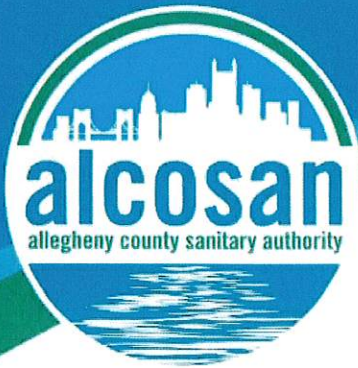




November 24, 2025

CONTRACT NO. 1797

OHIO RIVER TUNNEL

ADDENDUM No. 7

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*Director
Scholastic Programs*

All bidders bidding **Contract No. 1797** shall read and take note of this **Addendum No. 7**. The Contract Documents for **Contract No. 1797 – Ohio River Tunnel** are hereby revised and/or clarified as stated below.

Acknowledgement of Contract No. 1797; Addendum No. 7

The Acknowledgement attached to **Addendum No. 7** is to be signed and returned immediately via email to ORT.bids@alcosan.org and acknowledged with Bidder's Proposal.

Michael Lichte, P.E.
Director of Regional Conveyance

ACKNOWLEDGEMENT OF
CONTRACT NO. 1797 – OHIO RIVER TUNNEL
**** return via email to ORT.bids@alcosan.org ****

ADDENDUM No. 7

FIRM NAME: _____

SIGNATURE: _____

TITLE: _____

DATE: _____

November 24, 2025
CONTRACT NO. 1797
OHIO RIVER TUNNEL
ADDENDUM No. 7

ATTENTION:

BIDS DUE: 11:00 A.M., prevailing time, on Monday, January 26, 2026
DEADLINE FOR QUESTIONS: 5:00 P.M., Friday, December 19, 2025
DEADLINE FOR CORE SHED VISITS: Wednesday, December 17, 2025

This Addendum No. 007 consists of 80 total pages including the following attachments:

- Attachment A – APPENDIX A - TECHNICAL SPECIFICATIONS (1 page)
 - Section 01 10 00- TABLE OF CONTENTS, Page 2.
- Attachment B - APPENDIX A - TECHNICAL SPECIFICATIONS (1 page)
 - Section 01 31 00 – Permits and Approvals, Attachment 2 addition: Highway Occupancy Permit Supplement (Supplement 11060503-01 for Time Extension) issued by PennDOT on 10/31/25.
- Attachment C – APPENDIX B - CONTRACT DRAWINGS (1 sheet)
 - Revised O07-CI-702 (Sheet 582 of 770)
- Attachment D – APPENDIX B - CONTRACT DRAWINGS (3 sheets)
 - Revised O06A-CI-807 (Sheet 616 of 770)
 - Revised O06A-CI-808 (Sheet 617 of 770)
 - Revised ORT-MD-032 (Sheet 679 of 770)
- Attachment E – APPENDIX E SUPPLEMENTAL INFORMATION (FOR REFERENCE ONLY) (2 pages)
 - Section 9 – Section 9 fly sheet; Line Information Summary from Duquesne Light Company.
- Attachment F – APPENDIX A – TECHNICAL SPECIFICATIONS (8 pages)
 - Replace ATTACHMENT 2 of Section 01 45 23 (Revised 11/21/25)
- Attachment G – APPENDIX A – TECHNICAL SPECIFICATIONS (5 pages)
 - Replace Table 1-1 Wells and Piezometers for Abandonment of Section 31 29 00 (Revised 11/21/25)

- Attachment H – APPENDIX B – CONTRACT DRAWINGS (14 sheets)
 - o Revised O27-GI-100 (Sheet 716 of 770)
 - o Revised O41-GI-200 (Sheet 717 of 770)
 - o Revised A48-GI-300 (Sheet 718 of 770)
 - o Revised A58-GI-400 (Sheet 719 of 770)
 - o Revised AS1-GI-500 (Sheet 720 of 770)
 - o Revised O14-GI-600 (Sheet 721 of 770)
 - o Revised O07-GI-700 (Sheet 722 of 770)
 - o Revised O06A-GI-800 (Sheet 723 of 770)
 - o Revised ORT-GI-900 (Sheet 724 of 770)
 - o Revised ORT-GI-901 (Sheet 725 of 770)
 - o Revised ORT-GI-902 (Sheet 726 of 770)
 - o Revised ORT-GI-903 (Sheet 727 of 770)
 - o Revised ORT-GI-904 (Sheet 728 of 770)
 - o Revised ORT-GI-905 (Sheet 729 of 770)
- Attachment I – APPENDIX E – SUPPLEMENTAL INFORMATION (FOR REFERENCE ONLY) (5 pages)
 - o Section 10 – Section 10 fly sheet; Former Crivelli Chevrolet Drawing Sheets
- Attachment J – APPENDIX B – CONTRACT DRAWINGS (1 sheet)
 - o Revised CCT-ST-012 (Sheet 93 of 770)

ATTENTION BIDDERS

The following additions to and modifications of the Contract Documents will be included in and become part of the Contract for the Allegheny County Sanitary Authority (ALCOSAN) Ohio River Tunnel. Bidders are instructed to take the following into account in rendering any Bid for this work

The Bidder is responsible for verifying that he/she has received and reviewed all of the pages of the Contract Documents as well as all of the pages and attachments of all addenda. The Bidder shall verify all pages with the table of contents in the Contract Documents and the first page of all Addenda. Receipt of this Addendum must be noted on the Bid Form. These items modify the portions of the documents specifically noted; all other provisions of the Contract Documents shall remain in effect.

CONTRACT NO. 1797
OHIO RIVER TUNNEL
ADDENDUM NO. 7

A. QUESTIONS & ANSWERS FROM RFI'S SENT TO
ORT.bids@alcosan.org

Q1 *Please provide drawings of the existing floor plan for the former auto dealership building at site CCT-O07A that will be made available to the contractor for temporary offices and other purposes.*

A1 **Drawings for the former Crivelli Chevrolet auto dealership have been added to Appendix E, Section 10. See Attachment I of this Addendum.**

Add: Specification Section 01 14 19, Section 3.7.E. in its entirety. See Section B, Item 14, for CHANGES TO CONTRACT DOCUMENTS.

Q2 *Site AS-1 Well Decommissioning - GBR Section 6.6 ORT-ASI Site states that two existing wells are required to be decommissioned and grouted as noted on Drawing AS1-GI-500 however there aren't any notes regarding well grouting and decommissioning on the referenced plan sheet. Please provide the required notes and/or details for grouting and decommissioning the wells.*

A2 **See Section B, Items 11 and 12 - CHANGES TO CONTRACT DOCUMENTS for revisions to Specification Section 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT. See Section B, Item 13 – CHANGES TO CONTRACT DOCUMENTS for revisions to O27-GI-100, O41-GI-200, A48-GI-300, A58-GI-400, AS1-GI-500, O14-GI-600, O07-GI-700, O06A-GI-800, ORT-GI-900, ORT-GI-901, ORT-GI-902, ORT-GI-903, ORT-GI-904, and ORT-GI-905.**

Q3 *Please provide the voltage and overhead clearance of the OHW running over the proposed outfall scour protection that parallels Chartiers Creek.*

A3 **The Chartiers Creek overhead line in the vicinity of the O07 site outfall is installed between the Duquesne Light Company (DLC) towers located at the following northing and easting (NAD83 Pennsylvania State Plane South). Towers 6870 and 6872 are located outside of the O07 site Limit of Disturbance.**

Tower Number	Northing	Easting
6870	420739.7380	1327747.519
6872	420250.3950	1326934.9120

The line installed between these two DLC towers has a maximum calculated sag that will be no lower than an elevation (NAVD88) of 773.77' (including during maximum temperature operating conditions). This line has been confirmed to be operating at

138kV. See Section B, Item 3 - CHANGES TO CONTRACT DOCUMENTS for REVISED O07-CI-702.

- Q4 *Please provide the voltage and overhead clearance of the OHW running over the northern portion of the proposed river wall that parallels the Ohio River.*
- A4 **The O27 overhead line associated with the monopole in the vicinity of the O27 site riverwall is installed between the DLC monopoles located at the following northing and easting (NAD83 Pennsylvania State Plane South):**

Monopole Location	Northing	Easting
Brunot Island Steel Monopole	422258.1992	1329474.9532
ALCOSAN Steel Monopole	423492.0708	1330356.4591

The line installed between these two DLC monopoles has a maximum calculated sag that will be no lower than an elevation (NAVD88) of 836.5' above the O27 riverwall (including during maximum temperature operating conditions). This line has been confirmed to be operating at 23kV.

- Q5 *Bracing details at NSF Structures - If Contractors utilize the support of excavation, construction joints and bracing scheme (including member sizing) shown on the Near Surface Facilities drawings, should we expect to install any additional bracing between the permanent walls as the permanent structure is progressed?*
- A5 **Where required, the Contract Drawings call for intermediate stage bracing elements (as termed "jump-sets" or "re-shoring" on the Contract Drawings) during the installation of permanent structures. The Contract Drawings indicate the approximate required locations and minimum design requirements for these intermediate stage bracing elements for the Contractors to design, price, and implement. Any other additional bracing elements as required by the Contractor's installation sequences for a safe construction are at Contractor's own option.**
- Q6 *Drawing O27-ST-135. The pile schedule provides Assumed Rock Elevation (671.0) and Estimated Pile Tip Elevation (656.0). This infers the pile should be embedded 15 feet into rock. This same pile schedule provides a Minimum Rock Socket Depth of 5 feet. Please clarify this discrepancy.*
- A6 **Discrepancies removed. Refer to revised Drawing Sheets O27-ST-135, O41-ST-218, O41-ST-225, A58-ST-417, and O07-ST-707. See Addendum 6, Section B, Item 10 - CHANGES TO CONTRACT DOCUMENTS for revisions.**

Q7 *Based on GBR and the new Article 3SC 3.31.B.3 introduced in the Supplemental Contract Conditions with Addendum 2, a DSC encountered during TBM excavation shall be supported by TBM operating data, visual inspection (photos and face logs), as well as samples of the excavated ground taken from the TBM spoil discharge point. However, all the above would be subject to interpretation and it may become difficult or impossible to demonstrate univocally the occurrence of a DSC.*

When it comes to clogging, for instance, none of the above would be received as objective evidence (a clogged cutterhead would be blamed to means and methods, and the spoils made of disaggregated material contaminated with bentonite are no longer representative of actual in-situ conditions).

In order to make specific properties measurable/verifiable for direct and objective comparison with baselines for each lithology, would you consider requiring capability to core drill and recover rock samples from excavation face and/or through drill ports in the shields.

A7 **Yes. Refer to REVISED Specification Section 31 71 19 – Tunnel Boring Machine, Part 1.1.B.6 and Part 3.8.C. See Section B, Item 8 - CHANGES TO CONTRACT DOCUMENTS for revisions.**

Q8 *Paragraph 3.7.A in specification section 01 14 19 states "DLCO right-of-way restrictions are shown on the Contract Drawings." in reference to the high tension power lines installed by DLCO adjacent to and over the CCT-O07 site, however, no such right of way restriction information can be located in the contract drawings. Please advise.*

A8 **Work beneath/adjacent to/around existing power lines shall meet OSHA requirements, see Specification Section 01 35 26, paragraph 1.1.B.**

See Section B, Item 5 - CHANGES TO CONTRACT DOCUMENTS for revision to paragraph 3.7.A in Specification Section 01 14 19. DELETE "DLCO right-of-way restrictions are shown on the Contract Drawings."

