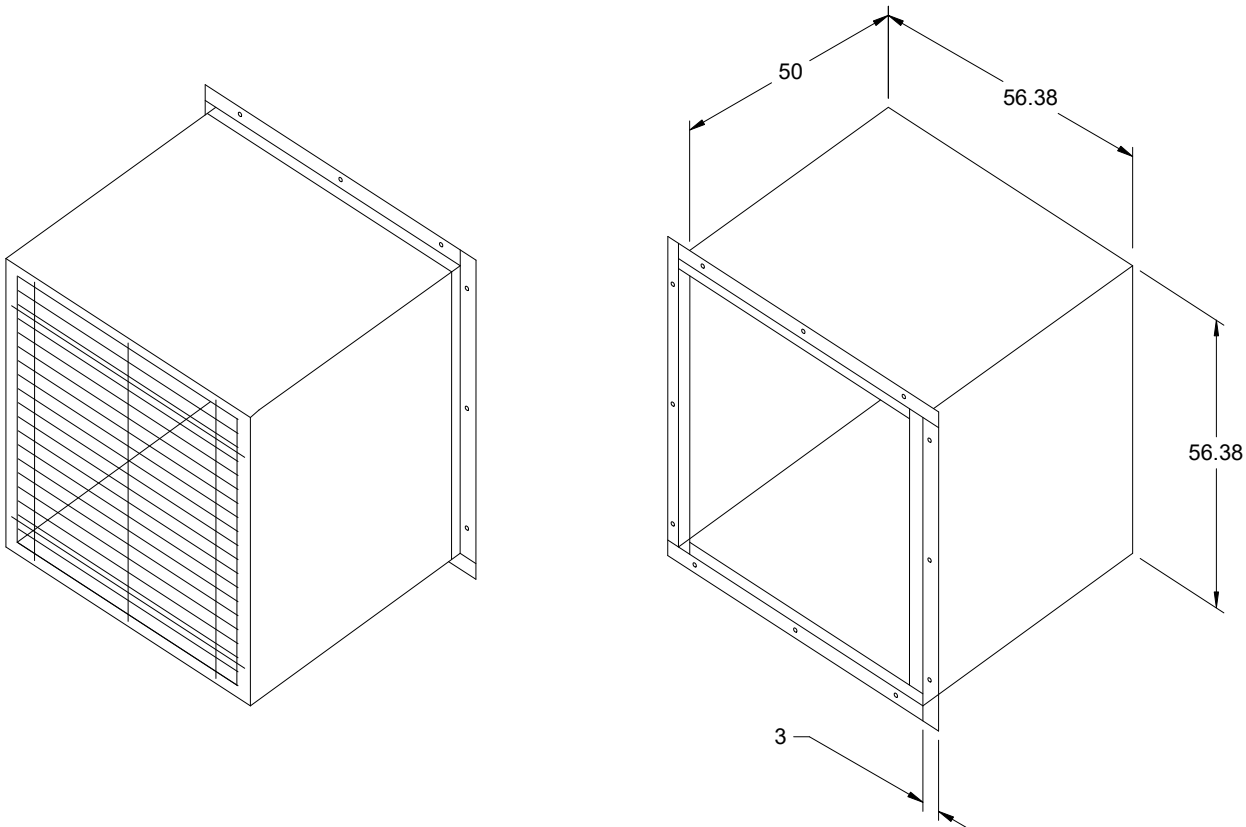


ELEVATION VIEW

Long Wall Housing

Standard Construction Features:

- Galvanized steel construction - Heavy gauge mounting flanges - Pre-punched mounting holes - Inside flanges allow damper to be mounted - Overlapping weatherhood flange keeps rain out - OSHA Protective guard of welded steel wire completely protects the drive side of the wall housing.



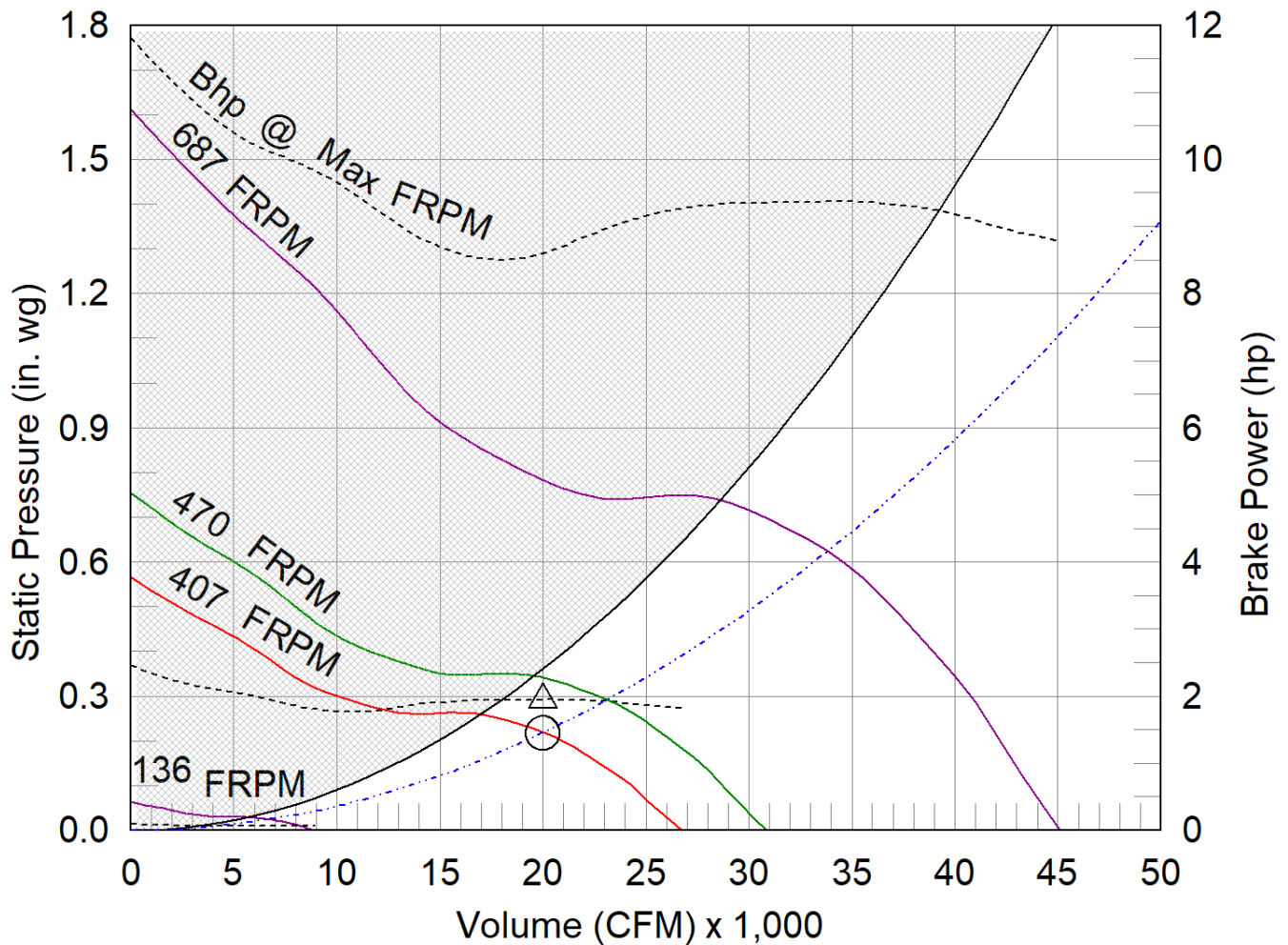
Notes: All dimensions shown are in units of in.

SBS-3L48-30

Min/Max Fan Curve

Performance

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
20,000	20,000	0.218	407	1.95



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

ESD-635 6 in. Frame, 35 deg Blade

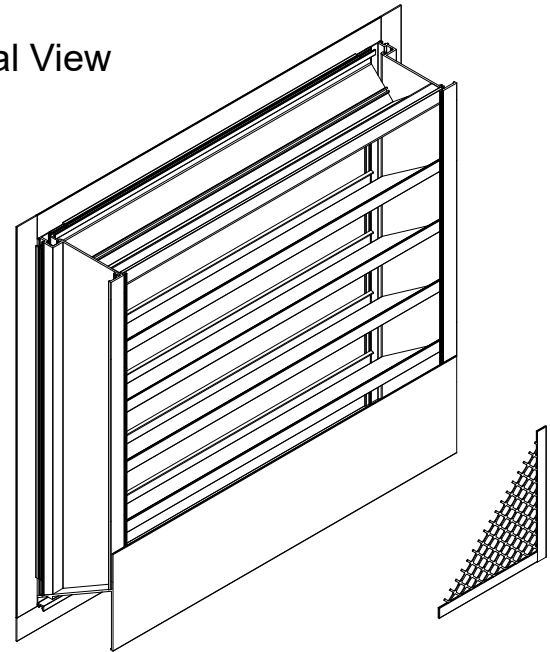
APPLICATION & DESIGN

ESD-635 is a weather louver designed to protect air intake and exhaust openings in building exterior walls. Design incorporates drain gutters in the head member and horizontal blades to channel water to the jambs where water is further channeled through vertical downspouts and out at the sloped sill. The ESD-635 is an extremely efficient louver with AMCA LICENSED PERFORMANCE DATA enabling designers to select and apply with confidence.

PRODUCT DETAILS

Frame:	6 in. x 0.081 in. Frame Thickness
Frame Type:	Flanged, 1.5 in., Exterior
Blades:	0.081 in. Fixed Blade Thickness
Material:	Aluminum
Sizing:	Nominal
Shape:	Rectangular
Construction:	Mechanically Fastened

Internal View



Width and Height furnished approximately 0.25 under size.

OPTIONS & ACCESSORIES

Finish:	Mill
Bird Screen:	0.75 in. x 0.05 in., Flat Expanded Aluminum, Internal, Mill Finish
Union Label:	No Preference
Warranty:	1 year Standard Product Warranty

SUMMARY

ID #	TAG	QTY.	W (in.)	H (in.)	FREE AREA (ft ²)	FREE AREA (%)	SECT. WIDE	SECT. HIGH	SHIP SECT.
4-1		4	108	84	40.12	63.7	1	1	4

PERFORMANCE

ID #	TAG	APPLICATION	VOLUME (CFM)	PRESSURE DROP (in. wg)	FREE AREA VELOCITY (ft/min)	BPWP (ft/min)
4-1		Intake	20,000	0.04	495	1,250

**Calculated pressure drop does not include the effects of screens, filters or other accessories

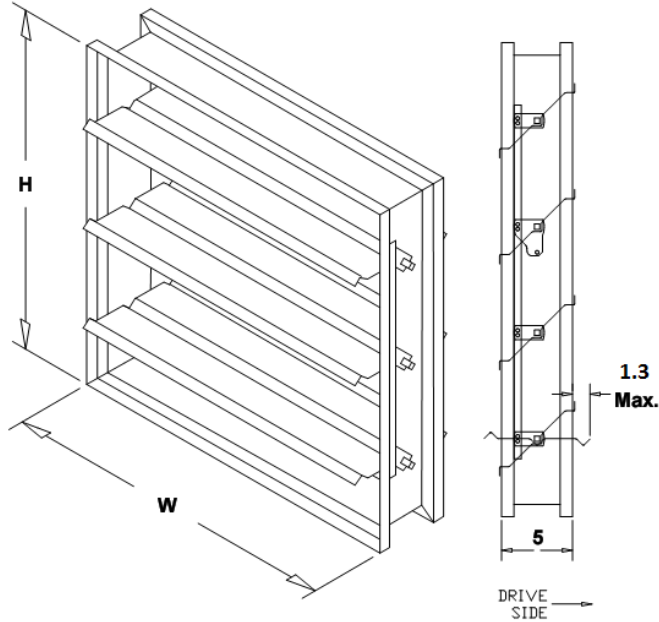
Total Louver Qty:	4	Total Weight (lb):	990	Louver Area (ft²):	252
Total Ship Sect.:	4				

**Weight shown is an estimate only based on the default base product configuration without options or accessories.

Larger openings may require field assembly of multiple louver panels to make up the overall opening size. Individual louver panels are designed to withstand windloads up to a maximum of 25 PSF (size and configuration dependent). Design, materials and installation of structural reinforcement required to adequately support large sections or multiple section assemblies within a large opening are not provided by Greenheck. Options and accessories including, but not limited to, screens, filter racks, louver doors, and blankoff panels are not subject to structural analysis unless indicated otherwise by Greenheck. Unless specifically indicated, the following are NOT included in the quote provided: structural steel, installation hardware (anchors, angle clips, continuous angles, shims, fasteners, inserts, backer rod and sealant), field measuring and/or installation, miscellaneous flashing, trim or enclosures, blank off panels, mullion covers or mullion hardware, hinged frames or removable subframes, custom bird/insect screen, 3-coat, metallic and/or exotic paint finishes, bituminous paints for unlike metals, any applicable taxes, stamped and sealed structural calculations seismic calculations or job specific engineered submittal drawings.

Control Damper

Model: VCD-23



Standard Construction Features:

- Model VCD-23 is a well built low leakage control damper for automatic control or manual balancing applications
- Galvanized 16 ga channel frame
- Galvanized blades with reinforcements
- Side mounted steel linkage is concealed in the frame to prevent additional pressure drop
- Axles are steel and 0.5 in. dia.
- Synthetic axle bearings
- Width and height furnished approximately 0.25 in. undersized
- Field wiring is required to individual components

Damper Configuration:

ID #:	Tag:	Quantity:	W (in.):	H (in.):	Act Qty:	Actuator Model:
6	EF-1,2,3,4	4	50	50	1	AFBUP

Notes: All dimensions shown are in units of in.
Width And height furnished approximately 0.25 in. undersize

Louvers Mill Aluminum Finish

Aluminum in the mill finish state will be commercially smooth and substantially free from blisters, inclusions, voids, slivers and kinks. Slight discontinuity resulting from flow and die lines inherent in the extrusion process will exist. Occasional discontinuities that can be reasonably removed making the surface suitable for finishing operations are acceptable. Although aluminum is naturally resistant to corrosion, its appearance changes as a result of weathering and aging. Aluminum in the mill finish state may also have a non-uniform surface appearance resulting from oil, heat and oxide discoloration inherent in the manufacturing process.

APPENDIX E

EQUIPMENT SPECIFICATIONS

**I.W.S. TRANSFER SYSTEMS OF N.Y., INC.
GOSHEN TRANSFER STATION
95 HARTLEY ROAD, GOSHEN, NEW YORK**

EQUIPMENT LIST

Equipment No.	Number of Units on Site	Equipment Description
1	1	Aquastore Water Storage Tank or equal
2	4	Greenheck Fan Model SBS-3L48-30 or equal
3	1	Highland 4,000 Gallon Dual Walled Underground Leachate Storage Tank or equal
4	1	Rice Lake Loadout Tunnel Scale or equal

WATER STORAGE TANK

AQUASTORE®

Glass-Fused-To-Steel Liquid Storage Tanks

CST



A LEGACY OF INNOVATION

CST Industries, Inc. has a long and storied history of turning raw steel into the finest storage tanks available. Our unique glass-fused-to-steel technology was introduced more than 67 years ago. Today, CST is dedicated to the design, fabrication and installation of glass-fused-to-steel storage tanks.

After more than 100,000 installations of field proven performance, Aquastore® tanks remain the markets preferred choice for potable water storage and liquid applications. With tens of thousands of satisfied customers, Aquastore tanks are engineered to be the very best.

CST has an ongoing research/product improvement program dedicated to constantly enhancing our manufacturing processes. As the leading innovator, CST ensures **Vitrium™ TiO₂** and **Edgecoat II™** technology is utilized on every tank for maximum corrosion resistance and the longest life span available. When you purchase an Aquastore, you get the best tank, EVERY TIME.

With Aquastore, you get the highest engineered quality, best service, longest product life and greatest value in liquid storage tanks.