Q9 *Please provide sag elevations for all overhead power lines that are located within or immediately adjacent to any of the eight work sites and that are intended to remain in place during the course of ORT construction.*

A9 **See Attachment E of this Addendum for a summary of power lines adjacent to the NSF sites. ADD this information to Appendix E - Supplemental Information, Section 9.**

Q10 *Please provide line voltage for all overhead power lines that are located within or immediately adjacent to any of the eight work sites and that are intended to remain in place during the course of ORT construction.*

- A10** See Attachment E of this Addendum for a summary of power lines adjacent to the NSF sites. ADD this information to Appendix E - Supplemental Information, Section 9.
- Q11** *Specification 03 10 00 – 3.4.A states, in part, “No forms shall be removed prior to the attainment of at least 80 percent of the specified concrete compressive strength.” This same requirement is duplicated in Subsection 3.4.D where it is limited specifically to elevated slabs and beams. This is common for elevated slabs or beams, but overly restrictive for walls and base slabs where it would result in extremely long and unnecessary delays to shafts and structures. The form removal requirements of 3.4.B are more common for walls and base slabs. We request the restriction for 80% strength be removed from 3.4.A and that Subsection 3.4.E be deleted.*
- A11** See REVISED Section 03 10 00 Part 3.4. See Section B, Item 6 - CHANGES TO CONTRACT DOCUMENTS for revisions.
- Q12** *Specification 01 22 00, Subsection 3.2, under Bid Item 108, Bidders are instructed to assume that all sewers to be cleaned are 25% full in volume within the sections to be inspected and cleaned. However, Table 2 in Specification 01 45 23 lists estimated sediment / debris percentages for some, but not all, lines. These listed percentages are often not equal to 25%. Should the 25% assumption be applied only to the utilities where no % data is listed on Table 2?*
- A12** Bidders are directed to prepare bids as directed in Specification 01 22 00, BID ITEM 108. Sewer CCTV, Cleaning and Stabilization, Item 2.d.1.
- Section B, Item 7 - CHANGES TO CONTRACT DOCUMENTS for REVISED Specification 01 45 23 – PRE-CONSTRUCTION & POST CONSTRUCTION INSPECTIONS, Attachment 2 – List of Utilities for Inspection and Cleaning, Revised 09/25/2025. DELETE column titled “Estimated Sediment / Debris” entirely.**
- Q13** *GBR Sections 4.8.2 (pg. 8) and 8.4.2 (pg. 31) – Please clarify whether the 105 gpm reported for PA Well ID 474357 represents a continuous demand flow rate or an available flow rate for the well. If the flow rate value is based only on the reported steady state well discharge rate availability, please provide current demand rate and any other relevant usage details.*
- A13** Use 105 gpm as the baseline for current continuous demand rate.
- Q14** *GBR Sections 7.3 and 8.2 state that the stratigraphic boundaries are expected to vary by plus or minus 5 ft. Please define whether this statement is to be understood that the entire boundary could shift 5 ft in either direction, or that the boundary line will vary by as much as 5 ft around the line as shown being an average expected position. For example, for keying SOE walls into the top of rock, is the pricing expected to cover an uncertainty where the entire perimeter toe elevation is 5 ft higher (or lower) than the boundary as shown or that the line as shown represents the average boundary along a given section of work (e.g., SOE perimeter, tunnel face position, etc.)? Further, Section 8.2 states that a DSC will only*

be considered if the boundary elevations exceeds the baseline variations. Please confirm that this statement is intended to mean that the difference in expected and encountered elevations vary by more than 5 ft.

A14 For SOEs of Shafts and NSFs (including retaining walls), the SOE tip elevations shown on the Contract Drawings shall be the basis for pricing. At each of these Shaft and NSF locations, the top of rock elevation line shown in the GBR and on Contract Drawings is to be considered an average top of rock elevation with a variation of 5 feet up or down in either direction across the average rock line along the perimeter of the SOE walls, but with the SOE tip elevations shown on the Contract Drawings remaining unchanged for pricing.

At deep tunnel elevations, due to the near horizontal bedding nature of the rock formations, the rock boundary lines shown for the rock classes are NOT to be considered an average but the entire baseline boundary lines for the rock classes. The 5 feet variation is the expected vertical shift in either direction of the entire boundary line for each rock class.

Q15 *GBR Section 7.4 and Figures 2 and 5: Please clarify the expectations for construction planning, pricing and dispute resolution in the context of Class A and D materials being baselined to have a minimum inferred unconfined compression strengths of zero.*

A15 The zero minimum values indicate there exist “weight of rod” materials in these soil classes. The baseline is the range between this minimum value and the maximum value. The Bidder shall review such a value in the context of the ranges of values, and frequency of occurrence shown on Figure 2 and Figure 5, as well as the overall characteristics of these soil classes provided in the GBR descriptions of these soils.

Q16 *GBR Section 8.3 provides a discussion related to clogging of the TBM by breakdown of the Siltstone and Claystone. The relationship between slaking index, duration of exposure to slurry or water, breakdown of the rock, and consequential changes to cuttings water content have not been defined and are not definable by the information provided in the GBR or GDR.*

Please clarify the expectations for breakdown of the cuttings in the context of the cutter head, lack of drying (as part of the slaking index test), and change in water content.

Definitions of clogging categories are not provided that could be used in a pricing or dispute resolution framework.

Given that different definitions exist in the referenced literature and that these definitions are somewhat ambiguous related to their effects on tunneling productivity (i.e., percent decrease in advance rate, number of interventions for cleaning, etc.), please also provide unambiguous definitions of clogging that are associated with each category shown in Figures 9 and 11

A16 **The breakdown of cuttings and change in water content are to be anticipated based on local project experience as summarized in the GBR and usage of slurry at the TBM face on this Project. Refer to Answer A17 regarding the definition of the clogging categories shown on Figures 9 and 11.**

It is not the intent of the GBR (nor an industry practice of any GBR) to provide deterministic expectations or relationships between the various factors affecting clogging potential because it is also highly related to the means and methods. It is within full control of the Contractor to design its TBM cutterhead, flushing/cleaning mechanisms, slurry/water additives, and interventions to reduce the occurrence and impacts of clogging behavior.

The GBR provides general descriptive narratives to inform the Bidders of clogging potential. The latter part of Section 8.3.1 Paragraph 7 defines risk allocation and considerations for DSC.

Q17 *GBR Section 8.3.1 states that two actions will transform the Siltstone and Claystone into sticky materials with “significant” clogging potential. Please define the meaning of “significant” in the context of Figures 9 and 11, and quantitative definitions of the clogging effects on tunneling productivity*

A17 **“Significant clogging potential” is used in the context of informing the Bidders of the occurrence of clogging behavior when the two actions (material breakdown and increase in moisture content due to slurry usage) transform the Siltstone and Claystone into sticky materials and when the actual data points fall within the “medium clogging” and “strong clogging” ranges shown in Figures 9 and 11.**

Regarding “quantitative definitions of the clogging effects on tunneling productivity” - It is not the intent of the GBR (nor an industry practice) to establish a direct quantitative relationship between clogging effects and tunneling productivity which is heavily dependent on the Contractor’s TBM cutterhead, flushing/cleaning mechanisms, slurry/water additives, and interventions to manage the impacts of clogging behavior. Such a relationship would be a deterministic predictive model of performance that does not fall within the scope of the GBR. The GBR only gives general descriptive characterization of rock types prone to clogging and the anticipated resultant behavior to inform the Bidders for their TBM design/operation and muck handling equipment design/operation.

Q18 *In GBR Section 8.3.1 the terms “enhance” and “reduce” with respect to cuttability of the Sandstone are ambiguous. Please quantitatively clarify these with the expected effects on cuttability as might be derived based on the baseline intact rock properties.*

A18 **It is not the intent of the GBR (nor an industry practice of any GBR) to quantitatively clarify / define the effects of geological joint trends on cuttability of the rock materials. These statements are descriptive in nature aimed at informing the Bidders of the potential positive or adverse effects of these geological formations on TBM cuttability.**

- Q19 *As described in GBR Section 8.3.1, please define how the Contractor is expected to demonstrate a material increase in the Plasticity Index or amounts of siltstone and claystone encountered during ORT excavation, given that the rock materials will be cut and mixed during excavation. Are additional boreholes expected for identifying alleged changes?*
- A19 **It shall be within the Contractor's full control to demonstrate any material differences from baseline conditions. Additional boreholes to verify changes are entirely at the Contractor's option. Also see Answer A7 for the added requirement of core drilling and recovering rock samples from excavation face and/or through drill ports in the shields.**
- Q20 *The GBR states in Section 8.4.1 that free air interventions are considered feasible for the "majority of the ORT and CCT" interventions. Neither the GBR nor the Bid Form define the numbers of expected interventions. Please quantitatively define the meaning of "majority" in the context of baseline expectations for interventions. Please also clarify whether Bid Items 10, 11, 16 and 17 are expected to cover all interventions that cannot be completed in free air.*
- A20 **The meaning of "Majority" refers to more than 50% of tunnel alignment (ORT or CCT). However, the number and location of interventions shall be the Contractor's option as stated in GBR Section 8.4.1 Intervention Conditions: "... The frequency, locations, and extent of planned free-air or hyperbaric interventions are the Contractor's option. Unplanned interventions will also be needed to address mechanical failure or other reasons and are also the Contractor's option."**
- Bid Items 10 and 16 cover all hyperbaric interventions where interventions cannot be performed in free air. Bid Items 11 and 17 cover free air interventions. Also refer to Answer A26 for revised Bid Items 10 and 11 regarding grouting to facilitate hyperbaric interventions.**
- Q21 *Specification 01 45 23, Subsection 1.7.A calls for a submittal of a Pre-Construction Inspection Plan 60 days prior to start of inspection. Subsection 1.7.B.6 calls for the Pre-Construction Documentation to be submitted 30 days prior to start of construction at each site. Together, these two requirements produce an extremely long delay to the start of construction at each site. We request these review times be reduced to something more reasonable, like two weeks each.*
- A21 **The maximum number of days the Contractor has to prepare and submit the Pre-Construction Inspection Plan and the Pre-Construction Documentation is identified. The Contractor may submit this information using fewer days. No changes to the Specification Sections identified will be made.**
- Q22 *Brick Restoration - Key Note B on drawing sheet O06A-CI-808 references Detail C-94 on Sheet ORT-MD-032 for Brick Restoration. Detail C-94 is for removing existing brick, cleaning it, and reinstalling the old brick. Does Alcosan want the Contractor to clean and reuse the old brick or replace it with new brick?*

- A22 **Solid, unbroken, unchipped, existing yellow bricks from Shingiss Street may be reused. Solid, unbroken, unchipped, red bricks from Shingiss Street may be reused in Shingiss Street but must be randomly interspersed with the yellow brick so that yellow is the predominant color once restored. Discard broken, chipped, damaged bricks appropriately independent of color. New bricks shall be yellow and shall match the existing yellow brick in type/color/dimensions. New bricks shall be provided in a quantity, when added to the bricks to be reused from Shingiss Street, sufficient for full depth brick restoration. See Section B, Item 4 - CHANGES TO CONTRACT DOCUMENTS for REVISED O06A-CI-807, REVISED O06A-CI-808, and REVISED ORT-MD-032.**
- Q23 *Design Pressure for TBM - Section 1.7 of Technical Specification 31 17 19 "Tunnel Boring Machine" states that "The TBM shall be designed for the various geological conditions as described in the GBR." However, the specification does not clearly define the required TBM design pressure. Sections 8.3.1 and 8.3.2 of the GBR indicate that hydraulic pressures at the tunnel springline are anticipated to range between 4 and 6 bar in the ORT, and between 4 and 5.5 bar in the CCT. Please confirm that the minimum required TBM design pressure is 6 bar for the ORT and 5.5 bar for the CCT.*
- A23 **It is confirmed that the minimum in-situ hydrostatic pressure is 6 bar for ORT and 5.5 bar for CCT, at the tunnel springline.**
- Q24 *Bid Items 10,11,16,and 17 - Should the Contractor assume that the Owner-provided quantities (in hours) for Bid Items 10, 11, 16, and 17 are included within the overall construction duration specified in Article 4? Additionally, if any of these bid items fall on the critical path of the construction schedule, should time-related overhead costs be included in those specific bid items?*
- A24 **The Bidders shall include these bid items in their own construction schedule development. For pricing, refer to Part 1.1.B for inclusion of indirect costs pertaining to the items of Work covered by the Bid Items.**
- Q25 *Water Discharge - Section 31 23 19, Clause 1.8 specifies the proposed discharge locations for the wastewater. Is the Contractor required to pay any associated fees for discharging at these specified locations?*
- A25 **The contractor is responsible for fees to connect to and discharge into sewers, regulators, and manholes as charged by McKees Rocks Borough and Pittsburgh Water. For connections and discharges to ALCOSAN sewers, regulators, and manholes, pretreatment, and industrial discharges, the Contractor is required to submit permit applications but ALCOSAN permit fees will be waived. See Specification Section 01 31 00 Permits and Approvals. See Section B, Item 9 - CHANGES TO CONTRACT DOCUMENTS for revisions.**

- Q26 *Grouting for Intervention - Bid Items 11 and 17 (Grouting for Intervention) and 114 (Grout Materials) specifically apply to free-air interventions only. However, Specification 31 23 20 – Section 3.6.O.2 states: 'When maintenance must be performed in areas of relatively high hydrostatic pressure, the Contractor may need or wish to drill and grout to bring pressures down to workable levels.' If grouting is performed to support a hyperbaric intervention, will the Owner compensate the associated time and material costs under the applicable bid items?*
- A26 **Yes. Added to Bid Items 10 and 11 for ORT (and applies to Bid Items 16 and 17 for CCT) and Bid Item 114.**
See Section B, Item 10 - CHANGES TO CONTRACT DOCUMENTS for revisions.
- Q27 *Bid Items 10 and 16: Hyperbaric Intervention - Sections 8.3.1 and 8.3.2 of the GBR indicate that hydrostatic pressures at the tunnel springline are anticipated to range between 4 and 6 bar in the ORT, and between 4 and 5.5 bar in the CCT. The cost of hyperbaric interventions varies significantly depending on the pressure. If pressures of up to 5–6 bar must be assumed, the intervention will be considerably slower and more costly. To allow for a reasonable and competitive bid estimate, we kindly request that you specify the base pressure to be used for the hyperbaric intervention bid item.*
- A27 **No change will be made for the Bid Documents. Refer to Specification 31 23 20 – Part 3.6.O.2 for considerations of hyperbaric intervention under relatively high hydrostatic pressure conditions, and payment for grouting related to hyperbaric intervention as answered in Answer A26.**
- Q28 *Bid Items 5 and 13: TBM Tunnel - Could you please provide the basis for the TBM tunnel lengths shown in Bid Items 5 and 13 — 19,681 ft for the ORT and 4,170 ft for the CCT?*
- A28 **TBM Tunnel length under each of these two bid items is from the end stationing (away from shaft) of the start tunnel to the inner face of the TBM tunnel at the terminus shaft, without considering the rounding margins. Price your bid based on the base quantities given. Payment will be made based on Unit Prices as described in Bid Item 5 and Bid Item 13 for the actual installed TBM tunneling length measured between these two points.**
- Q29 *Note 9 on sheet CCT-ST-012 states RCP is not allowed between STA 60+00 and STA 92+00 along the CCT-O06A tunnel alignment whereas the CCT-O06A adit is to be excavated from STA 0+00 to STA 19+00. Are there locations in the CCT-O06A tunnel where RCP is not allowed?*
- A29 **RCP is not permitted only within the tight curve between STA 0+62.86 and STA 0+92.28 Refer to revised drawing sheet CCT-ST-012.**
See Section B, Item J, for CHANGES TO CONTRACT DOCUMENTS.
- Q30 *Spec 31 23 23 1.5.C – The section requires the Contractor to engage a Grouting Consultant with five years of relevant experience in grouting for shafts and tunnels. It is unclear if this consultant must be a third-party expert or if an internal specialist employed by the grouting*

- contractor with equivalent experience qualifies. Can a qualified in-house employee fulfill this role, or must the consultant be independent?*
- A30 **Yes, an equivalent qualified in-house grouting specialist can fulfill this role. Qualification submittals shall be unchanged.**
- Q31 *Spec 31 23 23 3.6.C – Can the maximum default stage length for grouting and water pressure testing be revised to 20 feet, with adjustments allowed based on field observations?*
- A31 **Revised to 20 feet, with conditions as specified in revised Section 31 23 20 3.6.C. Also see revised Section 31 23 20 Part 3.4.C.
See Section B, Item 16, for CHANGES TO CONTRACT DOCUMENTS.**
- Q32 *Spec 31 23 23 3.6.N.1.A.1 – The specification requires probe holes around the shaft base to be drilled from within the excavation. Drilling from inside the excavation poses safety and logistical challenges. Can these internal probe holes be drilled from the surface prior to excavation instead?*
- A32 **3.6.N.1.a.1) of the Spec refers to probe / grout holes to be drilled through the wall (slurry or secant piles) above the wall tip elevation to seal the wall/rock interface above the wall tip. All internal shaft probe / grout holes specified in 3.6.N.1. a&b are shaft perimeter holes. These holes are anticipated to be sub--horizontal or inclined at the Contractor's option.
3.6.N.1.b.3) specifies shaft base probe / grout holes, which are anticipated to be vertical or sub-vertical. The subsection specifies the elevation where the holes are to be developed. The location where these holes will be drilled is up to the Contractor.**
- Q33 *Is there a reason that only TACS or VMT/HK systems are allowed? We would like to propose an alternative (Japanese supplier ENZAN).*
- A33 **Section 31 71 00 Part 3.2.A requirement has been revised to include "equivalent" systems.
See Appendix B, Item 17, for CHANGES TO CONTRACT DOCUMENTS.**
- Q34 *31 71 19 TBM - The referenced specification addresses the air lock and states that the TBM shall be designed to provide access to the tunnel face and pressure chamber in accordance with GC Section 1 – Safety Provisions, which requires compliance with all applicable local, state, and federal regulations. OSHA regulations limit the maximum pressure for manned entry into the chamber to 50 psi (3.4 bar). However, the GBR indicates that hydrostatic pressures at the tunnel springline are anticipated to range from 4 to 6 bar in the ORT and from 4 to 5.5 bar in the CCT. Please confirm the maximum working pressure to be used for the design of the TBM air lock.*
- A34 **OHSA air pressure limit to a certain value does not mean the airlock shall only be rated to that. The Contractor shall design the TBM, including the airlock, to suit the ground conditions indicated in the GBR. Also note Specification 31 23 20 – Section 3.6.O.2 states: “When maintenance must be performed in areas of relatively high hydrostatic pressure, the Contractor may need or wish to drill and grout to bring**

pressures down to workable levels", and the Answers to A26, and revised Bid Items 10 and 11 pertaining to payment for grouting to support hyperbaric interventions.

- Q35 *O14 Transition Box Nomenclature - For the O14 regulator, the drawing notes and sequence of construction both reference a "transition box". There is no callout to indicate where a transition box can be found. Please indicate which portion of the work is to be considered a transition box.*
- A35 **Transition concrete box refers to the connection concrete box between each of the two new sewers to the existing O14 regulator, as indicated by Step 9 on Sheet O14-ST-604.**
- Q36 *Appendix A - Table of Contents - Page 2 of specification section 01 10 00 is missing in Appendix A. Please provide.*
- A36 **Specification Section 01 10 00, Page 2 is included as Attachment A to this Addendum. See Section B, Item 1, for CHANGES TO CONTRACT DOCUMENTS.**
- Q37 *Section 31 55 00 – Part 1.1.A
The specification language limits the ground modification methods to jet grouting and permeation grouting.
Question: Are alternate ground improvement methods that achieve the same groundwater control and ground stability performance criteria acceptable?*
- A37 **No changes to Contract Documents for the bid. As shown on Contract Drawings, the grouting methodology and type of grout mix shall be determined by the Contractor based on geotechnical conditions and site access according to Specification Section 31 55 00. Select from the two ground modification methods for the bid.**
- Q38 *Section 31 55 00 – Part 1.7.B.2.a.1)a
The specification requires a minimum 28-day compressive strength of 150 psi for permeation grouting. Achievable strength is largely dependent on soil type and gradation, and this value may not be attainable in fine-grained or less permeable soils where permeation is not feasible.
Question: Will lower compressive strengths be acceptable in fine-grained soils where the target 150 psi cannot reasonably be achieved due to limited grout penetration? Let's talk through this one. If the soil is not permeable then should we really be permeating it? Also, if these methods are both acceptable then why are the strength criteria different? And what is the strength criteria for if the intent is water control?*
- A38 **Refer to the Contract Drawings pertaining to SOEs at each site for locations and design considerations of the specified grouted zones. It is the Contractor's responsibility to determine if permeation or jet grouting is to be used to achieve the required performance. Regarding ground improvement requirements, as noted on the Contract Drawings, water control is not the only design requirement at locations where ground improvement is specified (e.g., below sewer invert at fluming pipe bulkheads and sewer underside excavation at A58 RG2).
No changes will be made to the strength criteria for the bid.**

- Q39 *Section 31 55 00 – Part 1.7.C.1.c and Part 2.2.B.7*
Specification states: “At the direction of the Owner, any soil-cement element that exceeds the allowable horizontal alignment tolerances shall be re-mixed within two (2) calendar days of initial placement, or supplemented with one or more adjacent or overlapping elements, at no additional cost to the Owner.” And “The Contractor shall provide equipment capable of replacing hardened, non-conforming soil-cement elements.”
Question: Replacement or remixing of hardened jet grout columns is not technically feasible with the specified techniques. Please confirm that the intent is for the Contractor to remediate non-conforming columns by installing supplemental or overlapping elements to achieve the design intent in lieu of replacement.
- A39 **Confirmed.**
- Q40 *Section 31 55 00 – Part 3.2.A.1*
The specification requires a jet grouting trial program at each discontinuous site. Some sites include limited grouting quantities, and the GBR identifies consistent soil classifications (A–E system).
Question: Can a trial program performed at one representative site be applied to other sites with similar soil classifications and properties, provided the Contractor demonstrates comparable conditions through soil data, classification, and strength characteristics?
- A40 **No changes will be considered during the bidding process.**
- Q41 *Section 31 55 00 – Part 3.2.B.2.d*
The specification prohibits fouling of ballast and grout intrusion into utilities or manholes, with remediation assigned to the Contractor.
Question: Is grout infiltration acceptable if the Contractor plans to remediate any resulting impacts, or is fouling of utilities and manholes strictly prohibited regardless of remedial measures?
- A41 **Grout infiltration is not acceptable and fouling of utilities and manholes is strictly prohibited.**
- Q42 *Section 31 55 00 – Part 3.2.B.5*
The specification states: “Do not jet grout alongside existing brick sewers.” This restriction is unclear in its spatial extent.
Question: Does this prohibition apply only to immediately adjacent grouting, i.e. where the jet grout nozzle is directed at the brick sewer, or does it also preclude jet grouting below or near brick sewers? Can jet grouting be permitted near or beneath brick sewers when protective measures and remediation plans are implemented to prevent damage?
- A42 **Section 31 55 00 - Part 3.2.B.5. has be revised to: “For jet grouting alongside existing brick sewers to be approved by the Owner, the Contractor shall demonstrate by submittal of analysis that its jet grouting operations will not damage the existing sewers due to horizontal jet grouting pressures after installation of the interior lining support specified on the SOE Contract Drawings. Implement supplemental protective measures or remediation plans in addition to the specified interior lining support as determined to be necessary.”**

Refer to Appendix B, Item 18 for CHANGES TO CONTRACT DOCUMENTS.

- Q43 *Section 31 55 00 – Part 1.7.B.1.c requires a column overlap of “no less than the larger of 1/8 of the column diameter or 6 inches” Please clarify if this overlap is describing the spacing between 2 columns.*
- A43 **Overlap is the dimension of cut by the secondary column into the primary column.**
- Q44 *Section 31 55 00 Part 2.2.B.5 requires equipment that separately “inject cement grout, water and air” Please confirm if it triple-system jet grouting is being required by this statement.*
- A44 **Confirmed.**
- Q45 *Section 31 55 00 Part 3.2.A.5 requires review and approval of the results of the jet grout test program by the Owner prior to start of production jet grouting. Please provide the review time required for this process so appropriate down time can be included in the pricing and schedule.*
- A45 **Refer to Section 01 33 00 - Submittals, Part 1.9.B for review time of Contractor's submittals.**
- Q46 *Section 31 55 00 Part 1.7.B.1.d describes permeability measured by packer or rising/falling head testing of the entire jet grouted mass. Part 3.2.C.1 mentions only packer permeability testing and Part 3.2.C.2 mentions permeability testing mid-core sampling. Please confirm that both rising / falling head and packer testing are acceptable means of measuring permeability and that the intent is to test the entire grout zone rather than partial grout zones after “interrupting core sampling” as noted in Part 3.2.C.2.*
- A46 **Confirmed.**
- Q47 *Section 31 55 00 Part 3.2.C.4 describes abandoning core holes using upstage packer grouting. If the jet grout permeability test has been completed in the verification core and demonstrated the relatively impermeability of the soil-cement mass, then please provide clarity on the purpose of staged pressure grouting in a confirmed impermeable core hole.*
- A47 **No changes to the Contract requirements. If an impermeable core hole is confirmed, field change can then be made.**
- Q48 *Specification 01 10 00 Table of Contents – Page 2 (Divisions 2 through 6) is missing. Please provide this missing page.*
- A48 **See the response to Answer A36.**
- Q49 *See note 7 on O27-ST-100. Can vertical SOE elements be completed prior to the completion of the shaft, DWT and CCT as well as the ORT TBM removal?*
- A49 **Note 7 states "THE GENERAL ORDER OF CONSTRUCTION FOR THE ABOVE KEY PROJECT ELEMENTS IS SUGGESTED...". "IT IS ULTIMATELY THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP THE MOST SUITABLE SEQUENCE OF CONSTRUCTION TO ACCOMMODATE THE SITE**