Aquastore owners choose CST's glass-fused-to-steel technology over all other tank designs for several reasons:

- Never EVER needs painting
- Aquastore tanks are manufactured using Vitrium coating technology enhanced with TiO₂
- Edgecoat II technology, the ONLY process in the world that provides optimum glass encapsulation on all (4) four sides of the sheet
- Greater lifetime value compared to other tank designs
- Fastest construction time – Easy assembly without cranes or special equipment
- Expandable to accommodate future requirements
- Available in diameters from 11 feet (3.3 m) to 243 feet (74 m) and capacity from 20,000 gallons (75 cu m) to over 6 million gallons (22,700 cu m)
- Specific tank designs, options and accessories to meet every customers needs
- Lowest life cycle cost of all other available tank designs



All Aquastore tanks are manufactured exclusively in the USA with only USA steel and supported by the world's most experienced Local Authorized Dealer Network

Steel Gives You Strength Glass Gives You Protection



ENHANCED GLASS-FUSED-TO-STEEL TECHNOLOGY

Aquastore's glass-fused-to-steel is the premium technology in the tank market. Glass coating's physical properties are specially suited to municipal and industrial storage applications. The factory-applied silica glass coating on Aquastore tanks forms a hard, inert barrier for both the interior and exterior tank surfaces to guard against weather and corrosion. Glass-fused-to-steel is impermeable to liquids and vapors, controls undercutting caused by corrosion and offers excellent impact and abrasion resistance. The color won't fade or chalk and graffiti can easily be removed. ***It never needs painting!***



A multi-step process is the heart of the glass-fused-to-steel technology system:

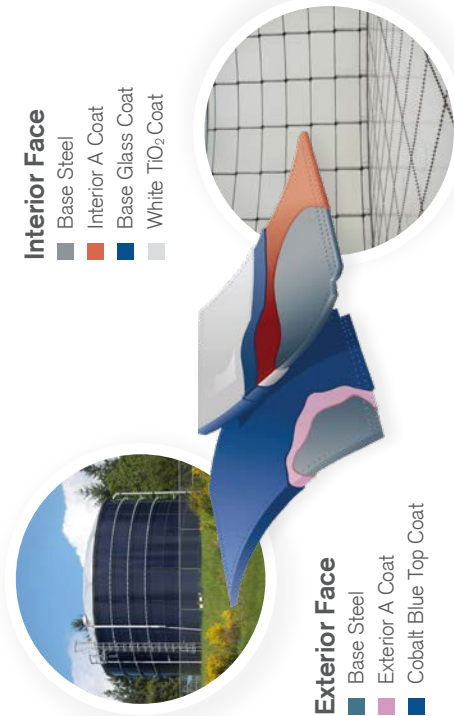
- Fabricated sheets are grit blasted to a uniform, near white surface
- Formulations of borosilicate, minerals, water and clays are blended into a sprayable slurry called "slip"
- After inspection, the slurry is fused to the steel sheets at temperatures above 1500° F (815° C) resulting in an ionic exchange of materials and forming a covalent bond producing the distinctive glossy Aquastore glass finish
- The molten glass reacts with the profiled steel surface to form an inert, inorganic chemical and mechanical bond

State-of-the-art porcelain enameling furnace improves quality, saves energy, increases production and speeds delivery of glass-fused-to-steel products to customers.

The interior of ALL Aquastore tanks feature Vitrium™ coating technology enhanced with titanium dioxide (TiO₂) for the toughest glass available. This coating combines the outstanding chemical and physical resistant properties of titanium-enhanced glass with a highly engineered, ultra-fine glass bubble structure essential to flexibility, quality and longevity. This process results in high performance glass-fused-to-steel technology. Vitrium features and benefits include:

- Tough TiO₂ glass formulations provides longer life
- White interior is easier to inspect than darker coatings
- Factory certified holiday-free sheets
- Designed for use in both cold and hot climates
- Designed, fabricated, shipped and supported within the USA

Guaranteeing the best quality available from our manufacturing facility to your jobsite.



Exterior Face
■ Base Steel
■ Exterior A Coat
■ Cobalt Blue Top Coat

Interior Face
■ Base Steel
■ Interior A Coat
■ Base Glass Coat
■ White TiO₂ Coat

Glass frit is specially formulated to produce the distinctive cobalt blue Aquastore glass coating.

» Edgecoat II™

ENGINEERED EDGECOAT TECHNOLOGY

Edgecoat II™ is a result of CST's commitment to an ongoing product development and improvement program. This continuous innovative *Edgecoat II technology is the ONLY process in the world that provides optimum glass encapsulation on all (4) four sides of the sheet edges*. CST took the best Edgecoat technology in the world and made it better with Edgecoat II.

Following Porcelain Enameling Institute guidelines (PEI-101), Edgecoat II sheets are mechanically rounded to specific radii that provides maximum glass adhesion to steel. The combination delivers the maximum corrosion resistance of Vitrium glass coating with the greatest protection on every sheet.

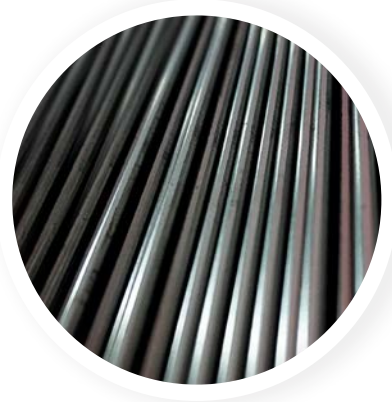
The Edgecoat II engineered approach involves stringent plant quality control procedures to ensure the Edgecoat II remains in place throughout the life of the tank.

Sheet edge corrosion on steel is aesthetically unpleasant and will significantly limit the life of your storage tank. Due to the manufacturing expense and professional engineering necessary to coat the steel edges, other glass tank providers will leave them uncoated and exposed; relying solely on the sealant fillet to prevent corrosion in this area. CST's improved process of mechanically rounding the sheet edges to exact radii ensures adherence of the glass for complete encapsulation on every sheet edge.



Aquastore glass-fused-to-steel tanks with Vitrium TiO₂ and enhanced Edgecoat II technology, offer complete encapsulation and corrosion protection. CST continues to lead innovative improvements in areas that are most susceptible to environmental attack.

The physical properties of all Aquastore tanks' glass coating are especially suited to municipal and industrial liquid storage applications. The tank designs incorporate recognized standards assuring high-quality long-lasting municipal and industrial liquid storage tanks.



Engineered Edge

Benefits of Edgecoat II include:

- 5 mils of glass encapsulation on every sheet edge
- Glass is applied on all (4) four sides of the rectangular sheet edges providing the greatest protection
- Edges are engineered to ensure optimum radii for each individual gauge of steel providing the maximum and consistent glass edge
- No sharp edges on tank sheets, eliminating safety hazards
- Highest quality finish

TANK ECONOMICS & LIFETIME VALUE

All tanks are not created equal! The glass-fused-to-steel technology in an Aquastore tank delivers greater lifetime value than any other tank provider. When you add up the tank benefits over its life cycle, the advantages of an Aquastore cannot be beat. It is simply the best quality, lowest maintenance and most flexible tank available.

CONSIDERING CONCRETE OR WELDED?

The biggest economic advantage is that an Aquastore tank never needs painting! The budgeted dollars that may be used to repair a concrete tank or repaint a welded tank every 8 – 15 years can be diverted to other municipal or industrial needs. The modular design allows for rapid installation and flexibility when compared to concrete and welded construction.

Concrete tanks are expensive, involve long construction periods, need a lot of room to build and are not "maintenance free". AWWA allows for leaking, and some level of cracking is expected. Concrete tanks require a lengthy construction time compared to an Aquastore tank, especially when expensive concrete roofs are involved and must be field coated to meet NSF approval.

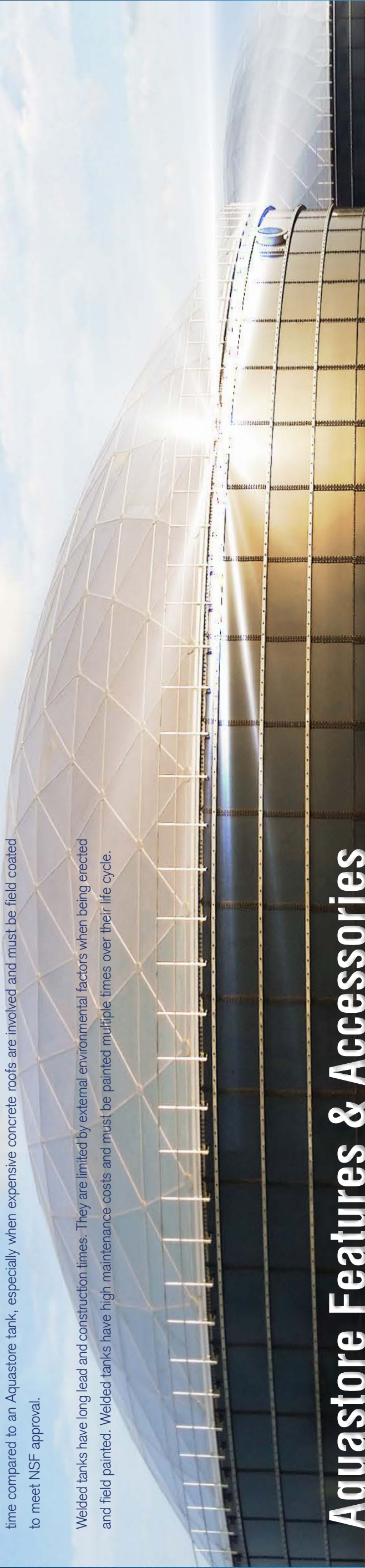
Welded tanks have long lead and construction times. They are limited by external environmental factors when being erected and field painted. Welded tanks have high maintenance costs and must be painted multiple times over their life cycle.

EXTERIOR COLOR OPTIONS

Aquastore glass coatings are available in standard cobalt blue and four other exterior colors. Inquire for custom colors.

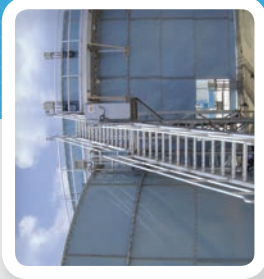
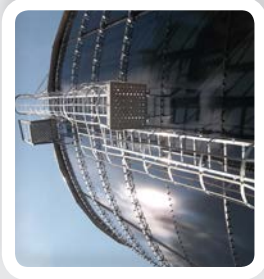
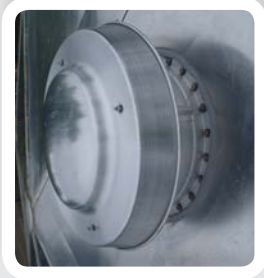


Look for the white interior as a result of the TiO₂ coating formula and technology that ensure the maximum corrosion protection for your tank. The white interior provides an added benefit of full visual exposure of your tank during inspections.



Aquastore Features & Accessories

Cathodic Protection	Gravity Vent	Ladder: Cage & Platform	Sidewall Manways	Hardware and Sealants	Accessories & More
An Aquastore tank's progressive cathodic protection system uses sacrificial anodes to protect the reinforcing bars, mitigate corrosion and provide protection to internal submerged surfaces of the tank. It is incorporated into the Aquastore tank's warranty.	Aquastore tank gravity vents are designed to allow for air exchange during filling and emptying. They are equipped with corrosion-resistant bird and insect screens.	Aquastore tank ladders are constructed of aluminum rails and rungs with hot-dip galvanized cages and step off platforms. Ladders with locking safety cage doors are available.	Aquastore tank manways are designed in accordance with AWWA D103 Standards. They are 24 inches (61 cm), 30 inches (76 cm) or 36 inches (91 cm) in diameter and are manufactured with hot-dip galvanized or stainless steel. Manways are provided with a davit hinge connection for easy access.	The hardware and sealants are specific to each application. Chlorine resistant sealants, hardware with protective covers and heavy duty plastic bolt caps are also available for added protection.	A variety of accessories are available to meet specific needs. Accessories include: • Roof walkways, railings & staircases • Level indicators • Nozzles • And many more



TANK APPLICATIONS

Aquastore storage tanks with Vitrium glass-fused-to-steel are ideal for the following designs and applications:



Composite Elevated



Standpipe



Leachate



Ground Storage Tank



Fire Protection



Anaerobic Digestion



Municipal Wastewater Clarifier / Sludge / Storage / Mixing

FROM THE TOP DOWN - FASTER, SAFER CONSTRUCTION

Every Aquastore tank is factory engineered to customer specifications. Since all components are manufactured in the factory and easily assembled, Aquastore tanks can be installed in many types of weather conditions that field-welded steel or concrete tanks cannot. Tanks are assembled from the top down by factory-trained professional building crews using CST's Proof Load Tested and PE stamped jacking systems that safely and progressively elevate the structure without the need for expensive cranes, large staging areas or extensive scaffolding. Erection crews can stay safely on the ground. This construction method enables rapid, logical progress for timely completion.

- Small footprint
- Site work savings
- Year round construction
- Fast turnaround
- Quick erection
- Trained and certified crews

Floors

Aquastore floors can be glass-fused-to-steel or reinforced concrete. Steel floors have the same superior glass coating as the Aquastore glass-fused-to-steel sheets. When using concrete, Aquastore walls are embedded in the foundation. Authorized Aquastore Dealers can provide site preparation and foundation installation.

Sidewalls

Sidewall erection is completed using a series of specially engineered motorized jacks. Each glass-fused-to-steel panel is bolted and sealed into place. Upon completion, the motorized jacks raise the sidewall ring so subsequent rings can be erected. Erecting an Aquastore tank does not require heavy-load cranes or lifting equipment on-site. This unique installation process allows for construction in remote regions, as well as metropolitan areas.

Roofs or Domes

The flush batten OptiDome® is a next generation aluminum geodesic dome. OptiDome aluminum domes incorporate a flush batten design that effectively sheds water and reduces ponding on the panels. With a Double Web I-Beam customers get the most efficient, functional, long lasting dome solution in the industry. OptiDome is easy to install and requires less sealant than typical geodesic domes. CST's OptiDome design efficiently complies with the latest requirements that have been adopted by 2010 Aluminum Design Manual, Eurocode, and International Building Code 2012.

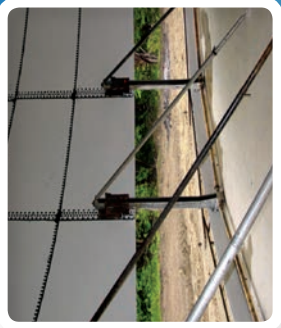
Every OptiDome is custom designed to meet the specific requirements of each project and can be engineered for any snow, wind or suspended load capacity, as well as span-to-rise-ratio. The all-aluminum free span OptiDome's are available for the complete range of Aquastore tanks.

Glass-fused-to-steel roofs are available up to 31' in diameter and aluminum geodesic domes are available in all sizes.

Glass-fused-to-steel roofs are manufactured with hard tooling and include radially sectioned steel panels. The roofs are assembled using the same sealant and bolting techniques as the sidewall panels.

Sealants

Aquastore tanks feature sealants specifically formulated for chemical resistance appropriate to the application. Each sealant is inspected on a batch-by-batch basis to ensure quality. The sealant is suitable for contact with potable water and is certified to meet ANSI/NSF Additives Standard 61 for indirect additives and is chlorine resistant. Sealants cure to a rubber-like consistency, have excellent adhesion to the glass coating, low shrinkage and are utilized for both interior and exterior use.



Most Experienced Dealer Network

CST delivers Aquastore tanks through a network of Authorized Aquastore Dealers. These organizations and their sales representatives are available to discuss project requirements from inception to completion. Experience in your region and application knowledge are valuable during all stages, from project development to specification to erection to the completed and tested tank.

Pricing, budget estimates, foundation layouts, project scheduling, approval drawings and foundation construction are just a few of the areas where Authorized Aquastore Dealers can help. Our customers deal with one source from start to finish, including service after installation. Dealers provide excellent customer service, are local and knowledgeable of your area and building requirements.

Authorized Aquastore Dealers offer a turn-key package to customers providing service, support and expertise from start to finish. In addition to selling and erecting an Aquastore tank, dealer sales and service specialists provide the following:

- Value engineering – total cost analysis
- Tank configuration and layout data
- Budgeting
- Product engineering specifications
- Design criteria assistance
- Tank layout drawings
- Approval drawings
- Certified drawings
- Site preparation and layout
- Tank construction scheduling
- Structural calculations
- Tank testing and commissioning
- Tank inspection
- Maintenance services
- Relocation or expansion
- Concrete work
- Pipe work (inlet, outlet, overflow, decant, etc.)
- Insulation (spray foam, battens, etc.)
- Dome installations
- Turn-key tank construction
- After sale service

Turnkey package from site preparation to completed and tested tank.

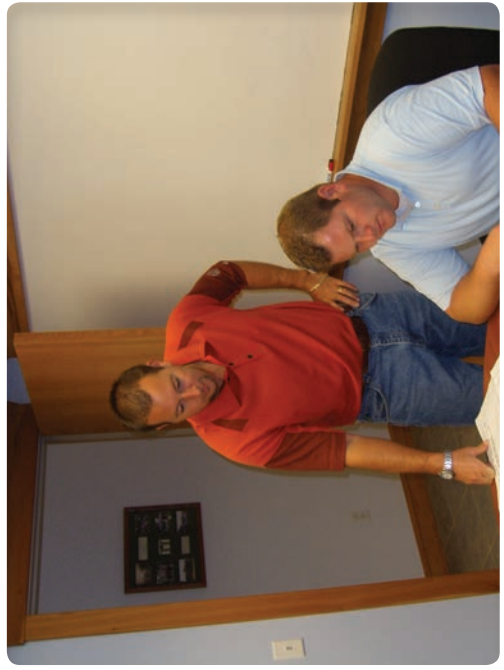


» Best in Industry Warranty

For more than 67 years, CST has offered the most comprehensive manufacturer's warranty in the industry. The field-proven performance history of Aquastore tanks is one more indication that our products are built to last.