**CONDITIONS AND ANY OVERLAPPING CONSTRUCTION ACTIVITIES
DEEMED FEASIBLE BY THE CONTRACTOR."**

- Q50 *On drawing O14-ST-607 section C there is a concrete slab shown under the pipe that runs from the regulator to the transition box. This slab is not shown on the regulator plans or section H and I on O14-ST-619. Please clarify if there is to be a concrete slab in this area.*
- A50 **The concrete base slab is considered a temporary structure working as a base strut for the purpose of keeping the SOE stable when the lowest strut is removed. Section H and I on O14-ST-619 are permanent structures only. See Section B of O14-ST-606; Section C of O14-ST-607; Section D of O14-ST-608; and Section I of O14-ST-611 for the extent of this slab.**
- Q51 *Shaft SOE drawings show the CIP ring beam at the toe of the secants/slurry walls, which in some cases is well below the top of rock as shown in the GBR. Typically the ring beam would be placed at the depth of sound rock and shaft excavation at the minimum A line shown for rock excavation would commence. Is that the intent or will the contract require removal of all sound rock within the SOE to the toe depth?*
- A51 **The toe of the SOE wall is a Contract requirement and will remain unchanged for the bid. Therefore, for the bid, the ring beam shall be located at the toe elevation around the rock ledge, with rock above removed.**
- Q52 *The Geotechnical Baseline Report (GBR), Page 2 states "Selection of slurry walls or secant piles for the shafts through overburden soils is the Contractor's option."
Specification 01 11 00 Section 1.1.D.7.B states " Shafts ORT-AS1 and ORT-O27-DS will consist of reinforced slurry walls (or diaphragm walls) in overburden strata and drill and blast excavation in rock with primarily rock dowels and shotcrete as initial support."
Specification 31 75 00, Section 1.1.B.1 states "The Work specified in this Section shall include, but not be limited to: 1. Providing reinforced slurry or secant pile walls as shown on the Contract Drawings and as specified in Section 31 56 00 – Slurry Wall and Section 31 57 00 – Secant Pile Wall, respectively, for temporary support of the shafts in soil".
Specification 31 75 00, Section 1.1.C.1 states "As part of this Work, the Contractor shall:
1. Excavate and install initial support and final lining and perform all Work necessary to construct the shafts as shown, and within the limits shown, on the Contract Drawings."
Specification 31 75 00 Section 1.7.A states " Minimum designs for shaft initial support are shown on the Contract Drawings. The shaft slurry wall and secant pile wall initial support systems have been designed based on geotechnical properties and groundwater elevations interpreted from the GDR and assumed surcharge loadings using the LRFD method (AASHTO)."*
- Question #1 – Why are secant piles unreinforced for Shafts A58, A48, 041, 014, O07 & O06A while the Slurry Walls are reinforced for Shafts As1 and O27?*
- Question #2: Can the Contractor base his bid on using a secant pile design in lieu of the slurry wall SOE shown for Shaft AS1 and Shat O27?*

Question #3 – Can the Contractor submit an alternative design that uses unreinforced secant pile shafts for Shafts AS1 & O27 as long as it meets all other design requirements / loadings listed in Specifications 31 75 00?

A52 Answer to Question #1: Contract designs were based on Design Requirements specified in Specification 31 75 00 Part 1.7.A. Unreinforced secant piles for Shafts A58, A48, O41, O14, O07 & O06A, and reinforced slurry walls for Shafts AS1 and O27 were results of such designs.

Answer to Questions #2 and #3: As stated in GBR Page 2 - 2nd last bullet point - "Selection of slurry walls or secant piles for the shafts through overburden soils is the Contractor's option." Design of AS1 and O27 using secant piles can be the bid design and will be considered REDESIGNS. Therefore, all REDESIGN requirements must be met in accordance with Specification 31 75 00 Part 1.7.B. In addition, since the Contract Designs are MINIMUM designs, as stated in Part 1.2.C and Part 1.7.B of Specification 31 75 00, secant pile alternatives, reinforced or unreinforced, to the reinforced slurry wall designs shall at a minimum provide equivalent structural capacity, rigidity, joint watertightness, functionality, and mitigation of ground settlement and groundwater drawdown.

Note that the SOE wall tip elevation remains unchanged for either the slurry wall or secant pile wall designs.

Q53 *Specification 31 75 00 Section 1.8.A states "All shaft work on this Project is classified as "Potentially Gassy". Perform all Work in accordance with General Conditions and Section 01 35 26 –Safety Provisions, at a minimum."*
Specification 01 35 26 Section 1.1.G states "The adits, tunnels, and shafts are classified as "potentially gassy". All work in these areas shall comply with applicable provisions of 29 CFR Part 1926, Subpart S, Underground Construction by OSHA, as well as requirements specified herein. "

Question – Since the installation of the Secant Piles, Slurry Walls, Pre-Excavation Grouting, Ground Modification, Interlocking Pipe Piles and Drilled H-Piles takes place from the surface and typically under drilling fluid (water or bentonite slurry), is this work governed by the requirements of this paragraph?"

A53 Work from the surface is not governed by the requirements of this paragraph.

Q54 *Specification 31 75 00 Section 3.2.A.6 states " It is the Contractor's full responsibility to develop criteria and implement pumping tests inside the shaft as deemed necessary by the Contractor to test the soundness of the shaft walls, completeness of wall joint closures, and the shaft wall and rock interface tightness, prior to and/or during the process of Mass Excavation".*

Question – Are the pump tests mentioned mandatory or are they to be performed at the Contractor's discretion?

- A54 **As the requirement states "... as deemed necessary by the Contractor...", they are to be performed at the Contractor's discretion as its means and methods.**
- Q55 *Specification 31 75 00 Section 3.5.A states" Near surface facility excavations adjacent to, and penetrations through, the shaft secant pile or slurry walls shall not be permitted until the shaft final lining is installed up to the elevations required on the Contract Drawings."*
- Question – Can the secant piles, steel sheet piles, interlocking pipe piles and Ground Modification grouting be installed / performed at the same time as the Shaft Secant Piles and Slurry Walls are installed? (i.e. before the shafts are excavated and the final linings are installed?)*
- A55 **The requirement says "Near surface facility excavation.....shall not be permitted...". Other SOE or ground modification installations shall be at the Contractor's option as long as the integrity of the installed elements and intended watertightness are maintained.**
- Q56 *Specification 31 41 00 Section 1.6.F.g states" Method to implement grouting from both the outside and inside of the excavation, including grout mix design, and method to inject grout into the entire soil zone below the invert of the existing sewer structure as shown on the Contract Drawings."*
- To be able to fully grout the zone underneath existing sewers with either jet grouting or permeation grouting, some of the grout holes will likely need to be drilled from the surface through the top and bottom of the existing sewer. A standpipe will then have to be placed and sealed into the sewer invert.*
- Question - Will the Contractor be allowed to drill through the top and invert of the existing sewers to install grouting access pipes?*
- A56 **No. The Contractor should not assume that they are able to drill through existing sewers. These are active sewers and the integrity of the conveyance must be maintained.**
- Q57 *Specification 31 41 00 Section 1.7.A.2.a states" At ORT-A58-RG2 site, no surcharge loadings shall be permitted on the west side of the connection zone during all stages of construction."*
- Question - Can the Contractor stage equipment on the west side of the ORT-A58-RG2 connection zone to install the Ground Improvement grouting before the regulator mass excavation and existing sewer demolition begins?*
- A57 **Yes. Construction must be completed within the Limits of Disturbance (LOD)/Limits of Construction (LOC) shown. However, once excavation around the connection zone starts, Section 31 41 00 Part 1.7.A.2.a must be followed, including equipment loadings.**
- Q58 *Specification 31 23 20 Section 3.5.D states "Drill inside of the casing and into rock to a minimum depth of 10 feet below the maximum depth of planned shaft excavation as shown on the Contract Drawings."*

- A58** *Question – Can the Contractor drill the portion of the grout hole in rock using air as a flushing medium, or does he have to use water as a flushing medium?*
Bid as stated in Section 31 23 20 Part 2.4.F where flushing water is required.
- Q59** *Specification 31 23 20 Section 3.5.E states “Flush the hole of drilling mud (if used) prior to drilling into the bedrock. Do not use drilling mud or polymers as drilling fluid when drilling rock.”*
Specification 31 23 20 Section 3.6.C states “At the completion of drilling or redrilling each stage, and prior to commencing any grout injection, each hole shall be carefully washed out or allowed to flush itself, until the return water is clean. Allow any loose material encountered in the holes to flush out of the holes.”
- A59** *Question – If the Contractor drills the rock portion of the grout hole with a down-the-hole water hammer will the water discharged from the hammer bit during drilling be considered adequate to meet the hole washing and flushing requirements?*
Whether the water discharged from the hammer bit during drilling can be considered adequate or not is up to the Contractor. Hole washing must meet the requirements of Section 31 23 20 Part 3.6.D.
- Q60** *Specification 31 57 00 Section 3.2.G states “After each pile is drilled to required depth, verify the exact three-dimensional location and geometry of the pile. Verify using ultrasonic drilling monitoring technology (e.g., DM-602 by Koden Electronics Company, or approved equal).”*
Question - Will the Jean Lutz Dialog -Prad verticality monitoring system, which has been successfully used on many secant pile projects, be considered an approved equal to the Koden system?
- A60** **No substitutions or alternatives will be considered during the bidding process.**
- Q61** *Specification 31 56 00 Section 2.2.A.5.b states “Drilling Monitor: Koden Electronics Company Model DM-684. or Owner-approved equivalent.”*
Question - Will the Contractor's proprietary on-board real time monitoring instrumentation that has a proven track record of success on other similar projects be considered an approved equal to the Koden?
- A61** **No substitutions or alternatives will be considered during the bidding process.**

B. CHANGES TO CONTRACT DOCUMENTS

1. APPENDIX A - TECHNICAL SPECIFICATIONS SECTION 01 10 00 - TABLE OF CONTENTS.
ADD Page 2, which is Attachment A to this Addendum.
2. TECHNICAL SPECIFICATIONS SECTION 01 31 00 – PERMITS AND APPROVALS - Attachment 2.
ADD Highway Occupancy Permit Supplement (Supplement 11060503-01 for Time Extension) issued by PennDOT on 10/31/25, which is Attachment B to this Addendum.
3. APPENDIX B – CONTRACT DRAWINGS
 - a) DELETE O07-CI-702 (Sheet 582 of 770) and ADD REVISED O07-CI-702 (Sheet 582 of 770) which is Attachment C to this Addendum.
4. APPENDIX B – CONTRACT DRAWINGS
 - a) DELETE O06A-CI-807 (Sheet 616 of 770) and ADD REVISED O06A-CI-807 (Sheet 616 of 770) which is Attachment D to this Addendum.
 - b) DELETE O06A-CI-808 (Sheet 617 of 770) and ADD REVISED O06A-CI-808 (Sheet 617 of 770) which is Attachment D to this Addendum.
 - c) DELETE ORT-MD-032 (Sheet 679 of 770) and ADD REVISED ORT-MD-032 (Sheet 679 of 770) which is Attachment D to this Addendum.
5. APPENDIX A – TECHNICAL SPECIFICATIONS Section 01 14 19 paragraph 3.7.A – DELETE the second sentence (CHANGES ARE DENOTED IN RED):
3.7 SITE USE AT CCT-007
A. DLCO has installed high-tension power lines to a monopole adjacent to the site, and the overhead lines cross the site. ~~DLCO right-of-way restrictions are shown on the Contract Drawings.~~ De-energization of these lines may be required during short periods of ORT construction.
6. APPENDIX A – TECHNICAL SPECIFICATIONS – Section 03 10 00 – REPLACE paragraph 3.4. in its entirety as follows (CHANGES ARE DENOTED IN RED):

3.4 FORM REMOVAL

- A. Forms shall be removed in accordance with ACI 347 recommendations without damage to concrete and in a way to ensure complete safety to all structural components. The contractor shall assume full responsibility for the strength and integrity of all components from which forms are removed as well as adjacent components.
- B. At a minimum, the forms shall be left in place for the length of time or

minimum achieved concrete strength, whichever occurs later, as specified in the table below: Form Removal Requirements, or as approved by the Owner based on field conditions. The duration requirements represent cumulative durations during which the air surrounding the concrete is above 50 degrees F. Minimum concrete strength shall be tested as recommended by ACI 347 or as approved by the Owner.

Form Removal Requirements

Structural Components	Min Duration ¹	Min Strength (psi)
Curbs and Sidewalks	12 hours	1500
Columns	24 hours	2000
Side forms for girders and beams, walls, and slabs ²	24 hours	2000
Bottom forms of elevated slabs:		
a. Under 20 feet clear span	7 days	3500
b. Over 20 feet clear span	14 days	4000
Bottom forms of elevated beams or girders:		
a. Under 10 feet clear span	7 days	3000
b. 10 to 20 feet clear span	14 days	3500
c. Over 20 feet clear span	21 days	4000

¹ These durations shall be increased accordingly by the time when air temperature following concrete placement drops below fifty (50) degrees F.

² Base slabs on this Project shall be poured against SOE walls or shaft rock walls where shown on the Contract Drawings.

C. Reference Section 03 39 00 – Concrete Curing, for curing requirements and duration of cold weather protection requirements.

7. APPENDIX A – Specification Section 01 45 23, Attachment 2:

- a. DELETE ATTACHMENT 2 – List of Utilities for Inspection and Cleaning (originally 4 pages; Addendum 4, Item 7 seven (7) pages) and ADD ATTACHMENT 2 – List of Utilities for Inspection and Cleaning (8 pages, Revised 11/21/25), which is Attachment F to this Addendum.

8. APPENDIX A – TECHNICAL SPECIFICATIONS - Section 31 71 19 – ADD PART 1 – GENERAL, 1.1.B.6. in its entirety and ADD Section 3.8.C. in its entirety as follows (CHANGES ARE DENOTED IN RED):

- a. ADD Section 31 71 19, PART 1, 1.1.B.6.

- 6. Perform core drill and recover rock samples from excavation face and/or through drill ports in the shields.**

b. ADD Section 31 71 19, 3.8.C.

C. The Contractor shall provide core drill capability to recover rock samples from excavation face and/or through drill ports in the shields. Actual performance of core drilling and rock sample recovery is at Contractor's option and own cost.

9. APPENDIX A - Specification Section 01 31 00, PART 3 – EXECUTION, 3.1 GENERAL REQUIREMENTS - ADD the following in its entirety and REVISE paragraph lettering beneath NEW 3.1.D (CHANGES ARE SHOWN IN RED)

a. ADD PART 3, 3.1.D

D. The fee associated with ALCOSAN's Industrial Waste Pretreatment shall be waived for connections shown on the Contract Drawings.

E. Provide the Owner with copies of permits/approvals.

F. Perform agency coordination and permitting as required to construct the Work of this Contract in accordance with applicable laws and regulations.

G. Provide information and technical support as requested by the Owner in response to third party agency permitting and coordination or other public coordination.

H. Inform the Owner of progress on agency coordination, and permits and status, and provide monthly updates describing agency coordination and permit progress. Provide and implement a corrective action plan when agency coordination work or permit acquisition is behind schedule.

I. The Contractor is responsible for compliance with permit requirements, terms, conditions, and regulations and for permit violations that occur and are caused by Contractor. Pay all permit violation penalties and fees resulting from violations.

10. APPENDIX A –Specification Section 01 22 00, REVISE the following BID ITEMS 10, 11, and 114 as follows:

a. REVISE BID ITEM 10, ORT TBM Tunnel Hyperbaric Interventions, part 3. (CHANGES SHOWN IN RED).

3. This item *excludes* free air intervention, which is considered incidental to TBM tunneling, or grouting to support hyperbaric intervention. Grouting

and grout materials for free air intervention, **or grouting to support hyperbaric intervention** shall be paid for under separate items – BID ITEM 11 for Grouting, and BID ITEM 114 for Grouting Materials.

b. REVISE BID ITEM 11, Grouting for ORT TBM Tunnel Interventions, excluding Grout Material, parts 1 and 4 as follows. (CHANGES SHOWN IN RED).

1. This Item shall include full compensation for labor and equipment for ORT grouting during free air interventions, **or grouting the Contractor may need or wish to perform in areas of relatively high hydrostatic pressure to bring pressures down to workable levels to support a hyperbaric intervention**, including:
 - a. Labor performing the grouting and support services for grouting.
 - b. Provisions of all grouting equipment, connections, piping, and consumables other than those specifically excluded in this BID ITEM.
 - c. All other work required to provide the tunnel grouting in accordance with the Contract Documents.
2. Grout Material is *excluded* from this pay item and paid under BID ITEM 114 – SPECIFIC ALLOWANCE #2, “Grout Materials Used for Tunnel Grout”.
3. Equipment used for drilling/grouting on the TBM is *excluded* from this BID ITEM since it is paid for as part of the respective TBM BID ITEMS.
4. Drilling for tunnel grouting to effect free air interventions **or to support hyperbaric interventions** is incidental to the Work.

c. REVISE BID ITEM 114, SPECIFIC ALLOWANCE #2 – Grout Materials Used for Tunnel Grout, part 1 as follows. (CHANGES SHOWN IN RED).

1. This Allowance Item shall compensate the Contractor for grout material used in the pre-excavation grouting of non-TBM tunnels as well as grout used to facilitate free-air TBM interventions, **or to support hyperbaric interventions**.

11. APPENDIX A – TECHNICAL SPECIFICATIONS - Section 31 29 00. REVISE the following sections as follows (CHANGES ARE DENOTED IN RED):

- a. PART 1 – GENERAL, 1.1.D

D. Geotechnical Wells and Piezometers to be abandoned are included in Table 1-1. **Historical wells identified in the well study included in the GDR to be abandoned are included in Table 1-1 and shown on the Contract Drawings.**

b. PART 1 – GENERAL, 1.6 SUBMITTALS, 1.6.A, 1.6.B, and 1.6.C.

A. At least 30 calendar days prior to the start of any abandonment work, the Contractor shall prepare and submit a form **to the Owner** for documenting the abandonment of wells, piezometers, and geotechnical instruments on the Project. At a minimum the form shall provide for documenting information including:

1. Well, piezometer, or instrument identification number and owner.
2. Location consisting of either state plane coordinates or tunnel or consolidation sewer station and offset.
3. Well, piezometer, or instrument construction details.
4. Well, piezometer, or instrument depth and diameter as well as depth determined by sounding.
5. Date, time, responsible person, and contractor/subconsultant performing the abandonment work.
6. Method/procedures and materials used.
7. Grout mix components, proportions, and lab testing.
8. Theoretical grout volume, actual grout volume placed, and an explanation if any discrepancy exists between these values.
9. Identification of materials used to achieve surface restoration.

B. At least 10 days prior to well abandonment, the Contractor shall notify PADEP of the intent to abandon wells in accordance with “The Water Well Drillers License Act” as outlined in Chapter 7 of the PADEP’s “Groundwater Monitoring Guidance Manual”.

C. Submit **to PADEP and the Owner** completed abandonment forms within five (5) work days after the abandonment work is completed.

12. APPENDIX A – TECHNICAL SPECIFICATIONS - Section 31 29 00.

DELETE Table 1-1 and ADD REVISED Table 1-1, which is Attachment G to this Addendum.

13. APPENDIX B – CONTRACT DRAWINGS

- a) **DELETE O27-GI-100 (Sheet 716 of 770) and ADD REVISED O27-GI-100 (Sheet 716 of 770) which is Attachment H to this Addendum.**
- b) **DELETE O41-GI-200 (Sheet 717 of 770) and ADD REVISED O41-GI-200 (Sheet 717 f 770) which is Attachment H to this Addendum.**
- c) **DELETE A48-GI-300 (Sheet 718 of 770) and ADD REVISED A48-GI-300 (Sheet 718 of 770) which is Attachment H to this Addendum.**

- d) DELETE A58-GI-400 (Sheet 719 of 770) and ADD REVISED A58-GI-400 (Sheet 719 of 770) which is Attachment H to this Addendum.
- e) DELETE AS1-GI-500 (Sheet 720 of 770) and ADD REVISED AS1-GI-500 (Sheet 720 of 770) which is Attachment H to this Addendum.
- f) DELETE O14-GI-600 (Sheet 721 of 770) and ADD REVISED O14-GI-600 (Sheet 721 of 770) which is Attachment H to this Addendum.
- g) DELETE O07-GI-700 (Sheet 722 of 770) and ADD REVISED O07-GI-700 (Sheet 722 of 770) which is Attachment H to this Addendum.
- h) DELETE O06A-GI-800 (sheet 723 of 770) and ADD REVISED O06A-GI-800 (Sheet 723 of 770) which is Attachment H to this Addendum.
- i) DELETE ORT-GI-900 (Sheet 724 of 770) and ADD REVISED ORT-GI-900 (Sheet 724 of 770) which is Attachment H to this Addendum.
- j) DELETE ORT-GI-901 (Sheet 725 of 770) and ADD REVISED ORT-GI-901 (Sheet 725 of 770) which is Attachment H to this Addendum.
- k) DELETE ORT-GI-902 (Sheet 726 of 770) and ADD REVISED ORT-GI-902 (Sheet 726 of 770) which is Attachment H to this Addendum.
- l) DELETE ORT-GI-903 (Sheet 727 of 770) and ADD REVISED ORT-GI-903 (Sheet 727 of 770) which is Attachment H to this Addendum.
- m) DELETE ORT-GI-904 (Sheet 728 of 770) and ADD REVISED ORT-GI-904 (Sheet 728 of 770) which is Attachment H to this Addendum.
- n) DELETE ORT-GI-905 (Sheet 729 of 770) and ADD REVISED ORT-GI-905 (Sheet 729 of 770) which is Attachment H to this Addendum.

14. APPENDIX A – TECHNICAL SPECIFICATIONS - Section 01 14 19. ADD Section 3.7.E. as follows (CHANGES ARE DENOTED IN RED):

E. The former auto dealership building will be made available to the Contractor with the following stipulations and expectations.

- 1. Contractor shall be solely responsible for its and its personnel's use, occupancy, access to, and activities within or about the building. To the fullest extent permitted by law, Contractor shall defend (with counsel reasonably acceptable to Owner), indemnify, and hold harmless Owner and Owner's affiliates, directors, officers, employees, and agents from and against any and all claims, demands, causes of action, damages, losses, liabilities, fines, penalties, judgments, costs, and expenses (including reasonable attorneys' fees and costs) arising out of or relating to: (a) Contractor's or its subcontractors', suppliers', invitees', or employees' use of, presence in, or operations within the building; (b) damage to the building or to property located therein; and (c) bodily injury (including death) or personal injury occurring in or about the building, in each case to the extent caused by the acts or omissions of Contractor or those for whom Contractor is responsible. The obligations in this Section are independent of, and in addition to, Contractor's insurance obligations.

2. Contractor is responsible for performing commercially acceptable routine maintenance and prevention in order to prevent waste of the building.
3. The building can only be used for work associated with the Ohio River Tunnel Project. Contractor is responsible for obtaining an Occupancy Permit from McKees Rocks Borough.
4. Storage or work for non-ORT project related activities is prohibited.
5. The building is being provided in an "As Is" condition.
6. Drawings representing the Crivelli building are provided in Appendix E, Section 10. These drawings are not As-Builts and may not reflect current conditions/dimensions.
7. The Owner and Owner's Representatives retain the right to enter the building at any time. A contact that is available 24 hours a day, 7 days a week must be provided to the CM for Owner use should they need access to the building.
8. Walls, doors and windows may not be removed or modified without written approval for the Owner.
9. Excavation and demolition within or adjacent to the building is prohibited.
10. Pre-construction (meaning move in) condition survey, including photos, is required.
11. Contractor is responsible for breakage, including windows. Any repairs or alterations must be submitted to the CM for Owner approval.
12. Contractor may not block ingress/egress to the building.
13. Contractor may not block and is not permitted to traverse Chartiers Avenue.
14. Contractor to provide garbage services, street sweeping, and snow and ice removal for the duration of the contract. Owner will retain responsibility for snow removal from the public sidewalk in front of the building and public roadway from Carson Street to McKee Street.
15. Water, sanitary, electric, and gas utilities will be provided by the Owner at the Owner's expense. Utility bills will be monitored by the Owner for excessive usage, and the contractor will reimburse Owner for usage that is above and beyond what would be normally anticipated.
16. Contractor is responsible for providing general housekeeping, telecommunications, and building security. The building is currently monitored 24 hours a day, 7 days a week by a security service. Within 120 days from Notice To Proceed the contractor must coordinate with Owner to be added as a user to the current building security coverage.
17. Contractor to provide and install signage with the following information: name, address, contact information, emergency contact telephone number(s). Signage is to be maintained and kept legible during the life of the contract and secured to the building prominently.
18. Disposal of construction water, wash down water, equipment fluids, etc. is prohibited. All such liquids/fluids must be appropriately disposed of in accordance with all applicable regulations.