An Aquastore tank requires minimal maintenance over its life cycle and CST's Authorized Aquastore Dealers will provide complete service packages tailored to your application needs. Most importantly, the glass-fused-to-steel technology provides protection from environmental impact and never needs painting, saving hundreds of thousands of dollars over time.

Always there when you need us,
just a phone call away...

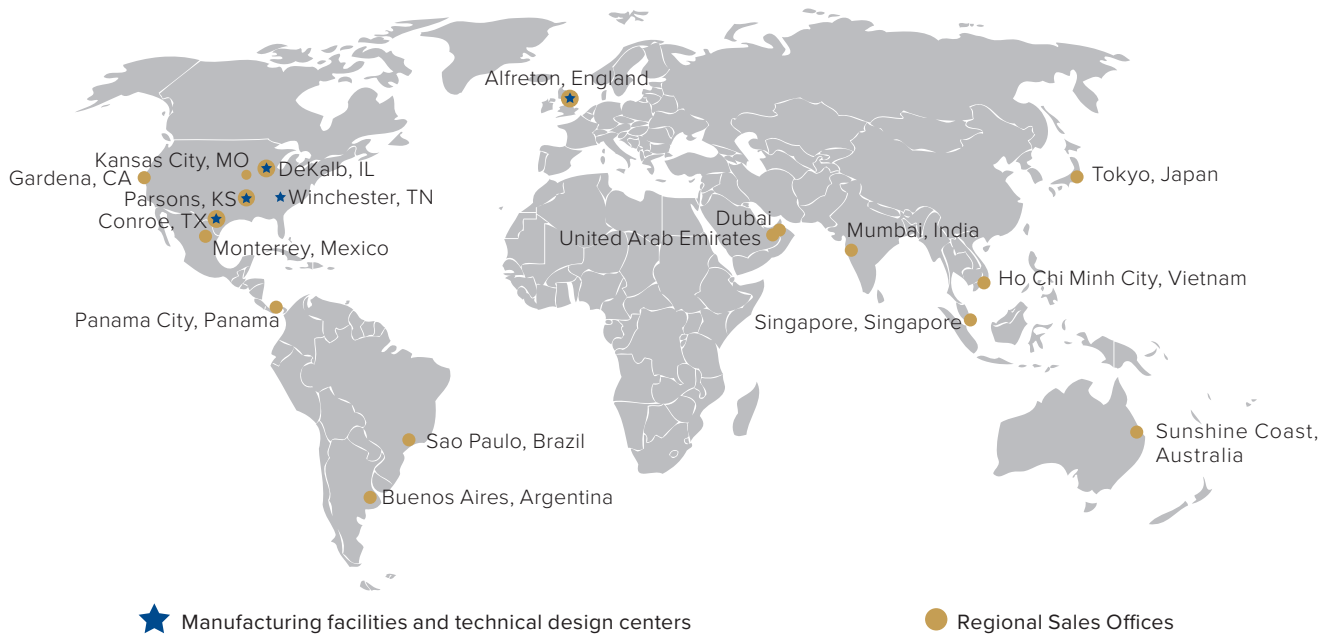


Find your nearest Aquastore Dealer in the dealer locator section at aquastore.com or call **815-756-1551** today!

CST is committed to providing its customers with the highest engineered quality, best service, longest product life and greatest value for every storage solution we supply. Contact CST for all of your water, wastewater and liquid applications.

Worldwide Availability

CST Global Manufacturing and Offices



Certifications and Capabilities:

- ISO 9001:2015
- AISC
- IBC
- Individual State Building Codes
- ANSI/AWWA D103
- NBCC
- FM 4020/4021
- British Standard 7543:2003
- EN 15282/ISO 28765
- NFPA Standard 22
- ANSI/NSF 61



For more information, call **815-756-1551** or visit **aquastore.com** to find an Authorized Aquastore Dealer nearest you.

Model: SBS-3L48-30

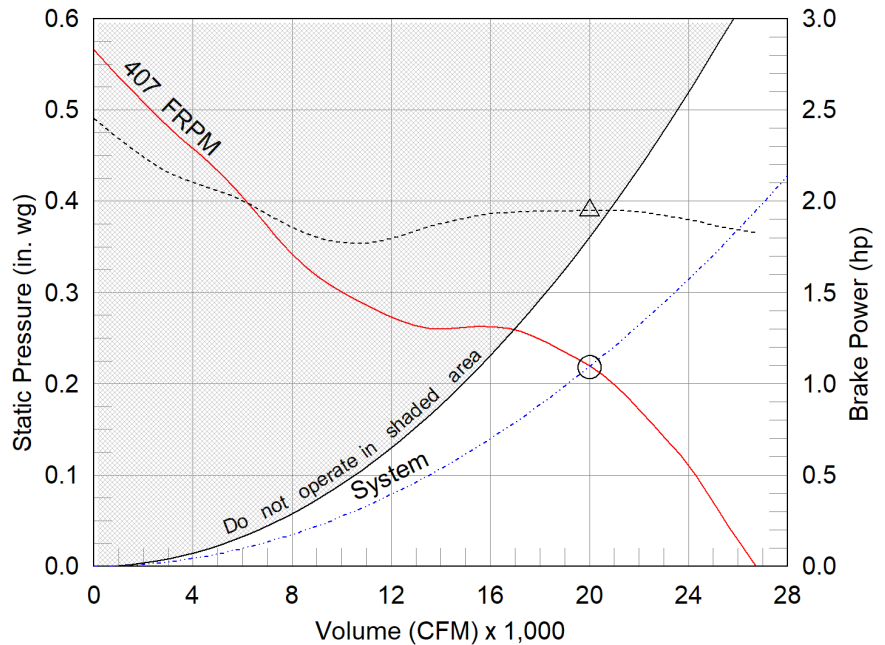
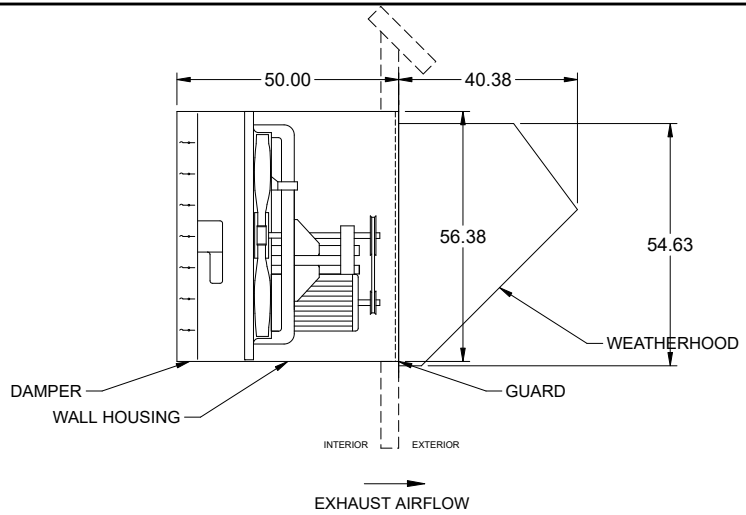
Sidewall Belt Drive Fan

Motor Access From Ext. of Bldg.

Dimensional	
Quantity	4
Weight w/o Acc's (lb)	302
Weight w/ Acc's (lb)	778
Max T Motor Frame Size	215
Optional Damper (in.)	50 x 50
Wall Opening (in.)	57.75 x 57.75

Performance	
Requested Volume (CFM)	20,000
Actual Volume (CFM)	20,000
Total External SP (in. wg)	0.218
Fan RPM	407
Operating Power (hp)	1.95
Elevation (ft)	341
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	4.9
Tip Speed (ft/min)	5,111
Static Eff. (%)	37

Motor	
Motor Mounted	Yes
Size (hp)	3
Voltage/Cycle/Phase	208/60/3
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	NEMA Premium
Windings	1
NEC FLA* (Amps)	10.6



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- Brake horsepower curve

Static Pressure Calculations

External SP	0.125 in. wg
Damper	0.047 in. wg
Wall Housing	0.046 in. wg
Total External SP	0.218 in. wg

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	87	84	79	77	74	71	67	60	80	68	17.1

Notes:

All dimensions shown are in units of in.
*NEC FLA, MCA and MOP are for reference only – based on tables 430.248 or 430.25 of National Electric Code 2020. Actual motor FLA may vary, for sizing thermal overload, consult factory. MCA and MOP values shown only account for the motor, not accessories (damper actuator, field supplied VFD, etc).
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2



Model: SBS-3L48-30

Sidewall Belt Drive Fan

Standard Construction Features:

- Galvanized steel fan panel - Die formed, galvanized steel drive frame assembly
- Fabricated steel propeller for Levels 1 and 2, welded and painted steel for Level 3
- Adjustable motor pulley - Ball bearing motors - Fan shaft mounted in ball bearing pillow blocks - Static resistant belts - Corrosion resistant fasteners

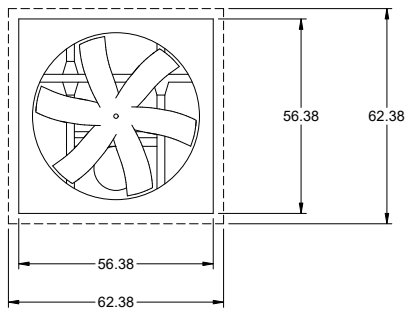
Selected Options & Accessories:

NEMA Premium Efficient Motor - meets NEMA Table 12-12
Motor VFD Rated without Shaft Grounding Protection
UL/cUL 705 Listed - "Power Ventilators"
Airflow Direction: Exhaust
Long Wall Hsg, Flush Exterior, w/ OSHA Grd.
Motor Access: From Ext. of Bldg.
Weatherhood, Aluminum 45 deg. with Bird Screen
Extended Bearing Lube Lines
Bearings with Grease Fittings
One Point Wiring
Unit Warranty: 1 Yr (Standard)
Damper Mounted, VCD-23-PB-50X50, Not Coated
Damper Actuator (AFBUP), 208 VAC Actuated w/ 115 VAC Transformer

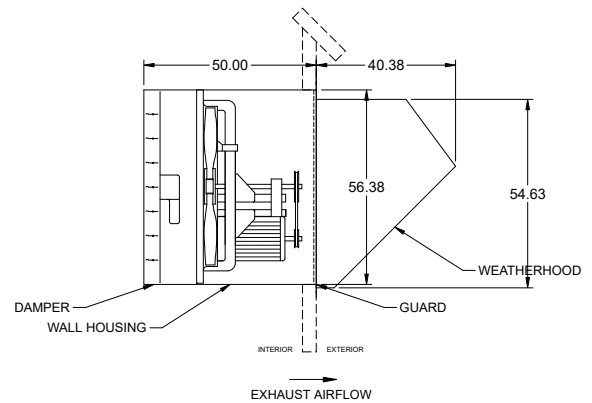
Assembly Drawing

Type: Sidewall Belt Drive Fan

DRAWING VIEWED FROM INTERIOR



END VIEW DIMENSIONS ARE FOR HOUSING NOT FAN PANEL
WALL OPENING 57.75 SQ.
MOTOR IS ACCESSIBLE FROM EXTERIOR OF BUILDING
THIS IS AN EXHAUST FAN DUE TO MOTOR ORIENTATION

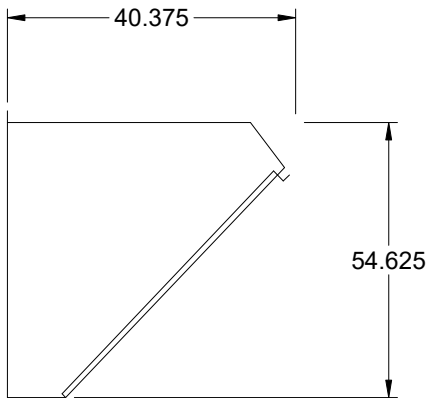


Notes: All dimensions shown are in units of in..

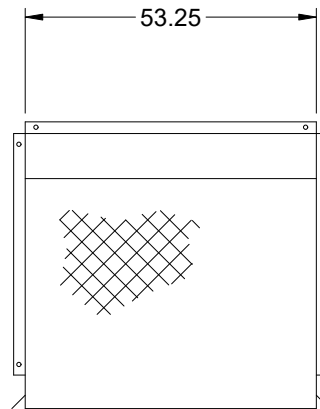
45 Degree Weatherhood

Standard Construction Features:

Galvanized Steel or aluminum construction. 0.5 welded wire birdscreen. Prepunched mounting holes. Field assembled.



SIDE VIEW

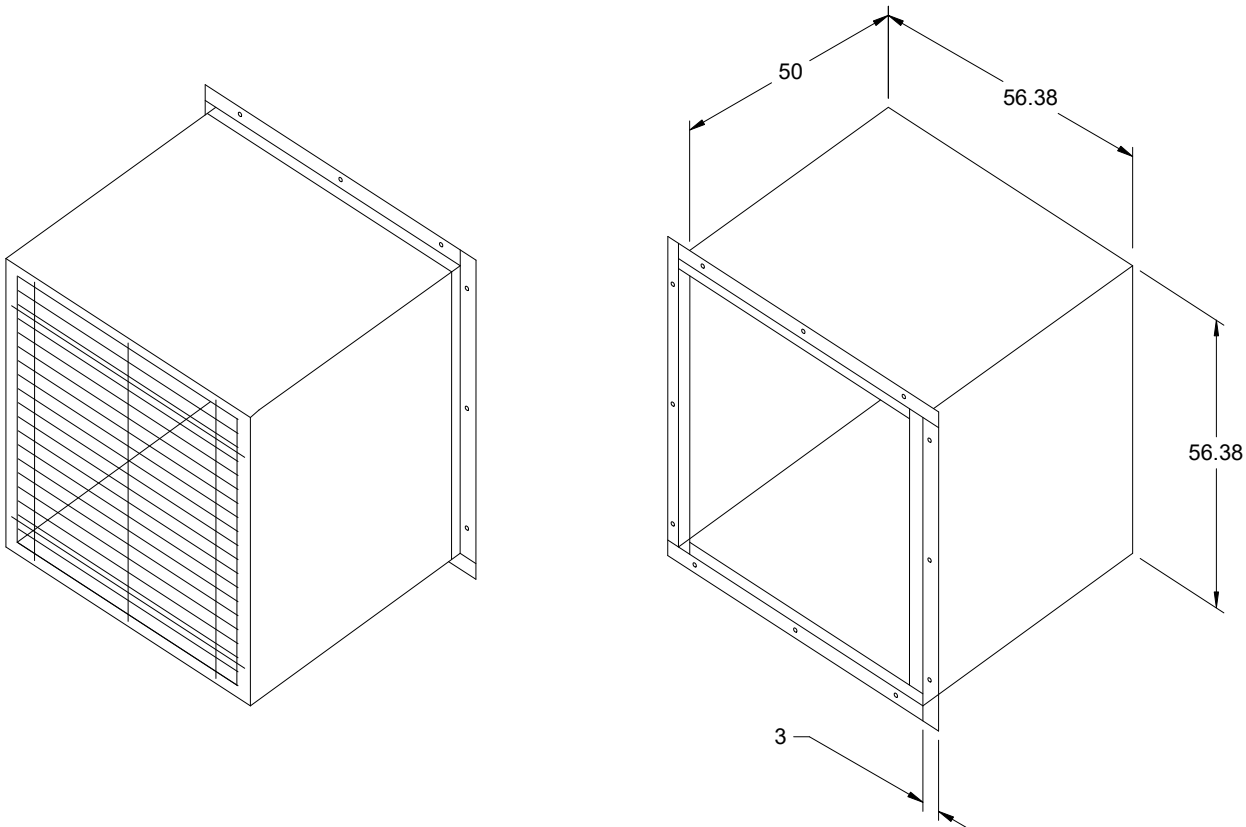


ELEVATION VIEW

Long Wall Housing

Standard Construction Features:

- Galvanized steel construction - Heavy gauge mounting flanges - Pre-punched mounting holes - Inside flanges allow damper to be mounted - Overlapping weatherhood flange keeps rain out - OSHA Protective guard of welded steel wire completely protects the drive side of the wall housing.



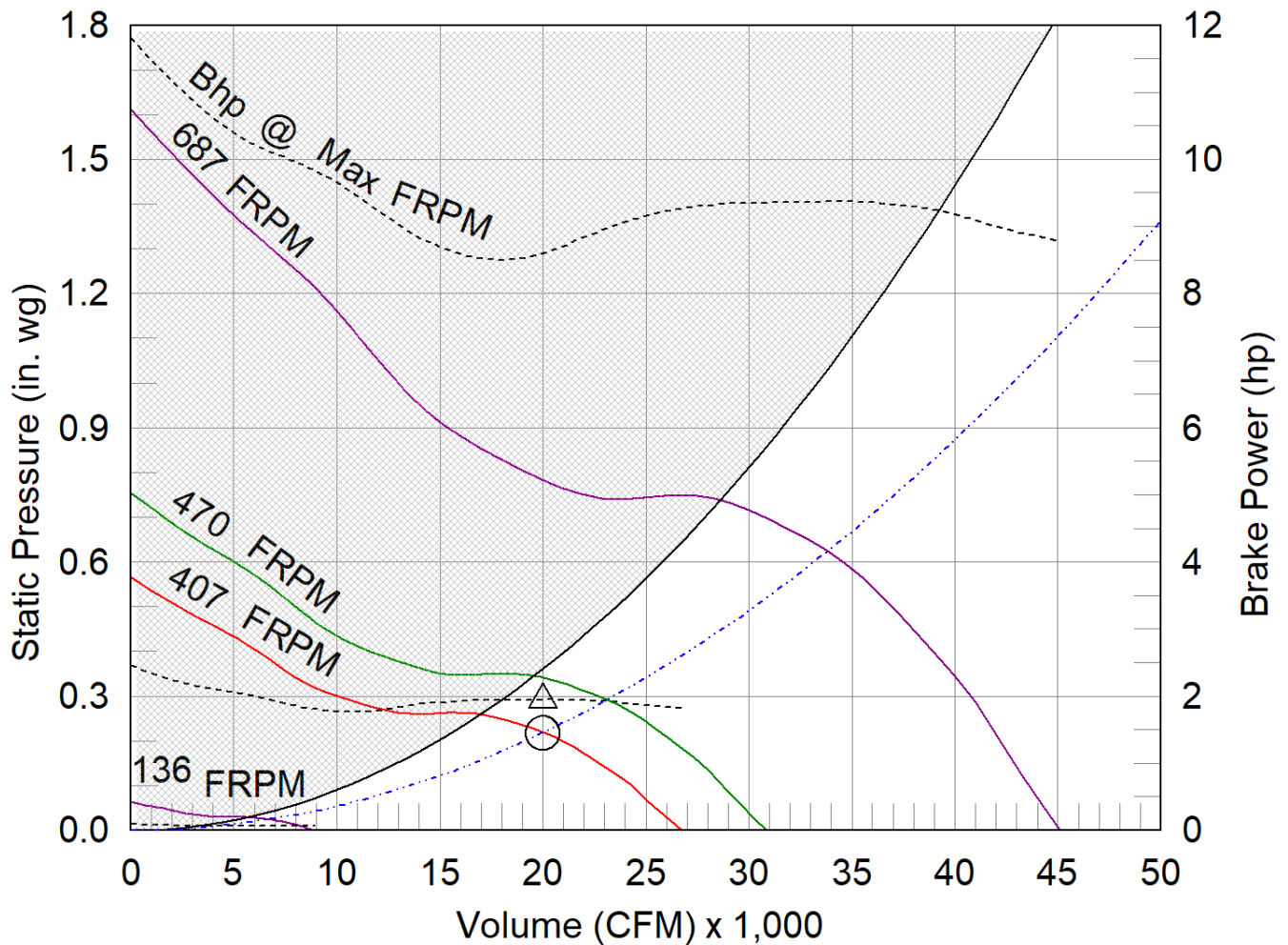
Notes: All dimensions shown are in units of in.

SBS-3L48-30

Min/Max Fan Curve

Performance

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
20,000	20,000	0.218	407	1.95



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

ESD-635 6 in. Frame, 35 deg Blade

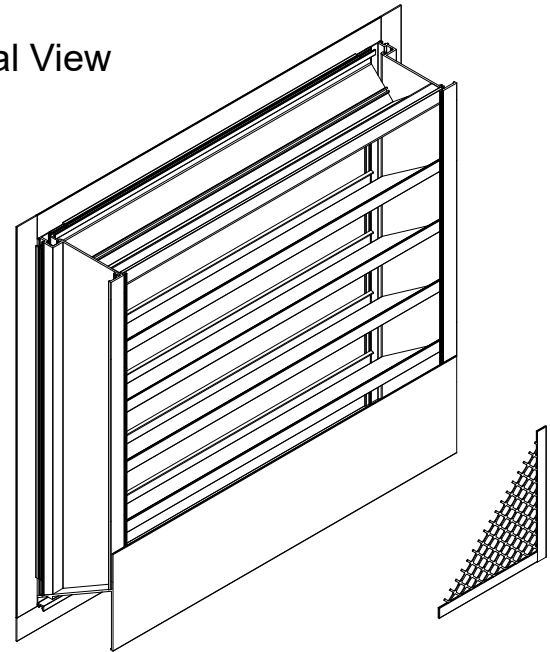
APPLICATION & DESIGN

ESD-635 is a weather louver designed to protect air intake and exhaust openings in building exterior walls. Design incorporates drain gutters in the head member and horizontal blades to channel water to the jambs where water is further channeled through vertical downspouts and out at the sloped sill. The ESD-635 is an extremely efficient louver with AMCA LICENSED PERFORMANCE DATA enabling designers to select and apply with confidence.

PRODUCT DETAILS

Frame:	6 in. x 0.081 in. Frame Thickness
Frame Type:	Flanged, 1.5 in., Exterior
Blades:	0.081 in. Fixed Blade Thickness
Material:	Aluminum
Sizing:	Nominal
Shape:	Rectangular
Construction:	Mechanically Fastened

Internal View



Width and Height furnished approximately 0.25 under size.

OPTIONS & ACCESSORIES

Finish:	Mill
Bird Screen:	0.75 in. x 0.05 in., Flat Expanded Aluminum, Internal, Mill Finish
Union Label:	No Preference
Warranty:	1 year Standard Product Warranty

SUMMARY

ID #	TAG	QTY.	W (in.)	H (in.)	FREE AREA (ft2)	FREE AREA (%)	SECT. WIDE	SECT. HIGH	SHIP SECT.
4-1		4	108	84	40.12	63.7	1	1	4

PERFORMANCE

ID #	TAG	APPLICATION	VOLUME (CFM)	PRESSURE DROP (in. wg)	FREE AREA VELOCITY (ft/min)	BPWP (ft/min)
4-1		Intake	20,000	0.04	495	1,250

**Calculated pressure drop does not include the effects of screens, filters or other accessories

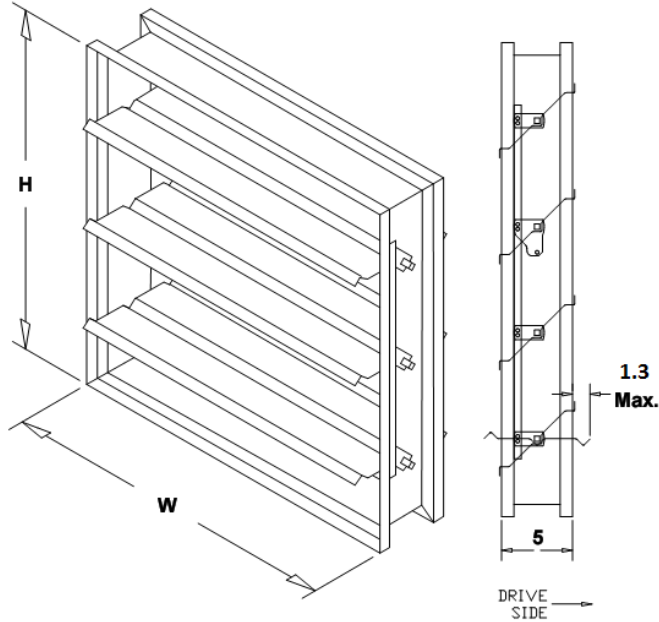
Total Louver Qty:	4	Total Weight (lb):	990	Louver Area (ft2):	252
Total Ship Sect.:	4				

**Weight shown is an estimate only based on the default base product configuration without options or accessories.

Larger openings may require field assembly of multiple louver panels to make up the overall opening size. Individual louver panels are designed to withstand windloads up to a maximum of 25 PSF (size and configuration dependent). Design, materials and installation of structural reinforcement required to adequately support large sections or multiple section assemblies within a large opening are not provided by Greenheck. Options and accessories including, but not limited to, screens, filter racks, louver doors, and blankoff panels are not subject to structural analysis unless indicated otherwise by Greenheck. Unless specifically indicated, the following are NOT included in the quote provided: structural steel, installation hardware (anchors, angle clips, continuous angles, shims, fasteners, inserts, backer rod and sealant), field measuring and/or installation, miscellaneous flashing, trim or enclosures, blank off panels, mullion covers or mullion hardware, hinged frames or removable subframes, custom bird/insect screen, 3-coat, metallic and/or exotic paint finishes, bituminous paints for unlike metals, any applicable taxes, stamped and sealed structural calculations seismic calculations or job specific engineered submittal drawings.

Control Damper

Model: VCD-23



Standard Construction Features:

- Model VCD-23 is a well built low leakage control damper for automatic control or manual balancing applications
- Galvanized 16 ga channel frame
- Galvanized blades with reinforcements
- Side mounted steel linkage is concealed in the frame to prevent additional pressure drop
- Axles are steel and 0.5 in. dia.
- Synthetic axle bearings
- Width and height furnished approximately 0.25 in. undersized
- Field wiring is required to individual components

Damper Configuration:

ID #:	Tag:	Quantity:	W (in.):	H (in.):	Act Qty:	Actuator Model:
6	EF-1,2,3,4	4	50	50	1	AFBUP

Notes: All dimensions shown are in units of in.
Width And height furnished approximately 0.25 in. undersize

Louvers Mill Aluminum Finish

Aluminum in the mill finish state will be commercially smooth and substantially free from blisters, inclusions, voids, slivers and kinks. Slight discontinuity resulting from flow and die lines inherent in the extrusion process will exist. Occasional discontinuities that can be reasonably removed making the surface suitable for finishing operations are acceptable. Although aluminum is naturally resistant to corrosion, its appearance changes as a result of weathering and aging. Aluminum in the mill finish state may also have a non-uniform surface appearance resulting from oil, heat and oxide discoloration inherent in the manufacturing process.

LEACHATE STORAGE TANK

HighGuard Underground Steel Storage Tanks

Superior Tanks for a Tough Environment

HT-1089



Highland Tank®



A 75 mil (min) coating
is applied to the steel
grit-blasted tank surface

UL-Listed Steel
Primary Tank 10
gauge to .375"
thick



The HighGuard Tank features a strong dielectric coating of high solids polyurethane for protection, even under the most difficult conditions. HighGuard resists surface damage due to impact or abrasion that may occur during transportation, rigging and installation.

In fact, HighGuard underground storage tanks are so tough they require no cathodic protection or expensive corrosion monitoring. They out-perform fiberglass-reinforced polyester (FRP) clad tanks and do not require any artificial reinforcement.

HighGuard is superior in strength and rugged in appearance. After manufacturing and rigorous testing, the tank's exterior surfaces are commercially blasted with steel grit in preparation for coating.

The HighGuard protective coating is a dense, solvent-free, tar-free, two-component polyurethane coating system with high impact properties and tensile strength.

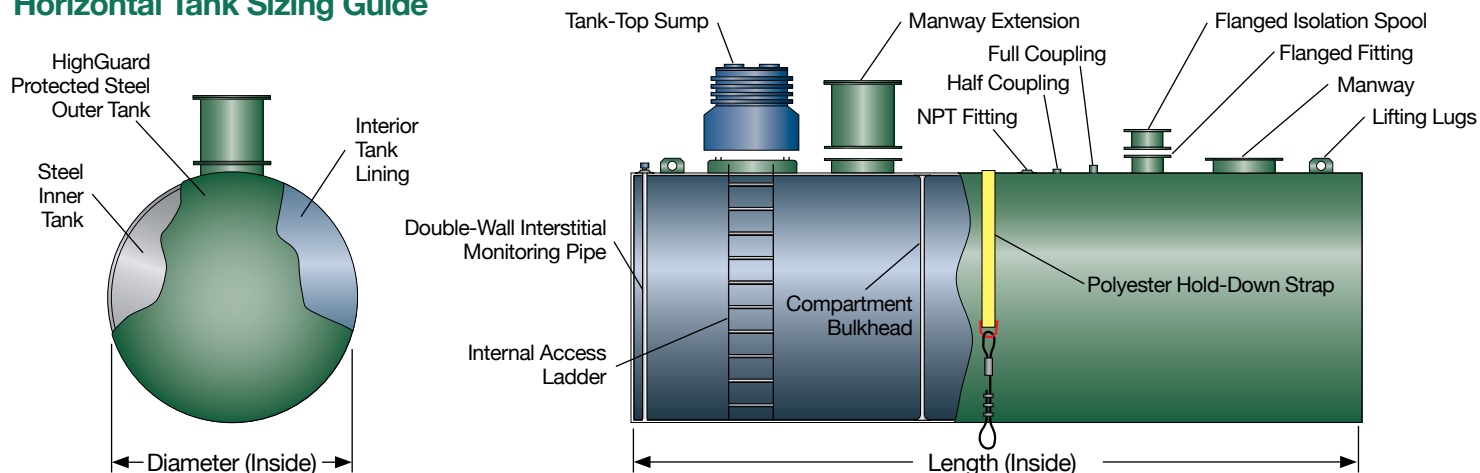
The coating is spray-applied with special equipment that ensures an even application of 75 mils over the entire surface of the tank.

The finished tank is quality checked by a 15,000-volt spark test to ensure coating integrity and effective corrosion protection that can be measured in decades, rather than years.

Unmatched Quality & Service



Horizontal Tank Sizing Guide



HighGuard Features

- UL-58 and UL-1746 compliant
- Provides 75 mils dielectric polyurethane protection
- Cured films are free of pores
- Must pass a 15,000 volt spark test before shipment
- Strong, flexible and resistant to impact, abrasion and corrosion
- No cathodic protection monitoring required
- Highland standard 10-year limited warranty
- Highland 30-year limited warranty is available

Flexible Designs

- Volumes from 240-50,000 gallons
- Custom sizes
- Multi-product storage compartments

Product Compatible

- Alternate fuel compatible without the additional cost of internal linings
- Safe storage for all motor fuels and biofuels, including biodiesel and ethanol blends

Environmentally Friendly

- Most environmentally-friendly coating on the market
- Uses no hazardous materials in production
- Can be disposed of as a non-hazardous material – steel tanks are 100% recyclable

Cost Effective

- On a total installed-cost basis, HighGuard's cost is less than any other unmonitored tank configuration on the market today
- No job site spark or air test required
- Lightweight construction for lower shipping and handling costs

Volume Gallons	Tank Dimensions	
	Diameter	Length
240	3'-2"	4'-0"
300	3'-2"	5'-0"
500	4'-0"	5'-5"
1,000	4'-0"	10'-9"
1,000	5'-4"	6'-0"
1,500	5'-4"	9'-0"
2,000	5'-4"	12'-0"
2,500	5'-4"	15'-0"
3,000	5'-4"	18'-0"
4,000	5'-4"	24'-0"
4,000	6'-0"	19'-0"
4,000	8'-0"	10'-8"
5,000	6'-0"	23'-10"
5,000	8'-0"	13'-4"
6,000	6'-0"	28'-8"
6,000	8'-0"	16'-0"
8,000	10'-0"	14'-0"
8,000	8'-0"	21'-4"
10,000	10'-0"	17'-0"
10,000	8'-0"	26'-8"
12,000	10'-0"	20'-6"
12,000	8'-0"	32'-0"
15,000	10'-0"	25'-6"
15,000	8'-0"	40'-0"
20,000	10'-0"	34'-0"
20,000	10'-6"	31'-0"
25,000	10'-0"	42'-6"
25,000	10'-6"	38'-9"
30,000	10'-0"	51'-2"
30,000	10'-6"	46'-6"
40,000	12'-0"	47'-6"
50,000	12'-0"	59'-6"