15. APPENDIX B – CONTRACT DRAWINGS

- a) DELETE CCT-ST-012 (Sheet 93 of 770) and ADD REVISED CCT-ST-012 (Sheet 93 of 770) which is Attachment J to this Addendum.

16. APPENDIX A – TECHNICAL SPECIFICATIONS – Section 31 23 20, REVISE 3.4.C. as follows (CHANGES ARE DENOTED IN RED):

- C. Probe hole drill lengths and/or lookout angles shall be adjusted by the Grouting Consultant at the following locations so that the clearance between any grout hole from the nearest point of the existing DTI or Interceptor in any direction shall be no less than 20 feet. The Contractor shall include the additional drilling effort in pricing the work, and submit the drill hole layout at these locations in the shop drawing submittal. The Owner reserves the right to **increase** the minimum clearance based on actual groundwater water inflow measured and grout intake in the vicinity of these locations. The Contractor shall work with the Owner to make sure that any drilling and grouting operations in the vicinity of these locations shall not pose any damages to the existing utilities.
1. SMRT Crossing of the existing DTI at STA 1+35, approximately.
 2. SMRT Crossing of the existing Interceptor at STA 12+00, approximately.
 3. CCT-O06A-AD Crossing of the existing Interceptor at STA 17+45, approximately.

17. APPENDIX A – TECHNICAL SPECIFICATIONS – Section 31 71 00, REVISE 3.2.A. as follows (CHANGES ARE NOTED IN RED):

- A. Equip and operate TBM with a computerized, fully automated digital systems using a total station or gyro with TACS or VMT **or equivalent** automated guidance system.

18. APPENDIX A – TECHNICAL SPECIFICATIONS – Section 31 55 00.
DELETE Part 3.2.B.5. in its entirety and ADD REVISED Part 3.2.B.5 in its entirety as follows (CHANGES ARE NOTED IN RED):

5. For jet grouting alongside existing brick sewers to be approved by the Owner, the Contractor shall demonstrate by submittal of analysis that its jet grouting operations will not damage the existing sewers due to horizontal jet grouting pressures after installation of the interior lining support specified on the SOE Contract Drawings. Implement supplemental protective measures or remediation plans in addition to the specified interior lining support as determined to be necessary.

Addendum No. 7

Attachment A

APPENDIX A – TECHNICAL SPECIFICATIONS

- **SECTION 01 10 00 - TABLE OF CONTENTS - Add Page 2 (1 page)**

Division 02 – Existing Conditions

- 02 21 14 Marine Surveys
- 02 41 00 Demolition
- 02 73 40 Flow Management
- 02 82 20 Hazardous Materials Abatement

Division 03 – Concrete

- 03 01 30 Concrete Repair and Rehabilitation
- 03 10 00 Concrete Forming and Accessories
- 03 20 00 Concrete Reinforcing
- 03 24 00 Fiber-Reinforced Concrete for PCTL Segments
- 03 25 00 Concrete Joints and Accessories
- 03 30 00 Cast-In-Place Concrete
- 03 34 00 Controlled Low Strength Materials
- 03 34 01 Low Density Cellular Concrete
- 03 35 00 Concrete Finishing
- 03 39 00 Concrete Curing
- 03 41 16 Precast Concrete Planks
- 03 60 00 Grouting

Division 04 – Masonry

- 04 72 00 Cast Stone Masonry
- 04 81 00 Unit Masonry Assemblies

Division 05 – Metals

- 05 12 00 Structural Steel Framing
- 05 21 00 Steel Joist Framing
- 05 31 00 Steel Deck
- 05 50 00 Metal Fabrications
- 05 50 50 Concrete and Masonry Anchors
- 05 52 00 Guardrail and Handrail
- 05 53 00 Stainless Steel Grating
- 05 56 13 Metal Castings for Structure Access
- 05 56 16 Metal Access Hatches
- 05 80 00 Structural Steel Ventilation Stacks

Division 06 – Wood, Plastics & Composites

- 06 10 00 Carpentry
- 06 60 00 FRP Gratings
- 06 64 00 PVC Wall Paneling
- 06 81 13 FRP Structural Shapes

Addendum No. 7

Attachment B

APPENDIX A – TECHNICAL SPECIFICATIONS

- SECTION 01 31 00 – PERMITS AND APPROVALS - Attachment 2.
Add Highway Occupancy Permit Supplement (Supplement 11060503-01 for Time Extension) issued by PennDOT on 10/31/25 (1 page)

Highway Occupancy Permit Supplement

Supplement No.: 11060503- 01

The original permit, bearing number shown on this supplement, was issued to: Allegheny County Sanitary Authority (ALCOSAN) 3300 Preble Avenue Pittsburgh, PA 15233	Original Permit No.: 11060503	Supplement Type: Time Extension
	County: Allegheny	Supplement Issue Date: 10/31/2025
	Issuing District Office: 11-0	Permit Expiration Date: 11/8/2026
	District Contact No.: (412) 429-4879	Application No.: 337078-01
	Municipalities: Pittsburgh City	Account No.: Supplement Fee: \$ 0.00

Commonwealth of Pennsylvania

Under and subject to all the minimum conditions and regulations prescribed by the PA Department of Transportation (see in particular 67 PA Code, Chapter 441 and 459) and on the original permit.

Supplement Description : Time Extension	Supplement No.: 11060503-01
The ORT Project construction work has not begun yet.	

Michael B. Carroll

Secretary of Transportation

Jason Zang, P.E.

District Executive

Addendum No. 7

Attachment C

APPENDIX B – CONTRACT DRAWINGS

- **REVISED O07-CI-702 (Sheet 582 of 770) (1 page)**
Addendum No. 7

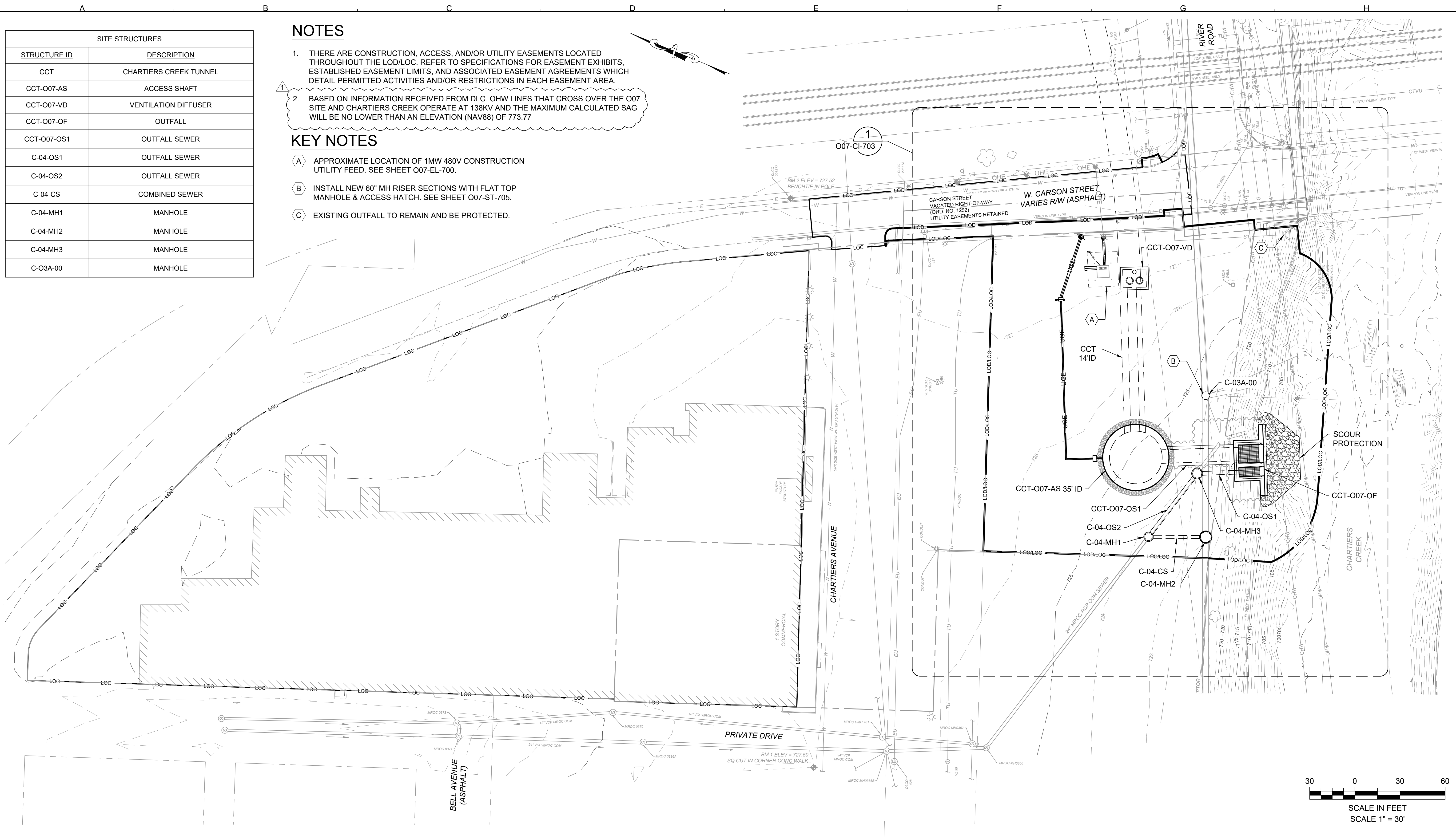
SITE STRUCTURES	
STRUCTURE ID	DESCRIPTION
CCT	CHARTIERS CREEK TUNNEL
CCT-007-AS	ACCESS SHAFT
CCT-007-VD	VENTILATION DIFFUSER
CCT-007-OF	OUTFALL
CCT-007-OS1	OUTFALL SEWER
C-04-OS1	OUTFALL SEWER
C-04-OS2	OUTFALL SEWER
C-04-CS	COMBINED SEWER
C-04-MH1	MANHOLE
C-04-MH2	MANHOLE
C-04-MH3	MANHOLE
C-O3A-00	MANHOLE

NOTES

1. THERE ARE CONSTRUCTION, ACCESS, AND/OR UTILITY EASEMENTS LOCATED THROUGHOUT THE LOD/LOC. REFER TO SPECIFICATIONS FOR EASEMENT EXHIBITS, ESTABLISHED EASEMENT LIMITS, AND ASSOCIATED EASEMENT AGREEMENTS WHICH DETAIL PERMITTED ACTIVITIES AND/OR RESTRICTIONS IN EACH EASEMENT AREA.
2. BASED ON INFORMATION RECEIVED FROM DCL, OHW LINES THAT CROSS OVER THE 007 SITE AND CHARTIERS CREEK OPERATE AT 138KV AND THE MAXIMUM CALCULATED SAG WILL BE NO LOWER THAN AN ELEVATION (NAV88) OF 773.77

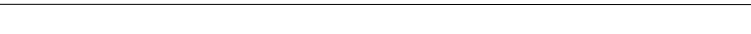
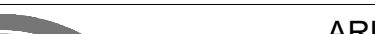
KEY NOTES

- | | |
|---|---|
| A | APPROXIMATE LOCATION OF 1MW 480V CONSTRUCTION UTILITY FEED. SEE SHEET 007-EL-700. |
| B | INSTALL NEW 60" MH RISER SECTIONS WITH FLAT TOP MANHOLE & ACCESS HATCH. SEE SHEET 007-ST-705. |
| C | EXISTING OUTFALL TO REMAIN AND BE PROTECTED. |



30 0 30 60

SCALE IN FEET
SCALE 1" = 30'

Designed by:	<table border="1"> <thead> <tr> <th>REV No.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPV</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>11/21/25</td> <td>REVISION FOR ADDENDUM 7</td> <td>DMM</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				REV No.	DATE	DESCRIPTION	APPV	1	11/21/25	REVISION FOR ADDENDUM 7	DMM																	 Two Allegheny Center Nova Tower 2, Suite 1301 Pittsburgh, PA 15212 (412) 497 - 2900	 Pennsylvania One Call System Serial Number FINAL DESIGN TICKET # 20250040203		 ARLETTA SCOTT WILLIAMS EXECUTIVE DIRECTOR, ALCOSAN 3300 PREBLE AVE. PITTSBURGH, PA 15233 (412) 766 - 4810 www.alcosan.org	ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN) OHIO RIVER TUNNEL (ORT) O07-CI-702 PROPOSED SITE PLAN DURING CONSTRUCTION	Contract: 1797 File: O07-CI-702.dwg Date: 11/21/2025 Sheet: 582 OF 770
REV No.	DATE	DESCRIPTION	APPV																															
1	11/21/25	REVISION FOR ADDENDUM 7	DMM																															
Drawn by:	JRL																																	
Checked by:	MJN																																	
	DLM																																	

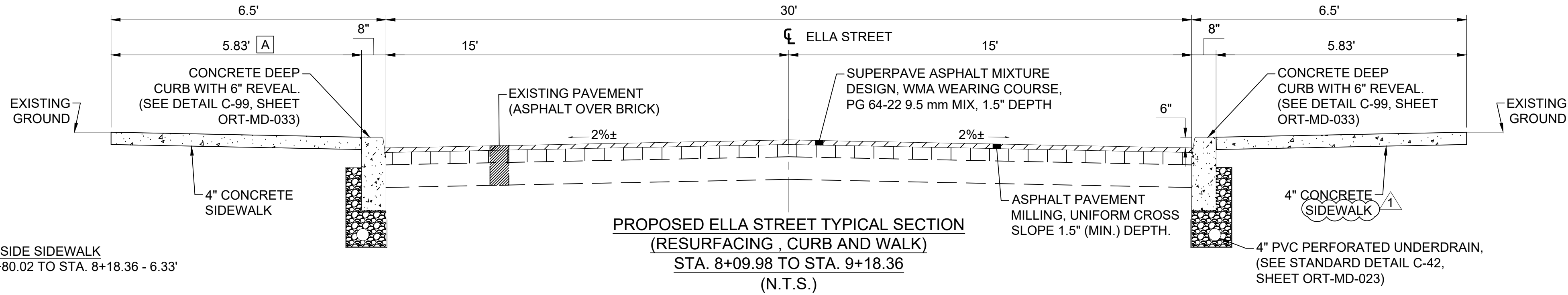
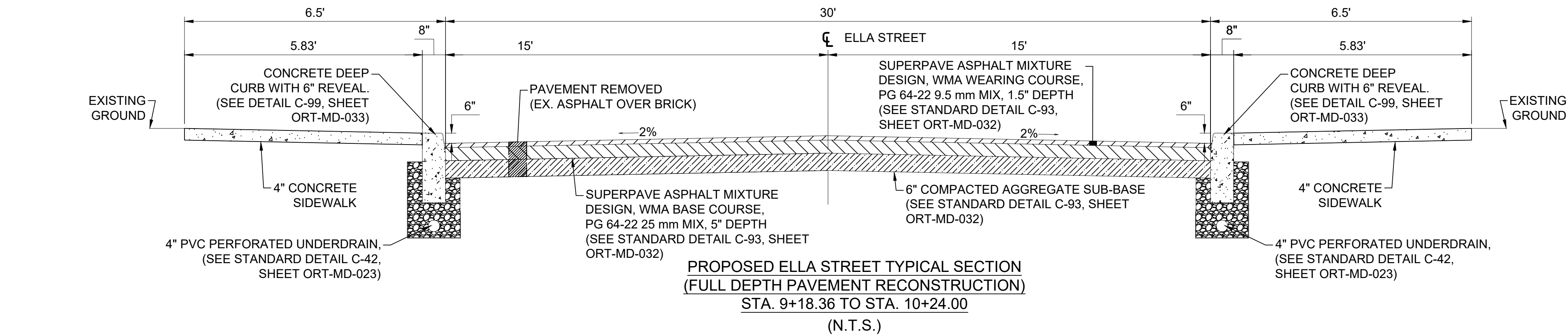
Addendum No. 7

Attachment D

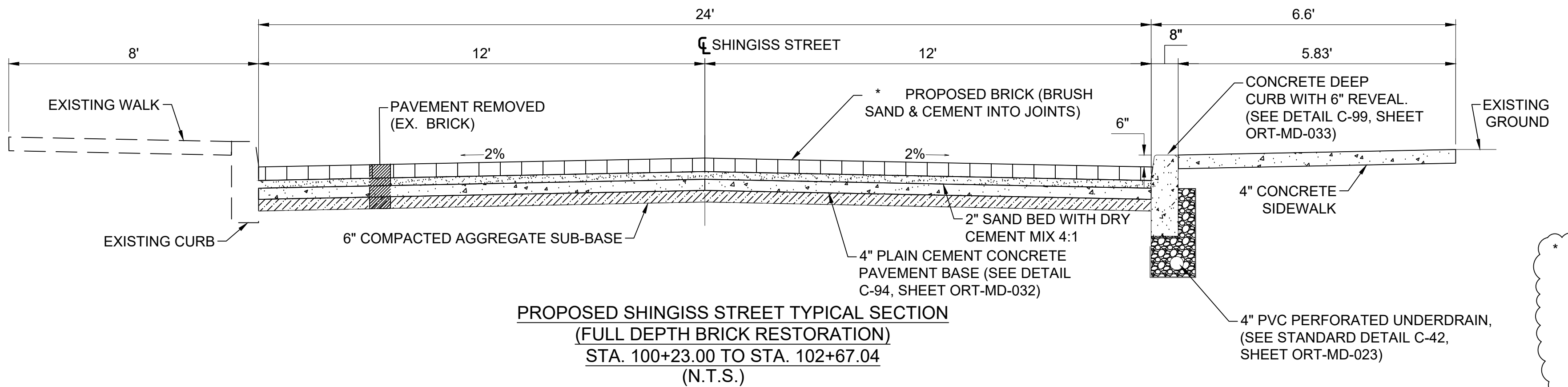
APPENDIX B – CONTRACT DRAWINGS

- **Revised O06A-CI-807 (Sheet 616 of 770) (1 page)**
- **Revised O06A-CI-808 (Sheet 617 of 770) (1 page)**
- **Revised ORT-MD-032 (Sheet 679 of 770) (1 page)**

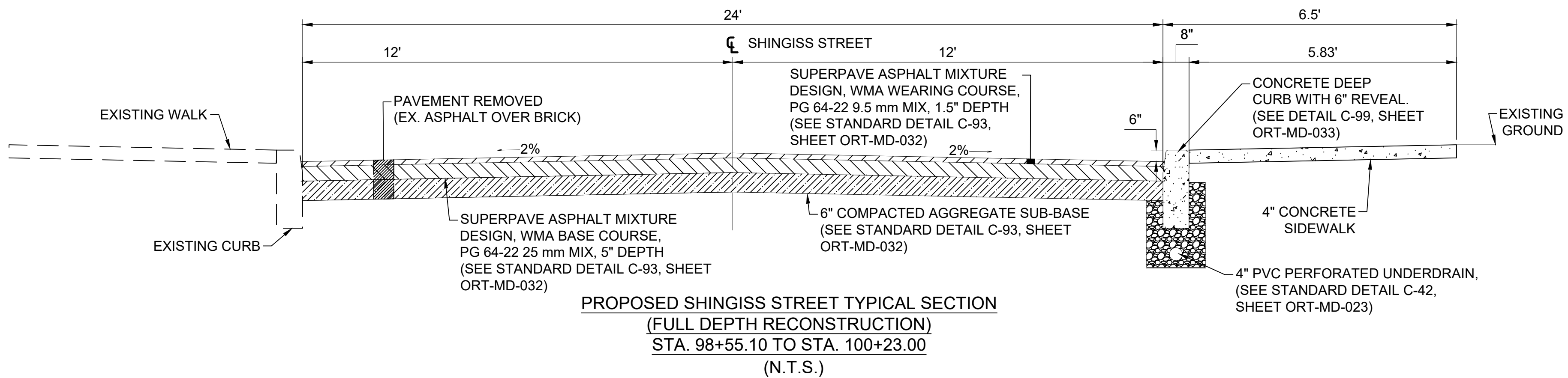
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PLOT DATE: 11/18/2025 9:48:11 AM
LAST SAVED BY: BOW101681



A NORTHSIDE SIDEWALK
STA. 8+80.02 TO STA. 8+18.36 - 6.33'



* SOLID, UNBROKEN, UNCHIPPED, EXISTING YELLOW BRICKS FROM SHINGISS STREET MAY BE REUSED. SOLID, UNBROKEN, UNCHIPPED RED BRICKS FROM SHINGISS STREET MAY BE REUSED IN SHINGISS STREET BUT MUST BE RANDOMLY INTERSPERSED WITH THE YELLOW BRICK SO THAT YELLOW IS THE PREDOMINANT COLOR ONCE RESTORED. DISCARD BROKEN, CHIPPED, DAMAGED BRICKS APPROPRIATELY INDEPENDENT OF COLOR. NEW BRICKS SHALL BE YELLOW AND SHALL MATCH THE EXISTING YELLOW BRICK IN TYPE/COLOR/DIMENSIONS. NEW BRICKS SHALL BE PROVIDED IN A QUANTITY, WHEN ADDED TO THE BRICKS TO BE REUSED FROM SHINGISS STREET, SUFFICIENT FOR FULL DEPTH BRICK RESTORATION.



Designed by:	TMA	REVISION	DESCRIPTION	APPV
Drawn by:	TMA	1	11/21/25	MS
Checked by:	DLM			

M

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MACDONALD

Two Allegheny Center
Nova Tower 2, Suite 1301
Pittsburgh, PA 15212
(412) 497 - 2900

811

Dial 8-1-1 or 1-800-242-1776 not less than 3 business days nor more than 10 business days prior to the start of excavation.

Pennsylvania One Call System Serial Number
FINAL DESIGN TICKET # 20250040204

REGISTERED
PROFESSIONAL
ENGINEER

STEPHEN B. COLE

PA 003668-R

alcosan

allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCO SAN

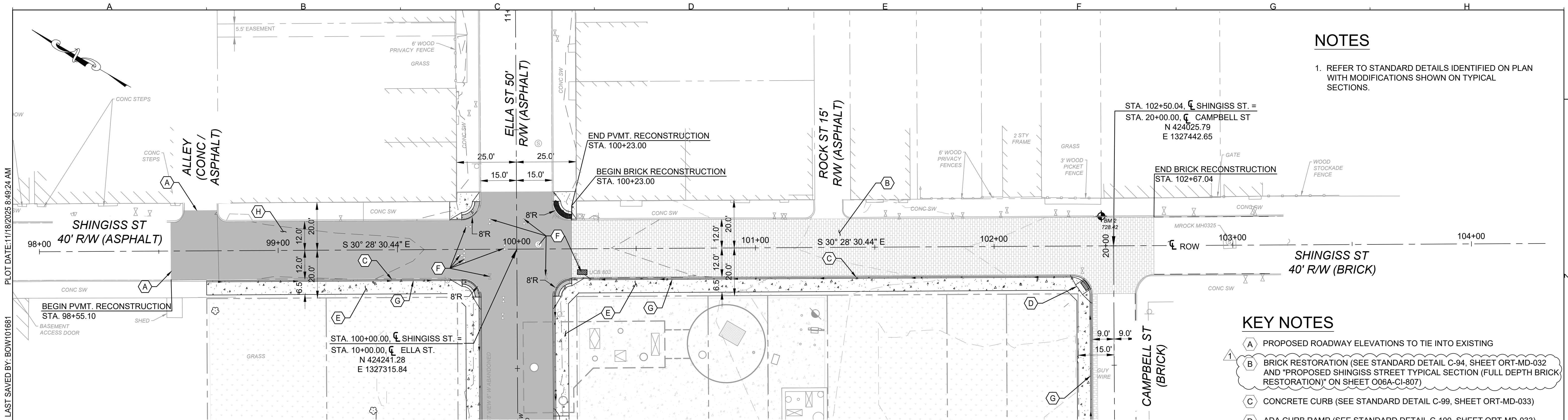
3300 PREBLE AVE.
PITTSBURGH, PA 15233
(412) 766 - 4810

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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCO SAN)
OHIO RIVER TUNNEL (ORT)