Please visit us at www.highlandtank.com

One Highland Road
Stoystown, PA 15563
P: 814-893-5701
F: 814-893-6126

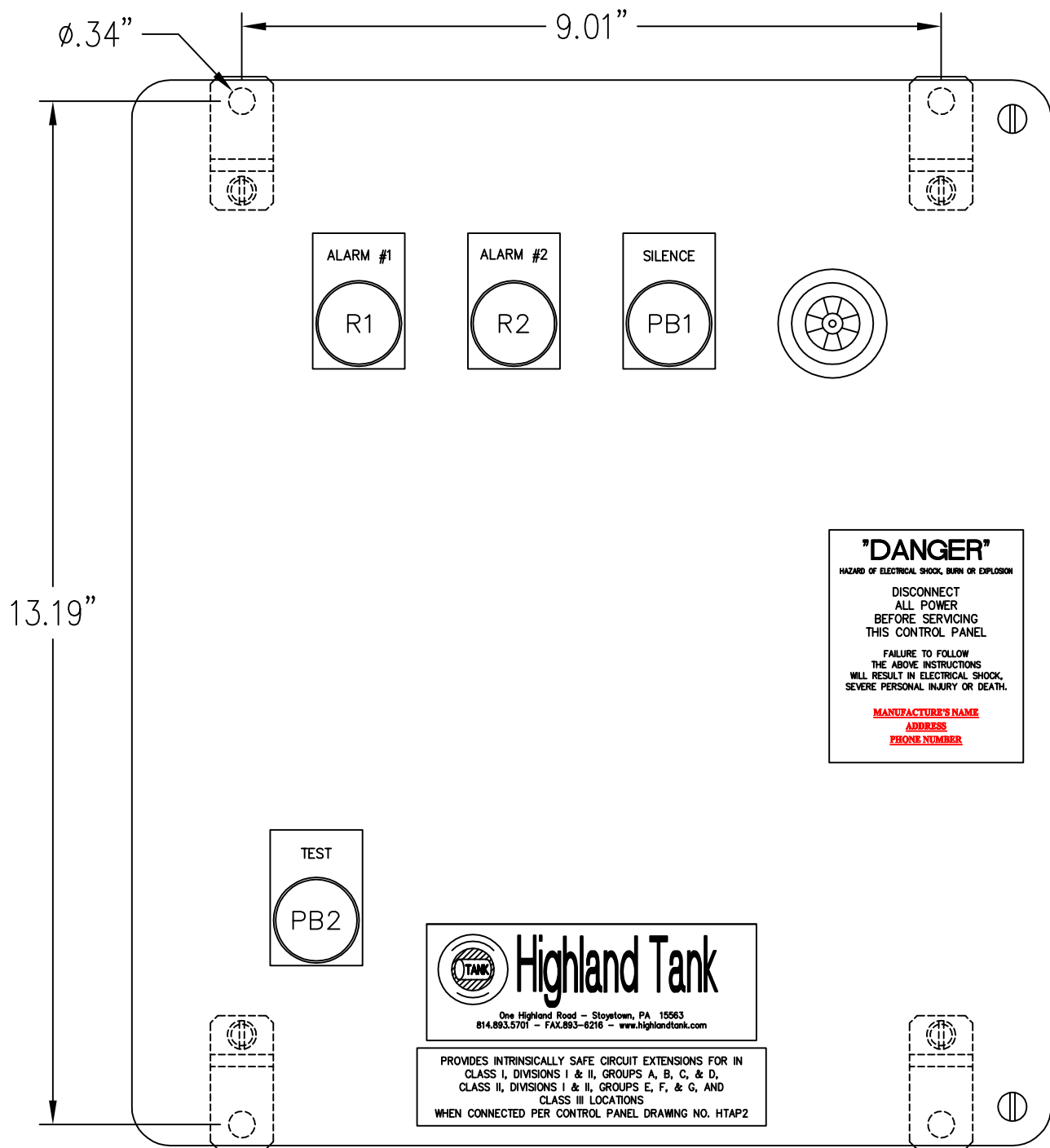
4535 Elizabethtown Road
Manheim, PA 17545
P: 717-664-0600
F: 717-664-0617

958 19th Street
Watervliet, NY 12189
P: 518-273-0801
F: 518-273-1365

2700 Patterson Street
Greensboro, NC 27407
P: 336-218-0801
F: 336-218-1292

2225 Chestnut Street
Lebanon, PA 17042
P: 717-664-0602
F: 717-664-0631

1510 Stoystown Road
Friedens, PA 15541
P: 814-443-6800
F: 814-444-8662

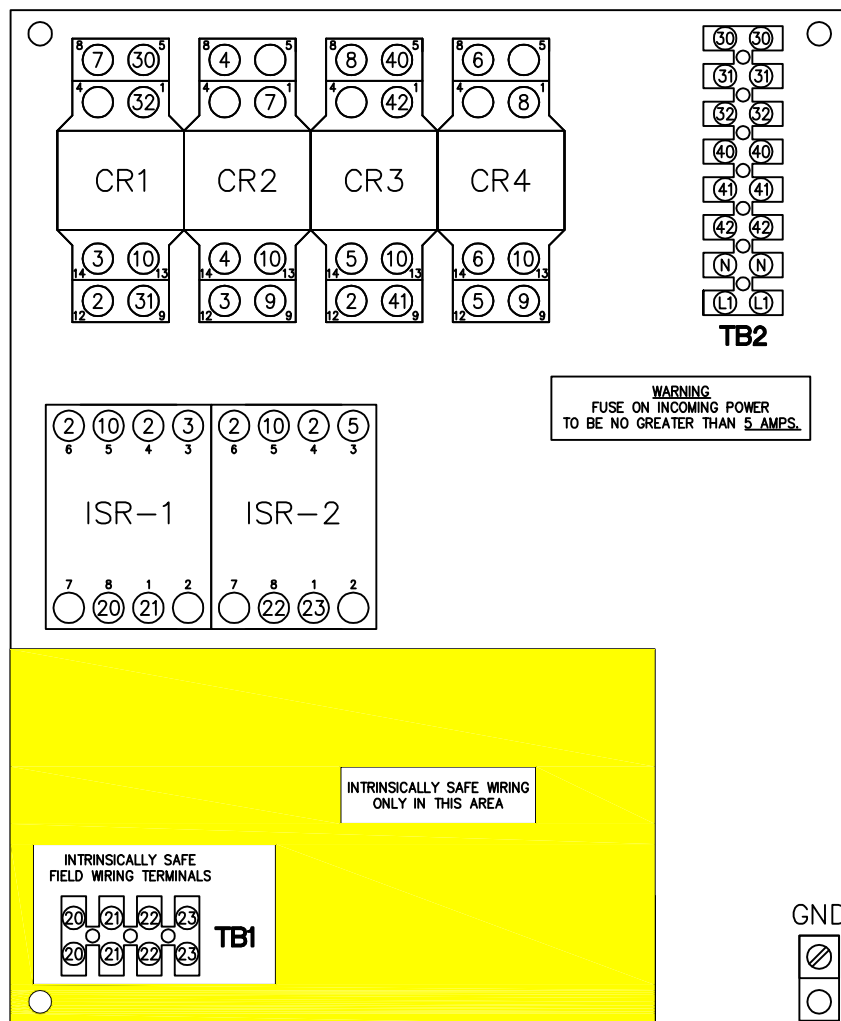


ENCLOSURE
(12"x 10"x 6")
NEMA 4X FIBERGLASS

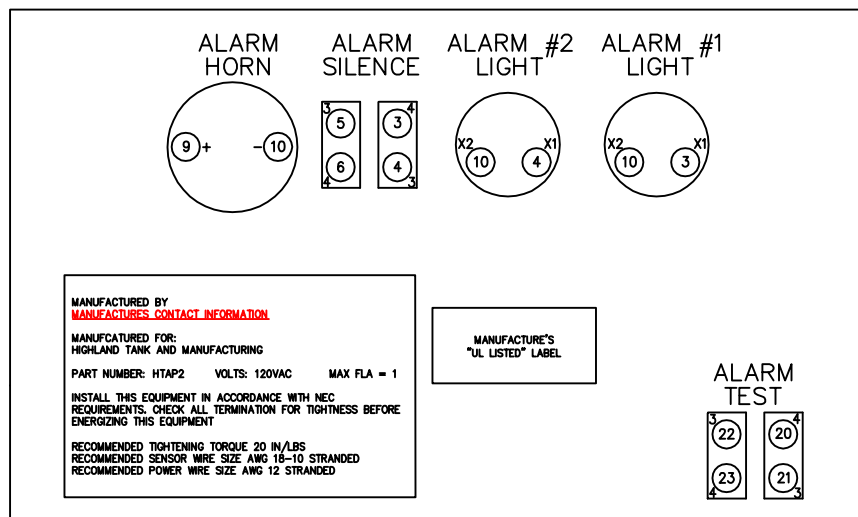


MANUFACTURED IN ACCORDANCE TO
UL 698A STANDARDS

Highland Tank®	
TWO CHANNEL ALARM PANEL WITH LIGHTS, HORN, SILENCE CIRCUIT & AUX. CONTACTS	
CUSTOMER:	
PROJECT:	
QUOTE NO:	CHK'D BY:
SCALE: NTS	DATE:
DWG. BY:	DWG. NO:
HTAP2-1	



PANEL INTERIOR



REAR VIEW OF ENCLOSURE DOOR

		Highland Tank®	
TWO CHANNEL ALARM PANEL WITH LIGHTS, HORN, SILENCE CIRCUIT & AUX. CONTACTS			
CUSTOMER:			
PROJECT:			
QUOTE NO:		CHK'D BY:	
SCALE: NTS	DATE:	DWG. BY:	DWG. NO: HTAP2-3



MANUFACTURED IN ACCORDANCE TO UL 698A STANDARDS

LEGEND

8
(20)

PANEL COMPONENT TERMINAL NO.
TERMINATED WIRE NO.

BILL OF MATERIALS

QUANTITY	PART NUMBER	DESCRIPTION
----------	-------------	-------------

CUTLER HAMMER

2	M22-D-S-K20	Pushbutton Assembly, Flush, Black, 2-N.O.
2	C22-L-R230R	Pilot Light Assembly, Red LED

IDEC

4	RH2B-UL-AC120	Relay, DPDT, 120 VAC Coil, with LED
4	SH2B-05	Relay Base, RH Series, DPDT

ALLIED MOULDED PRODUCTS

1	AM1206H	Single Door Wall Mount Enclosure with Painted Steel Back Panel NEMA 4X, Fiberglass, Size: 12" x 10" x 6" (HWD)
---	---------	---

AC/DC EQUIPMENT

1	MC-09-201-QG	Alarm Horn, 120 VAC, NEMA 4X with Gasket
---	--------------	--

SYMCOM

2	ISS-101	Intrinsically Safe Relay with Socket (OT08-PC)
---	---------	--

WECO

1	323-HDS/12	Terminal Block, 12-Pole, Cut to Suit
1	BST-323/12	Terminal Marking Strip, 12-Pole, Cut to Suit



MANUFACTURED IN ACCORDANCE TO
UL 698A STANDARDS



Highland Tank®

TWO CHANNEL ALARM PANEL WITH LIGHTS,
HORN, SILENCE CIRCUIT & AUX. CONTACTS

CUSTOMER:

PROJECT:

QUOTE NO:

CHK'D BY:

SCALE:
NTS

DATE:

DWG. BY:

DWG. NO:

HTAP2-4

HTAP 2 Alarm Panel Wiring Instructions:

Terminal Block Two (TB2):

Incoming 120V 60Hz 1Phase Power

Neutral (White) Wire to “N”- Neutral Terminal
Hot (Black) Wire to “L1”- Line Voltage Terminal
Ground Wire to “G”- Ground Lug

Auxiliary Contacts (Form “C” Dry Contacts):

Rated at: 10A at 28VDC, 10A at 120VAC

Auxiliary Contacts can be utilized for relaying an alarm signal, for example, to a remote alarm panel.

Channel One (Corresponding to Alarm Circuit Terminals “20” and “21”):

Terminals “30” and “31” are Dry (Un-Powered) Contacts – Normally Open (Close on Alarm)

Terminals “31” and “32” are Dry (Un-Powered) Contacts – Normally Closed (Open on Alarm)

Channel Two (Corresponding to Alarm Circuit Terminals “22” and “23”):

Terminals “40” and “41” are Dry (Un-Powered) Contacts – Normally Open (Close on Alarm)

Terminals “41” and “42” are Dry (Un-Powered) Contacts – Normally Closed (Open on Alarm)

Terminal Block One (TB1):

Depending on the type of sensor(s) supplied for this alarm panel system, wire as follows:

Two Float Level Sensor (Standard Sensor) Model: HTF

Top Float: (2) YELLOW Leads From Level Sensor To “20” and “21” Terminals

Bottom Float: (2) RED Leads From Level Sensor To “22” and “23” Terminals

Single Float Level Sensor (Standard Sensor) Model: HTF and Leak Sensor Model: HTLP

Single Float: (2) RED Leads From Level Sensor To “20” and “21” Terminals

Leak Sensor: RED and BLACK Leads From Leak Sensor To “22” and “23” Terminals

Two Float Level Sensor (Suspended Sensor) Model: HTSF

Top Float: GREEN and WHITE Leads From Level Sensor To “20” and “21” Terminals

Bottom Float: RED and BLACK Leads From Level Sensor To “22” and “23” Terminals

Single Float Level Sensor (Suspended Sensor) Model: HSTF and Leak Sensor Model: HTLP

Single Float: RED and BLACK Leads From Level Sensor To “20” and “21” Terminals

Leak Sensor: RED and BLACK Leads From Leak Sensor To “22” and “23” Terminals

Notes:

1. For operational clarity, identify and label the alarm light signals (on the front of the panel enclosure) with the corresponding sensor. For Example, High Fluid Level, High-High Fluid Level, Low Fluid Level, Low-Low Fluid Level, High Oil Interface, High-High Oil Interface, Leak.). Reference the Highland Tank Submittal Drawing for More Details.
2. Float Sensor Typical Usages are:
 - “A” Float -- High Fluid Level
 - “B” Float -- Low Fluid Level
 - “E” Float – High Oil Interface Level – Interface floats are weighted to float in water, but sink in oil
3. **Oil Water Separator Application:** Oil accumulates on top of the water and displaces the water in a downward direction towards the bottom of the vessel; therefore, the top float is the High Oil Interface Float and the Bottom Float is the High-High Oil Interface Float
4. **Oil Water Separator Application: The Interface Level Alarm(s) will sound when the unit is empty. Fill with clean water before activating alarm system.**

Warning: Installation and Servicing of electrical equipment should only be completed by qualified personnel who are familiar with local codes and standard safety procedures.

Read and understand all instructions before attempting to install or service any electrical equipment.

Follow all jurisdictional safety regulations when working on electrical equipment.

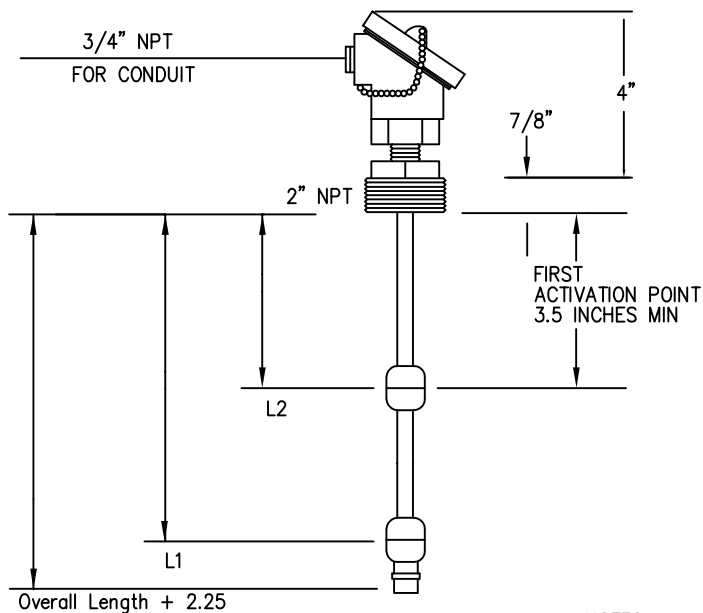
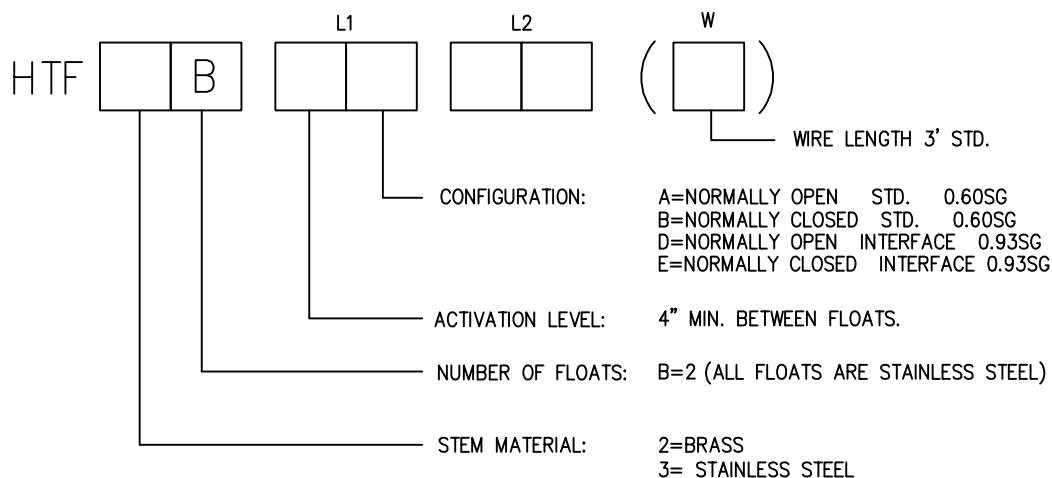
Series HTF Standard Two Float Sensor



Highland Tank

Engineering Bulletin

One Highland Road, Stoystown Pa.15563
814-893-5701 - Fax 893-6126
www.Highlandtank.com
email: staff @ highlandtank.com



SPECIFICATIONS:

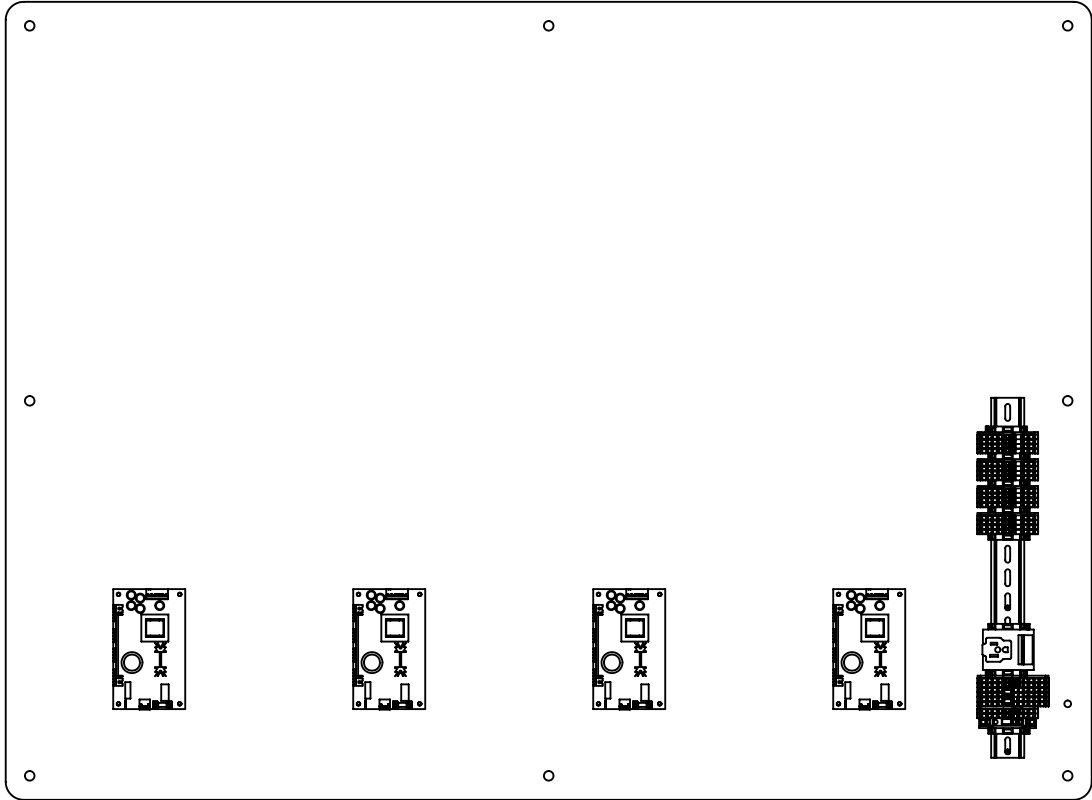
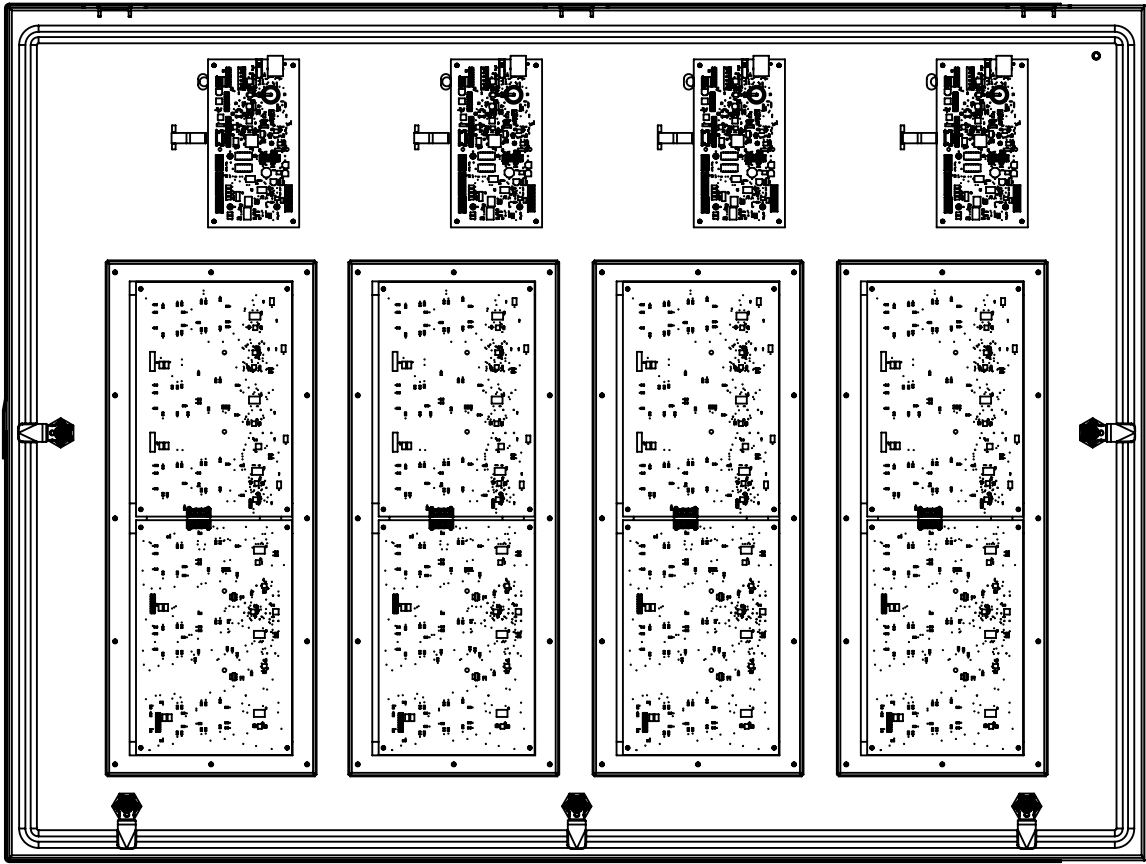
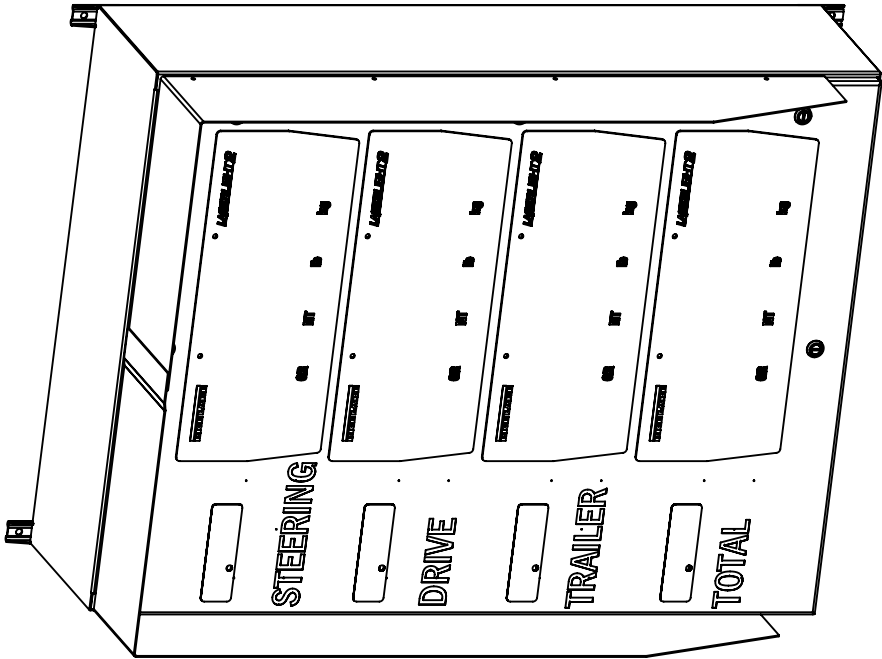
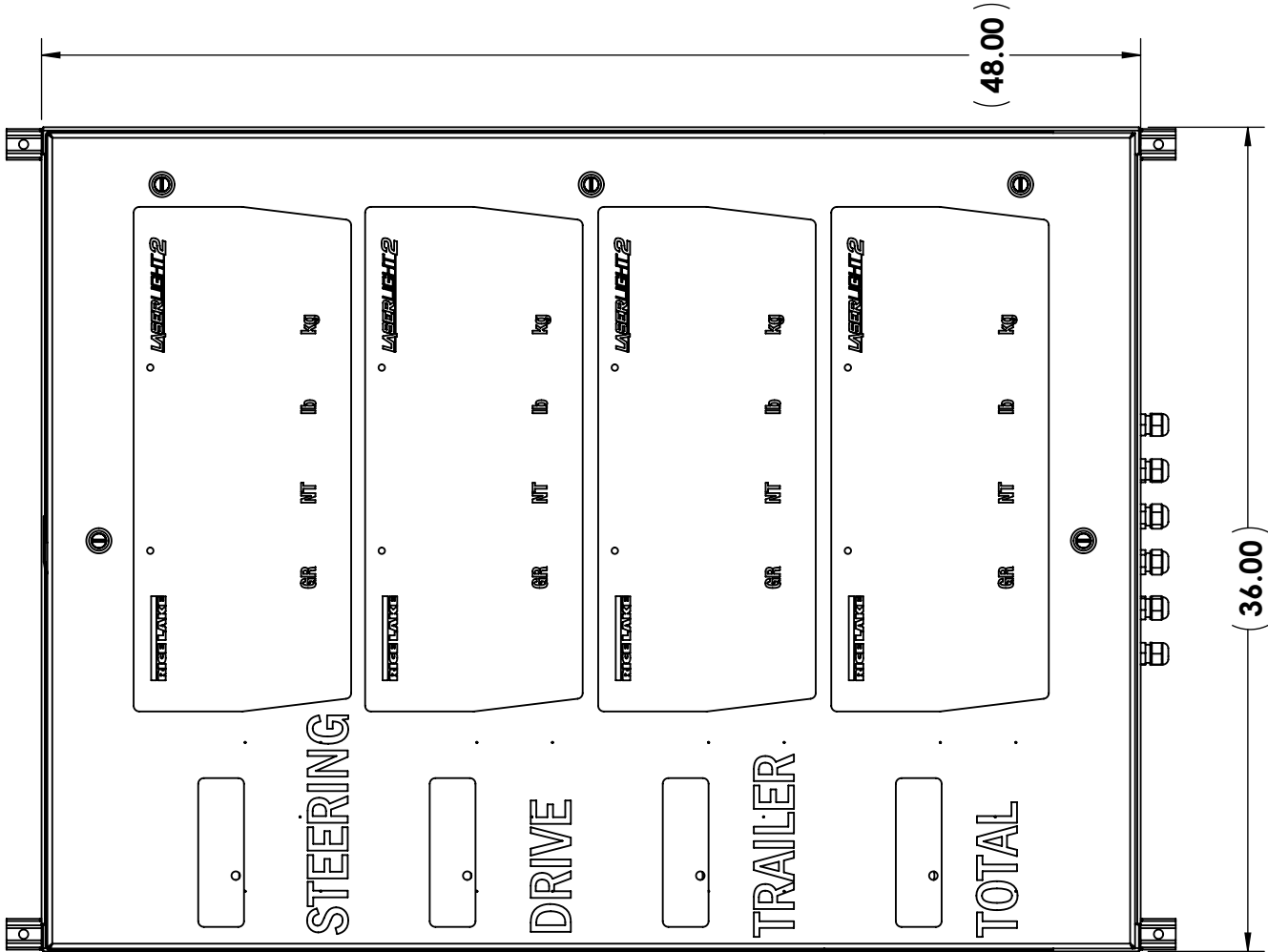
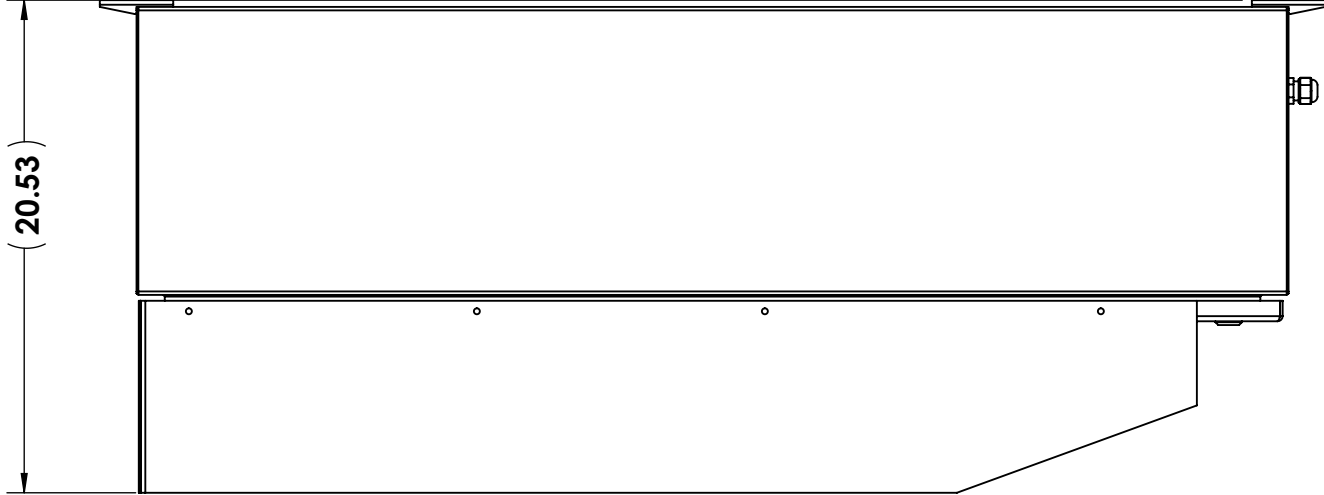
HOUSING:	CAST ALUMINUM NEMA 4X
FITTING:	BRASS OR STAINLESS STEEL
THREAD SIZE* :	2" NPT
FLOAT SIZE:	1.85" DIA x 3.01" HIGH
CONTACT RATING:	FOR INTRINSICALLY SAFE CONTROL CIRCUIT ONLY
STEM SIZE:	1/2"
SPECIFIC GRAVITY:	0.6 STANDARD 0.93 INTERFACE
WIRE COLOR CODE FOR 10' OR LESS :	L1=RED L2=YELLOW
WIRE COLOR CODE FOR GREATER THAN 10' :	L1 = RED & BLACK L2 = GREEN & WHITE

NOTES:

- 1) FOR TOTAL LENGTHS OVER 8 FEET, CONTACT HIGHLAND TANK
- 2) ACTIVATION LEVEL TOLERANCE +/- .125"
- 3) CONSULT FACTORY FOR OPTIONAL MOUNTING OPTIONS

LOADOUT TUNNEL SCALE

REVISION				INIT		DATE	
REV	ECO	DESCRIPTION		MWE		05/30/2019	
A	-	ENGINEERING RELEASE					



NOTES:
1. BREAK SHARP EDGES.

DESIGNED BY / DATE		DRAWN BY / DATE		FEEB APPROVAL / DATE	
M. EKENSTEDT 05/30/2019		M. EKENSTEDT 05/30/2019		M. EKENSTEDT 05/30/2019	
TREATMENT		THIS DRAWING AND INFORMATION CONTAINED HEREIN, IS AND REMAINS THE PROPERTY OF RICE LAKE WEIGHING SYSTEMS, INC. HEREINAFTER REFERRED TO AS "RICE LAKE". IT IS THE POLICY OF RICE LAKE WEIGHING SYSTEMS, INC. TO PROTECT ITS PATENT RIGHTS, PROPRIETARY INFORMATION, AND/OR CUSTOMER'S CONFIDENTIALITY. IT SHALL NOT BE DISCLOSED OR COPIED WITHOUT RICE LAKE WEIGHING SYSTEMS, INC.'S WRITTEN CONSENT AND SHALL BE IMMEDIATELY RETURNED UPON REQUEST.		UNLESS OTHERWISE SPECIFIED, UNITS TO BE INCHES. ALL THREADS TO BE CLASS 2 AFTER TREATMENT.	
NUMBER OF CRANES: MINIMUM CRANE CAPACITY: ESTIMATED WEIGHT (POUNDS)		TOLERANCES DRAWING TOLERANCES UNLESS OTHERWISE SPECIFIED SURFACE FINISH DO NOT SCALE ANGLE: ±1°		DESCRIPTION KIOSK, CUSTOM	
56.29		✓ .XX: ±.03 .XXX: ±.010		SCALE 1:8 1 OF 1	
				THIRD ANGLE PROJECTION P/N	
				MATERIAL SEE BOM	
				REV SZ2906302	
				A	

RICE LAKE
WEIGHING SYSTEMS

LASERLIGHT 2

REMOTE DISPLAY



*Shown with flange mount
and radio option.*

RICE LAKE
WEIGHING SYSTEMS

800-472-6703
www.ricelake.com

LASERLIGHT2

REMOTE DISPLAY

Bright and Vivid Display, Even in Direct Sunlight

Prominently display weight, numeric data and messages with the LaserLight2 remote display. A super-bright LED display with non-glare lens provides sharp seven-segment, six-digit characters that are easy to read. Never lose visibility in dark conditions or experience wash-out in direct sunlight. Simply power up a LaserLight2 remote display in your application and the benefits are clearly visible.



A redesigned enclosure provides easy access to internal components. The front panel swings open for convenient setup and service, yet

is securely held in place. The weather-tight, IP66 rated enclosure provides superior protection for worry-free daily use. The external keypad makes navigating configuration options safe and easy with up, down, left and

right arrow keys as well as Enter, Setup, Mode, Set and Learn buttons.

Available in four-inch or six-inch character sizes, LaserLight2 remote displays include annunciators for gross, net, pounds, and kilograms. For added convenience, time and date is also included.

To simplify installation and make retrofitting an attractive option, Auto Learn mode identifies communication formats and data rates used by existing weight indicators. Use LaserLight2 with virtually any weight indicator and you'll experience a seamless installation every time.

Mounting options include a flange tab which accommodates 1/4-inch hardware for vertical surface or pole mounting, or VESA mounting bracket for increased versatility. With the VESA mount, a wide variety of readily available mounting options are compatible with the LaserLight2.



The LaserLight2 remote display—providing crisp, accurate weight readings in any condition to ensure your process is always in clear view.

Standard Features

- Six high-intensity red digits (double-row discrete LED)
- Auto Learn mode of communication protocols
- Hold displayed weight (demand input)
- Software selectable standstill mode for no updates while in motion
- Mirror (reverse image) feature, auto mode
- Durable weather-tight IP66 enclosure
- Adjustable daylight/night intensity
- Non-glare contrast filtered lens
- RS-232, 20 mA, and RS-485 communications
- Auto sensing 115/230 VAC power supply
- PEMs locations accommodate flange or VESA mounting brackets
- Polyethylene breather vent inhibits internal moisture buildup
- Red, green and arrow lights in Stop/Go model

Options

- Pole mount bracket
- Fiber-optic interface
- Radio interface
- cUL versions available
- Stainless steel enclosure
- Display visor

Specifications

Display:	6-digit, 7-segment discrete oval precision optical performance red LED lamps Contrast enhanced optical filtering lens 1- or 2- place decimal or comma indication 4 annunciators for GR, NT, lb, kg 4-inch red, green ball/arrow in Stop/Go model
Maximum Viewing Distance:	4-inch: 200ft (60m) 6-inch: 300ft (100m)
Input Interface:	RS-232, RS-485, 20 mA current loop (active or passive, switch selectable)
Output interface:	Independently configurable echo out port, RS-232
Input Data Format:	Baud Rate: 1200, 2400, 4800, 9600 and 19,200 self-learning or software selectable
Character Format:	7 or 8 data bits; even, odd, or no parity; 1 or 2 stop bits, self-learning or software selectable
Update:	Continuous or out-of-motion only; software selectable
Power Consumption:	4-inch: 21 watt 6-inch: 27 watt
Time:	Software enable/disable, 12- or 24-hour format
Date:	Software enable/disable, US or ISO format
Rating/Material:	IP66 Weather tight, mild steel, black powder coated
Dimensions:	4-inch (L x H): 22.28in x 9.8in 6-inch (L x H): 30.63in x 12.77in Stop/Go (L x H): 30.63in x 12.77in (flanges add 3.16 inches in width)
Weight:	4-inch: 20lb (9kg) 6-inch and Stop/Go: 25lb (11kg)
Operating Temperature Range:	-40°F to 120°F (-40°C to 49°C)
Warranty:	Two-year limited warranty

Your Rice Lake Weighing Systems distributor is:

RICE LAKE
WEIGHING SYSTEMS

230 W. Coleman St. • Rice Lake, WI 54868 • USA
TEL: 715-234-9171 • FAX: 715-234-6967 • www.ricelake.com

An ISO registered company © 2017 Rice Lake Weighing Systems PN 168341 4/17
Specifications subject to change without notice.

LaserLight2™

Four-inch or Six-inch, Four-inch Stop/Go Remote Display



Standard Features

- Available with a 4-in or 6-in display
- Six high-intensity red digits (double-row discrete LED)
- Time and date displayed when scale is empty
- Auto Learn mode of communication protocols
- Hold displayed weight (demand input)
- Software selectable standstill mode for no updates while in motion
- Durable weathertight IP66 enclosure
- Adjustable daylight/night intensity
- Non-glare contrast filtered lens
- Mirror (reverse image) function
- RS-232, 20 mA and RS-485 communications
- Auto sensing 115/230 VAC power supply
- PEMs for VESA flat-wall mount or side-mounting flange
- Polyethylene breather vent inhibits internal moisture buildup
- Red, green and arrow lights in stop/go version

APPROVALS*



*See Specific Part Numbers

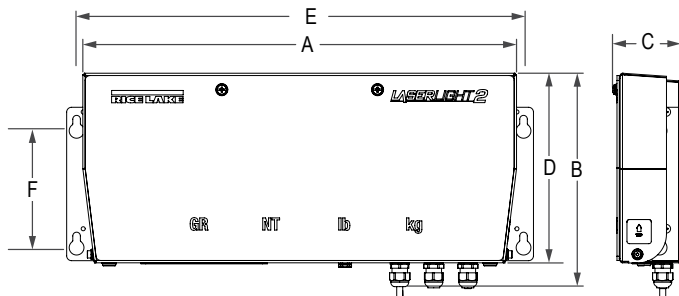
Dimensions

22-inch Enclosure (Four-inch Model)

A	22.28 in (565 mm)	D	9.80 in (250 mm)
B	10.96 in (280 mm)	E	23.00 in (584 mm)
C	3.28 in (85 mm)	F	6.00 in (152 mm) 3/8 in bolt

31-inch Enclosure (Six-inch and Stop/Go Models)

A	30.63 in (780 mm)	D	12.77 in (325 mm)
B	13.94 in (355 mm)	E	31.00 in (787 mm)
C	3.73 in (95 mm)	F	7.75 in (197 mm) 3/8 in bolt



Specifications

Display:

6-digit, 7-segment discrete oval red LED lamps
Contrast enhanced optical filtering lens
1- or 2-place decimal or comma indication
4 annunciators for GR, NT, lb, kg
4-inch red, green ball/arrow in Stop/Go model

Maximum Viewing Distance:

4 in: 250 ft (75 m)
6 in: 300 ft (100 m)

Input Interface:

RS-232, RS-485, 20 mA current loop (active or passive, switch selectable)

Output Interface:

Independently configurable echo out port or RS-232

Input Data Format:

Baud Rate: 1200, 2400, 4800, 9600 and 19200
self-learning or software selectable

Character Format:

7 or 8 data bits; even, odd, or no parity; 1 or 2 stop bits, self-learning or software selectable

Update:

Continuous or out-of-motion only; software selectable

Power Consumption:

4 in: 21 watt
6 in: 27 watt

Time:

Software enable/disable, 12- or 24-hour format

Date:

Software enable/disable, US or ISO format

Rating/Material:

IP66 weather tight, mild steel, powder coated

Dimensions:

4-inch (L x H): 22.28 in x 9.8 in
6-inch (L x H): 30.63 in x 12.77 in
Stop/Go (L x H): 30.63 in x 12.77 in
(flanges add 2.00 in width)

Weight:

4 in: 20 lb (9 kg)
6 in: 25 lb (11 kg)

Operating Temperature Range:

-40°F to 120°F (-40°C to 49°C)

Warranty:

Two-year limited warranty

Approvals:

UL/cUL on specific part numbers

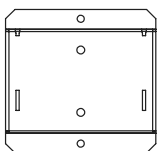
Part Number/Price

Part #	Description	Est. Weight	Price
Flange Mounted (included)			
167091	LaserLight2 remote display 4-inch (100 mm) includes PN 175305	20 lb	Consult
179521*	LaserLight2 remote display 4-inch (100 mm) marked UL/cUL includes PN 175305	20 lb	Consult
175286	LaserLight2 remote display 4-inch (100 mm) stainless steel includes PN 179910	20 lb	Consult
167092	LaserLight2 remote display 6-inch (150 mm) includes PN 175306	25 lb	Consult
179523*	LaserLight2 remote display 6-inch (150 mm) marked UL/cUL includes PN 175306	25 lb	Consult
167093	LaserLight2 remote display Stop/Go 4-inch (100 mm) includes PN 175306	25 lb	Consult
179525*	LaserLight2 remote display Stop/Go 4-inch (100 mm) marked UL/cUL includes PN 175306	25 lb	Consult
187120	LaserLight2 remote display Stop/Go 4-inch (100 mm) stainless steel includes PN 187123	25 lb	Consult
VESA Mounted (included)			
175860	LaserLight2 remote display 4-inch (100 mm) includes PN 175213	20 lb	Consult
179522*	LaserLight2 remote display 4-inch (100 mm) marked UL/cUL includes PN 175213	20 lb	Consult
175861	LaserLight2 remote display 6-inch (150 mm) includes PN 175213	25 lb	Consult
179524*	LaserLight2 remote display 6-inch (150 mm) marked UL/cUL includes PN 175213	25 lb	Consult
175862	LaserLight2 remote display Stop/Go 4-inch (100 mm) includes PN 175213	25 lb	Consult
179526*	LaserLight2 remote display Stop/Go 4-inch (100 mm) marked UL/cUL includes PN 175213	25 lb	Consult

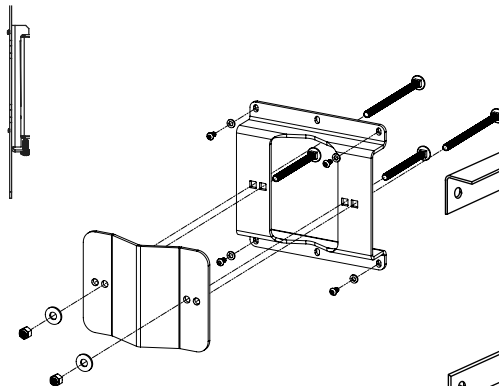
*UL/cUL on specific models

Options/Accessories

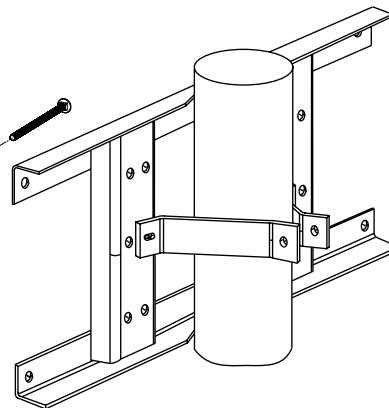
Part #	Description	Price
175052	Wireless interface, pair of ConnexLink Radios and mount	Consult
Consult	LaserLight2 green display (modified LED boards)	Consult
175213	Mount bracket, VESA flat-wall option (included with VESA mounted remote)	Consult
175305	Mount bracket, 4-inch flange option (included with flange mounted remote)	Consult
175306	Mount bracket, 6-inch flange option (included with flange mounted remote)	Consult
179910	Mount bracket, 4-inch stainless steel flange option (included with flange mounted stainless steel remote)	Consult
187124	Mount bracket, 6-inch stainless steel flange option (included with flange mounted stainless steel remote)	Consult
75856	Pole mount kit, 4-inch flange option (24-inch wide frame for 4-8 inch dia. pole)	Consult
77775	Pole mount kit, 6-inch and 4-inch stop/go flange option (32-inch wide frame for 4-8 inch dia. pole)	Consult
177865	Pole mount kit, VESA flat-wall option mount for 2-6 inch pole	Consult
178790	Offset kit (right or left flag mount) for universal pole mount (requires PN 177865)	Consult
181224	Visor for 22 inch enclosure (not required for weather protection)	Consult
181801	Visor for 31 inch enclosure (not required for weather protection)	Consult



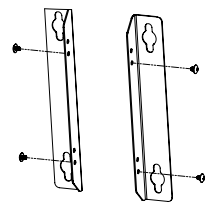
VESA flat-wall mount
PN 175213



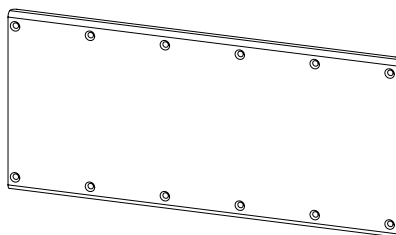
VESA pole mount kit
PN 177865



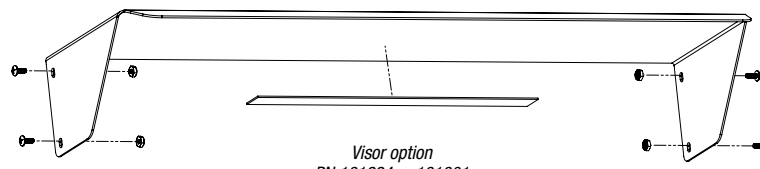
Flange pole mount kit
PN 75856 or 77775



Flange mount
PN 175305, 175306,
179910, 187124



Offset kit
PN 178790



Visor option
PN 181224 or 181801

LaserLight2™ Remote Display

Pole Mount Kit Installation

This document contains drawings, replacement parts lists, and instructions for installing the optional pole mount for the 4" and 6" LaserLight2 Remote Displays. See the LaserLight2 Technical Manual (PN 175775) for general installation and configuration and calibration information.



Manuals and additional resources are available from the Rice Lake Weighing Systems website at www.ricelake.com

Warranty information can be found on the website at www.ricelake.com/warranties



The LaserLight2 has no on/off switch. Before working with the unit, ensure the power cord is disconnected from the power outlet.

The LaserLight2 Remote Display can be easily mounted to a pole or steel I-beam using the optional pole mounting weldment and clinching brackets. The pole mounting kit can accommodate either the 4" or the 6" LaserLight2.

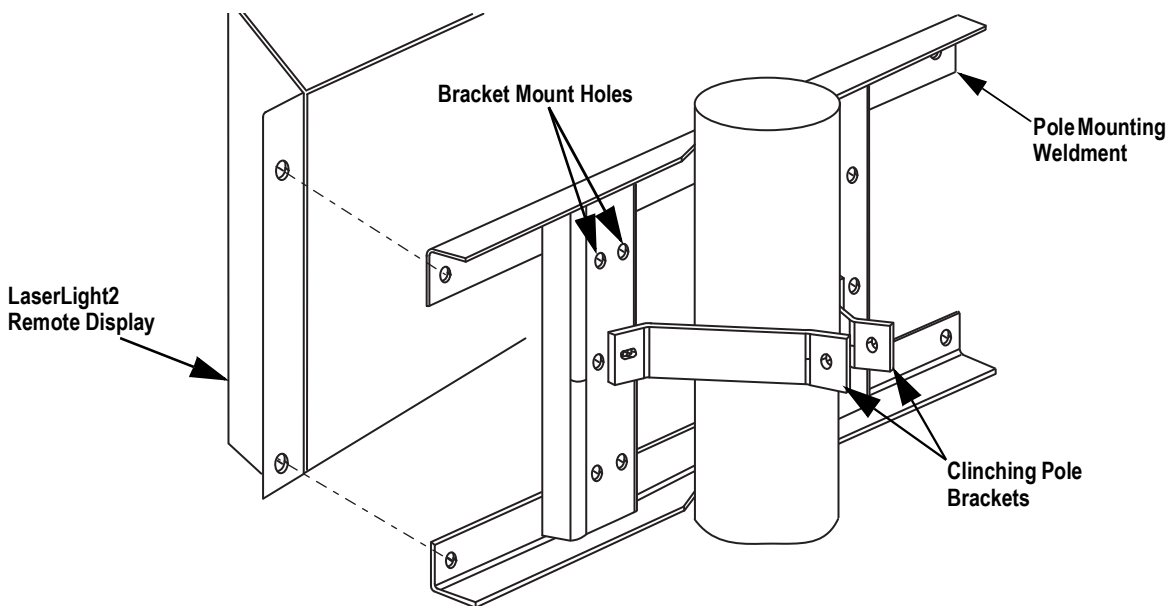


Figure 1. Optional Pole Mount Kit



The 4" models are attached to the pole mounting weldment at the center holes using two clinching pole brackets.

The 6" models use four clinching pole brackets and are connected using the top and bottom hole alignments.



The pole mounting weldment has two sets of mount holes. The two sets of bracket mount holes are for alternate diameter poles. The inner mount holes are used for smaller diameter poles while the outer mount holes are used for larger diameter poles.

Installation

1. Attach the clinching pole brackets to the pole mounting weldment using the 3/8"-16NC x 1" cap screws, washers and lock nuts supplied. See the information above for clinching pole bracket placement.
2. Attach the clinching pole brackets together using the 3/8-16NC x 2-3/4" bolt, washers and lock nut supplied. Tighten as necessary.
3. Repeat [Step 1–Step 2](#) for second set of clinching pole brackets if installing for a 6" model.
4. Align the back of the LaserLight2 Remote Display to the holes in the pole mount weldment. Secure with 5/16-18NC x 1/2" bolts, washers and nuts.

Replacement Parts

Table 1 lists the replacement parts for the pole mount options for the LaserLight2 4" Remote Display (PN 75856) and the LaserLight2 6" Remote Display (PN 77775).

Part No.	Description	Model	
		4" Qty.	6" Qty.
77000	4" Pole Mounting Weldment	1	–
76998	6" Pole Mounting Weldment	–	1
14646	Nut, Lock 5/16-18NC	4	4
14747	Bolt, 3/8-16NC x 2-3/4	1	2
14735	Bolt, 5/16-18NC x 1/2	4	4
15019	Cap Screws, 3/8-16NC x 1	2	4
21939	Washers 5/16 Type A	8	8
21938	Washers 3/8 Type A	4	8
22072	Lock Nuts, 3/8-16NC	3	6
76999	Clinching Pole Bracket	2	4
77001	Machine Screws 3/8-16NC x 6	3	6

Table 1. Replacement Parts



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LaserLight2™ Remote Display

ConnexLink™ Wireless Radio 900 MHZ Installation Instructions

Available for PNs 167091, 167092 and 167093

The ConnexLink Wireless Radio allows communication between the LaserLight2 Remote Display and an indicator with matching radio installed.

See the LaserLight2 Installation Manual, PN 175775, for general installation, configuration and calibration information.



Manuals and additional resources are available from the Rice Lake Weighing Systems website at www.ricelake.com

Warranty information can be found on the website at www.ricelake.com/warranties



The LaserLight2 has no on/off switch. Before opening the unit, ensure the power cord is disconnected from the power outlet.

Item	Part No.	Description	QTY.
	175053	Bracket Assembly, ConnexLink Radio	1
	180683	Cable Assembly, Transceiver RF	1
	180684	Cable Assembly, Power Supply	1
	129662	Pair Transceivers, RF	1
	15631	Cable Tie, 3 inch nylon	1

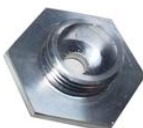
Item	Part No.	Description	QTY.
	14839	Screw, Mach 6-32NCx1/4	6
	102131	Antenna	1
	166240	Antenna Cable Extension	1
	202131	Bulkhead Adapter	1
	30376	1/2 NPT Nylon Seal Ring	1
	15630	1/2 NPT, Black Locknut	1

Table 1. ConnexLink Wireless Radio Kit (PN 175052) Parts List

The ConnexLink Wireless Radio can be installed in the 4", 6" or 4-SG LaserLight Remote Display. Use the following steps to install the ConnexLink Wireless Radio option;



Some procedures described in this manual require accessing the inside of the remote display enclosure. These procedures are to be performed by qualified service personnel only.



To ensure that the correct radio is installed with the remote display and the indicator, each radio is marked with either CLIENT and SERVER.

Client is to be installed with the remote display and the Server is to be installed with the indicator.

1. Open the LaserLight2 enclosure.
2. Flip the enclosure front panel downward exposing the cabinet interior.
3. Unplug and remove the main power supply wire harness.

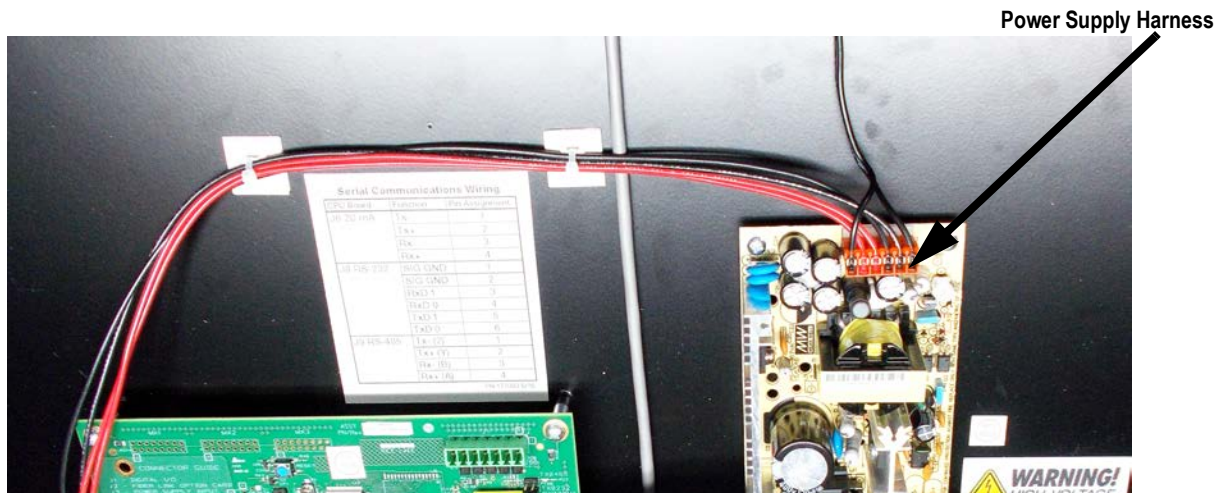


Figure 1. Remove Power Cable Wire Harness

4. Remove entire cord grip (1 of 2), in the bottom panel of the LaserLight2 (shown in Figure 5 on page 2).
5. Attach the bracket assembly to the enclosure using screws provided, as shown in Figure 2.

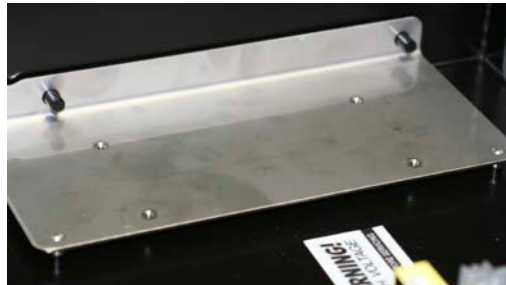


Figure 2. Attach Mount Plate and Bracket Assembly

6. Secure the antenna assembly by threading the bulkhead adapter through the enclosure hole.

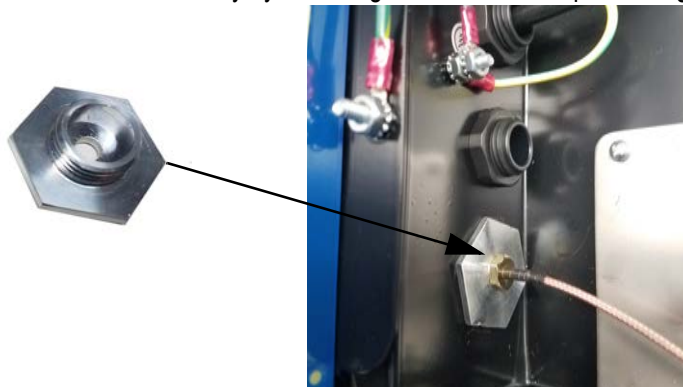


Figure 3. Secure Antenna Assembly

7. Secure bulkhead adapter using nylon seal ring (30376) and black locknut (15630). Thread the antenna extension cable through the bulkhead adapter and secure with a tooth washer and nut.



Figure 4. Thread Antenna Extension Cable Through

8. Thread the antenna onto the antenna extension cable.



Figure 5. Thread Antenna onto LaserLight2

9. Plug the 9-pin end of the RF Transceiver cable assembly to the ConnexLink Wireless Radio. Finger tighten.



Figure 6. Plug 9-Pin Connector

10. The 6-pin end of the RF transceiver cable assembly attaches to J8 on the CPU board.

11. Attach the antenna cable extension to the ConnexLink Wireless Radio.



Figure 7. Attach Cable Extension Antenna to ConnexLink Wireless Radio

12. Mount the ConnexLink Wireless Radio onto the bracket assembly, using the screws provided.



Figure 8. Mount ConnexLink Radio to Bracket

13. Attach the new power supply cable harness to the power supply and the CPU board.

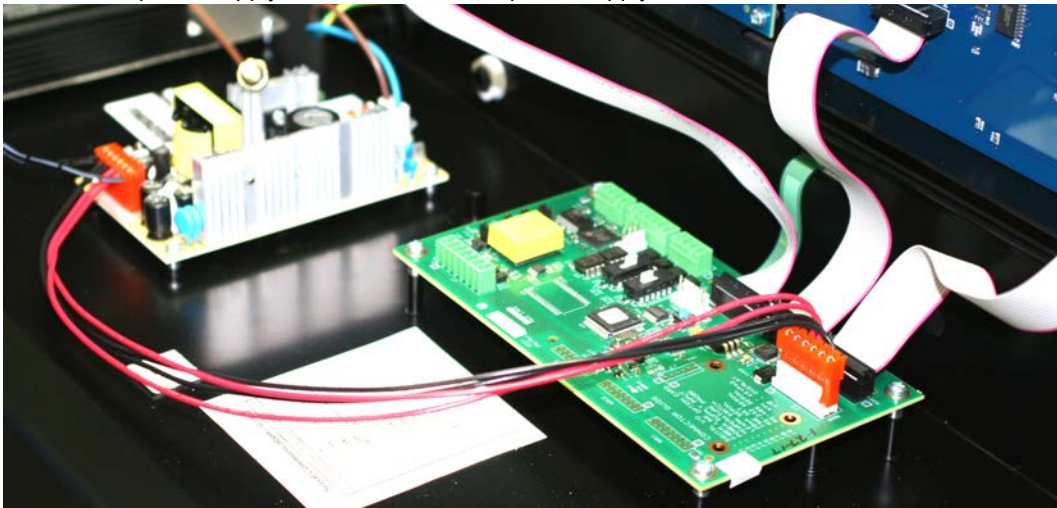


Figure 9. Connect the Power Supply Harness

14. Plug the power cord into the radio.



Figure 10. Connect Cable Assemblies



Note See the applicable indicator manual for further information.

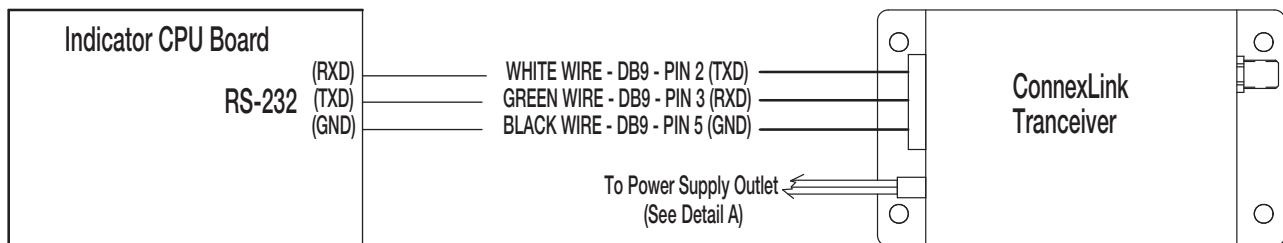


Figure 11. Connect ConnexLink Wireless Radio to Indicator



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APPENDIX F

BOUNDARY AND TOPOGRAPHIC SURVEY



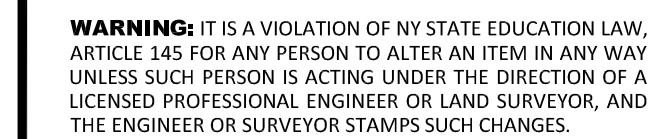
1. THE LOCATION AND DEPTH OF ALL SUBSURFACE UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED ON OBVIOUS ABOVE GROUND PHYSICAL UTILITY APPURTENANCES AND REFERENCE No. 2. THE EXACT DEPTH AND LOCATION OF ALL SUBSURFACE UTILITIES SHALL BE VERIFIED BY OWNER, BY DIGGING TEST HOLES, PRIOR TO CONSTRUCTION. ADDITIONAL UTILITIES MAY EXIST.

2. CONTRACTOR SHALL CALL 1-800-272-1000 FOR UTILITY MARK-OUT PRIOR TO DIGGING, EXCAVATING AND/OR CONSTRUCTION. EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, EXIST ON AND ADJACENT TO THIS SITE. EACH CONTRACTOR OR SUBCONTRACTOR IS TOTALLY RESPONSIBLE FOR DETERMINING THE LOCATION OF SUCH UTILITIES, BOTH ON AND ADJACENT TO THE SITE AND AT BUILDING ENTRY PRIOR TO PROCEEDING WITH CONSTRUCTION. EACH CONTRACTOR OR SUBCONTRACTOR IS FURTHER RESPONSIBLE FOR COORDINATING ANY REQUIRED UTILITY SHUT-DOWNS OR INTERRUPTIONS WITH BUILDING TENANTS BEING SERVICED BY SUCH UTILITIES.

1) TAX MAP TOWN OF GOSHEN NEW YORK, SECTION NO. 12.
2) MAP ENTITLED "WIS TRANSFER SYSTEMS OF NY, INC. 95 HARTLEY ROAD, GOSHEN, NEW YORK, EXISTING SITE PLAN WITH AERIAL PHOTO, PREPARED BY J. YANOSH NYS L.S., DATED 01/22/02, PROJECT NO. 160108.
3) MAP ENTITLED "SITE PLAN EXISTING CONDITIONS WIS TRANSFER SYSTEMS OF NY, INC. HARTLEY ROAD TOWN OF GOSHEN, ORANGE COUNTY, NEW YORK", PREPARED BY STERLING ENVIRONMENTAL ENGINEERING P.C., DATED 10-10-2008, DRAWING NO. 26071007.
4) FLEED MAP NO. 163-13, MAP ENTITLED "AL TURLI LANDFILL, INC. 73 HARTLEY ROAD, TOWN OF GOSHEN, STATE OF NEW YORK", PREPARED BY DANIEL P. YANOSH NYS L.S., DATED 1-28-2014, LAST REVISED ON 3-26-2014, JOB NO. 94-168-2014.
5) FLEED MAP NO. 167-96, MAP ENTITLED "SUBDIVISION FOR IPPCO, INC TOWN OF GOSHEN, ORANGE COUNTY NEW YORK", PREPARED BY THOMAS R. MLO, PROFESSIONAL LAND SURVEYOR, DATED 7-29-1996, LAST REVISED ON 8-2-1996, PROJECT NO. 6013, DRAWING NO. 1.
6) FLEED MAP NO. 234-95, MAP ENTITLED "MINOR SUBDIVISION FOR ALL WASTE SYSTEMS, INC, TOWN OF GOSHEN, ORANGE CO, NEW YORK", PREPARED BY THOMAS R. MLO, PROFESSIONAL LAND SURVEYOR, DATED 4-4-1995, LAST REVISED ON 5-17-1995, PROJECT NO. 95012.
7) FLEED MAP NO. 183-17, MAP ENTITLED "MODIFIED LOT LINE CHANGE MAP OF LANDS OF VERHAGE INDUSTRIES, LLC, TOWN OF GOSHEN, ORANGE COUNTY NEW YORK", PREPARED BY T.M. DEPUY ENGINEERING AND LAND SURVEYING P.C., DATED 03-28-2017.
8) FLEED MAP NO. 266-16, MAP ENTITLED "LOT LINE CHANGE LANDS OF AL TURLI LANDFILL, INC. NYS ROUTE 17M & HARTLEY ROAD, TOWN OF GOSHEN, COUNTY OF ORANGE, STATE OF NEW YORK", PREPARED BY DANIEL P. YANOSH NYS L.S., DATED 06-30-2015, LAST REVISED ON 02-01-2016, JOB NO. 94-168-2014.

- 1) THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO SUCH STATEMENTS OF FACTS THAT AN ACCURATE REPORT OF TITLE MAY DISCLOSE.
- 2) SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY, AND AGREEMENTS OR RECORD.
- 3) DEEDS OF RECORD:
BLOCK 1 LOT 17 32, DEED BOOK 12263 PAGE 1304
BLOCK 1 LOT 20, DEED BOOK 12121 PAGE 279
BLOCK 1 LOT 21.12, DEED BOOK 3848 PAGE 71
BLOCK 1 LOT 21.21, DEED BOOK 12283 PAGE 1300
BLOCK 1 LOT 11.12, DEED BOOK 4464 PAGE 219
- 4) HORIZONTAL DATUM = NAD83, VERTICAL DATUM = NYPEGOD 12 GR580, UNITS ARE U.S. SURVEY FEET.
- 5) UNLESS OTHERWISE NOTED, COORDINATES SHOWN ON THIS SURVEY ARE NAD83(2011) AND NAVD83(2011) WITH A 2mm NETWORK ACCURACY OF 0.05 HORIZONTAL AND 0.05 VERTICAL, LOCAL ACCURACY AT 29mm IS 0.05 HORIZONTAL AND 0.02 VERTICAL.
- 6) FIELD WORK WAS COMPLETED ON 05-25-2022.

	CONCRETE
	EASEMENT LINE
	RIGHT OF WAY LINE
	LOT LINE
	PROPERTY LINE
	FENCE LINE
	CONTOUR LINE
	TREE LINE
	GUIDE RAIL
	CURB LINE
	TELECOMMUNICATION CONDUIT
	GAS LINE
	WATER LINE
	OVERHEAD WIRE
	UNDERGROUND ELECTRIC LINE
	GROUND ELEVATION
	PAVEMENT ELEVATION
	TOP & BOTTOM OF CURB ELEVATION
	WATER VALVE
	GAS VALVE
	UTILITY POLE
	HYDRANT
	VENT PIPE
	MONITORING WELL
	BOLLARD
	STATE HIGHWAY DEPARTMENT BOX
	CLEAN OUT
	WATER METER



JERSEY CITY ■ FAIRFIELD ■ ASBURY PARK ■ CHERRY HILL