O06A-CI-807
ROADWAY TYPICAL SECTIONS

Contract:	1797
File:	O06A-CI-807.dwg
Date:	11/21/2025
Sheet:	616 OF 770



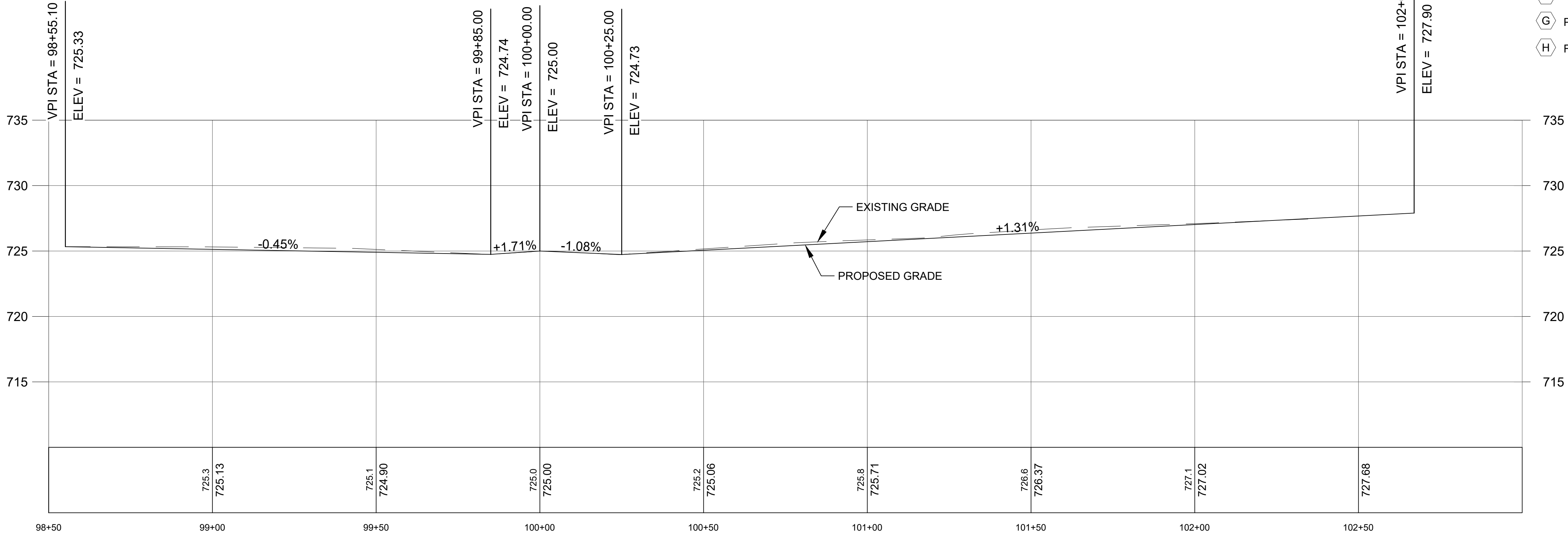
NOTES

1. REFER TO STANDARD DETAILS IDENTIFIED ON PLAN WITH MODIFICATIONS SHOWN ON TYPICAL SECTIONS.

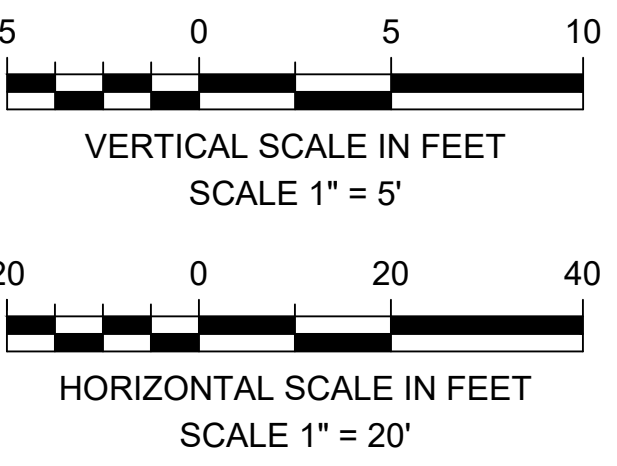
KEY NOTES

- (A) PROPOSED ROADWAY ELEVATIONS TO TIE INTO EXISTING
- (B) BRICK RESTORATION (SEE STANDARD DETAIL C-94, SHEET ORT-MD-032 AND "PROPOSED SHINGISS STREET TYPICAL SECTION (FULL DEPTH BRICK RESTORATION)" ON SHEET O06A-CI-807)
- (C) CONCRETE CURB (SEE STANDARD DETAIL C-99, SHEET ORT-MD-033)
- (D) ADA CURB RAMP (SEE STANDARD DETAIL C-100, SHEET ORT-MD-033)
- (E) CONCRETE SIDEWALK (SEE STANDARD DETAIL C-98, SHEET ORT-MD-032)
- (F) ADJUST CASTING TO GRADE
- (G) PROPOSED 4" UNDERDRAIN
- (H) FULL DEPTH ASPHALT (SEE STANDARD DETAIL C-93, SHEET ORT-MD-032)

SHINGISS STREET PLAN



SHINGISS STREET PROFILE



Designed by:	TMA	REVISION	DESCRIPTION	APPV	MS
Drawn by:	TMA	1	11/21/25	REVISION FOR ADDENDUM 7	
Checked by:	DLM				

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Pittsburgh, PA 15212
(412) 497 - 2900

811

Dial 8-1-1 or 1-800-242-1776 not less than 3 business days nor more than 10 business days prior to the start of excavation.

Pennsylvania One Call System Serial Number
FINAL DESIGN TICKET # 20250040203

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
PITTSBURGH, PA 15233
(412) 766 - 4810

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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

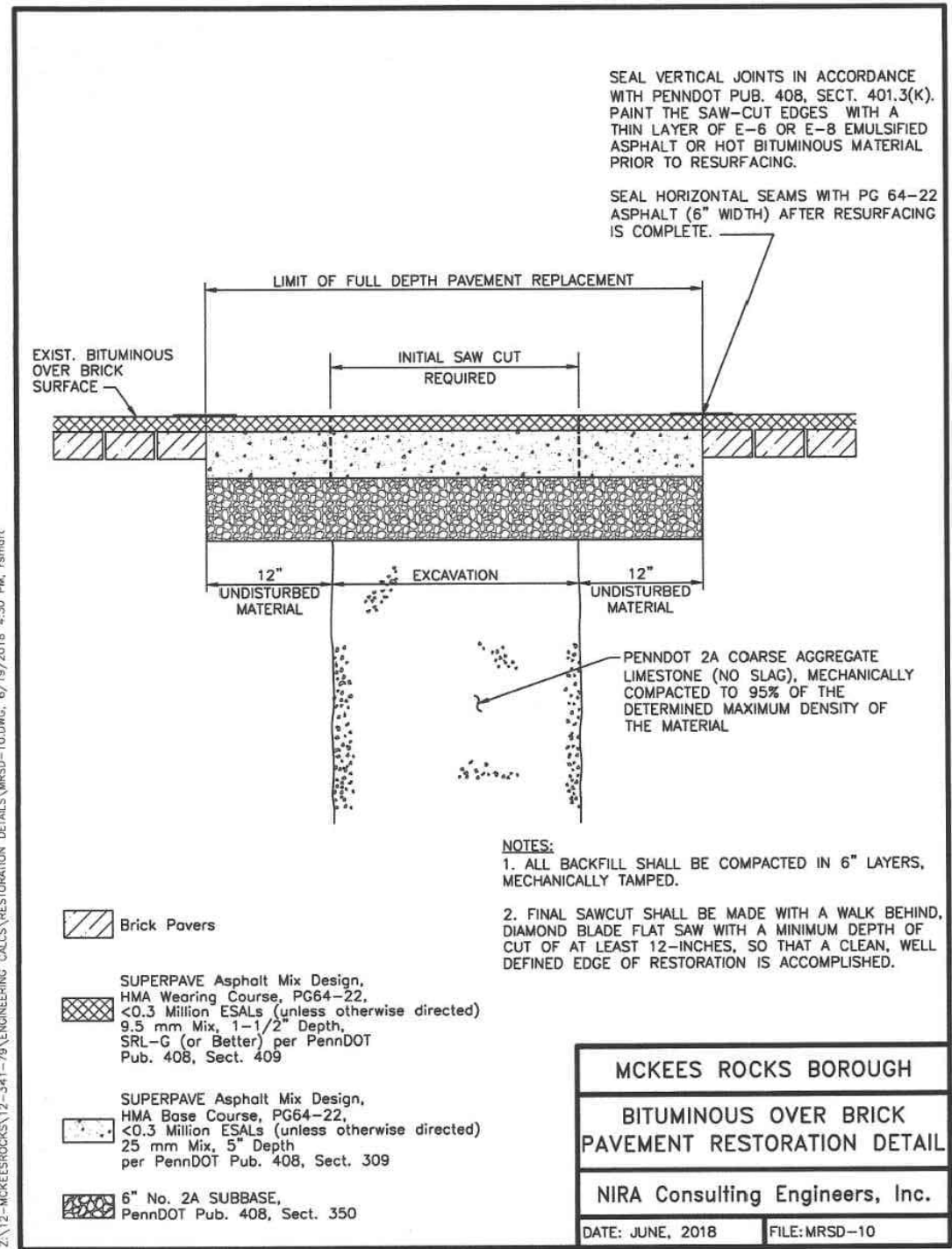
O06A-CI-808
SHINGISS STREET PLAN AND PROFILE

Contract: 1797

File: O06A-CI-808.dwg

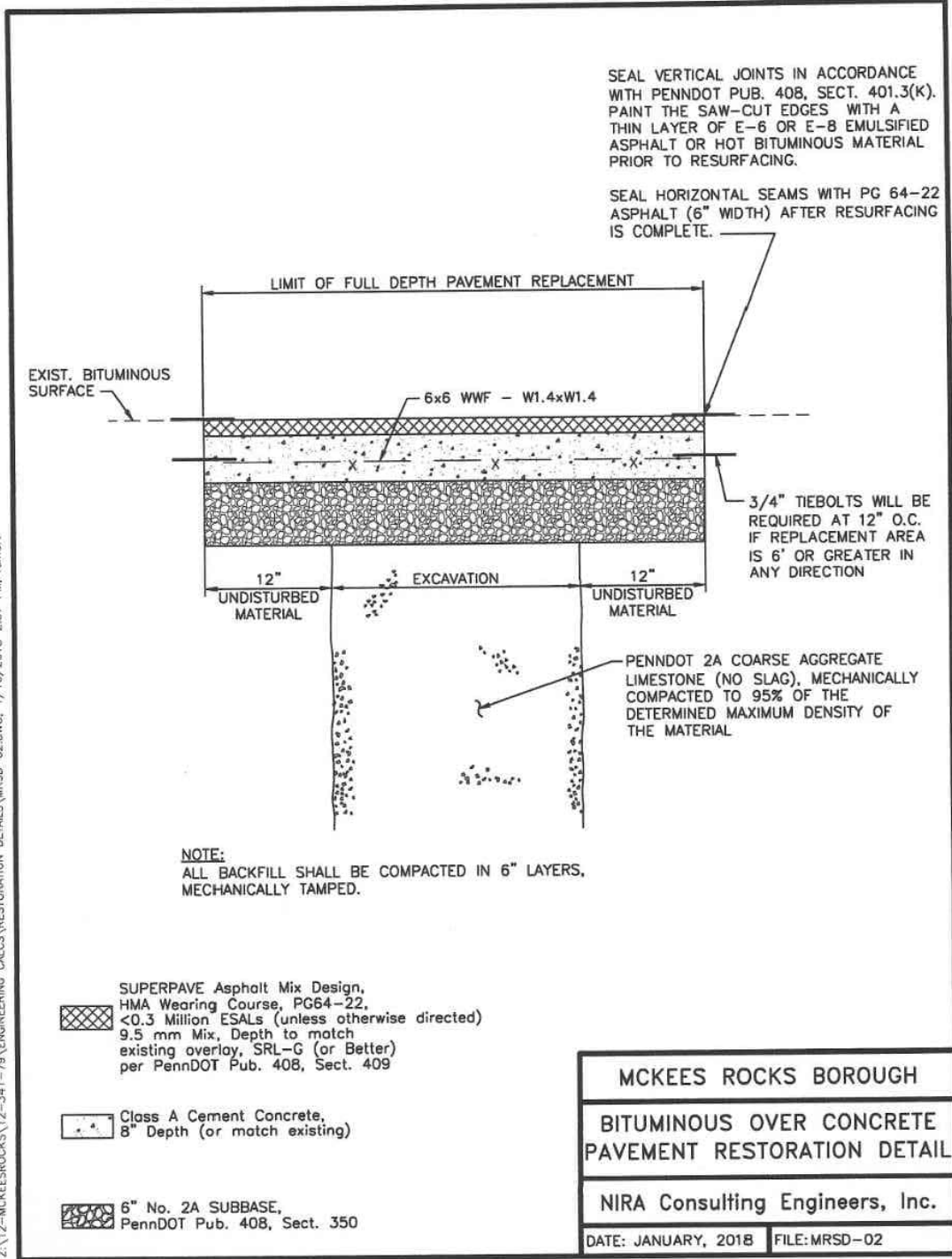
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Sheet: 617 OF 770



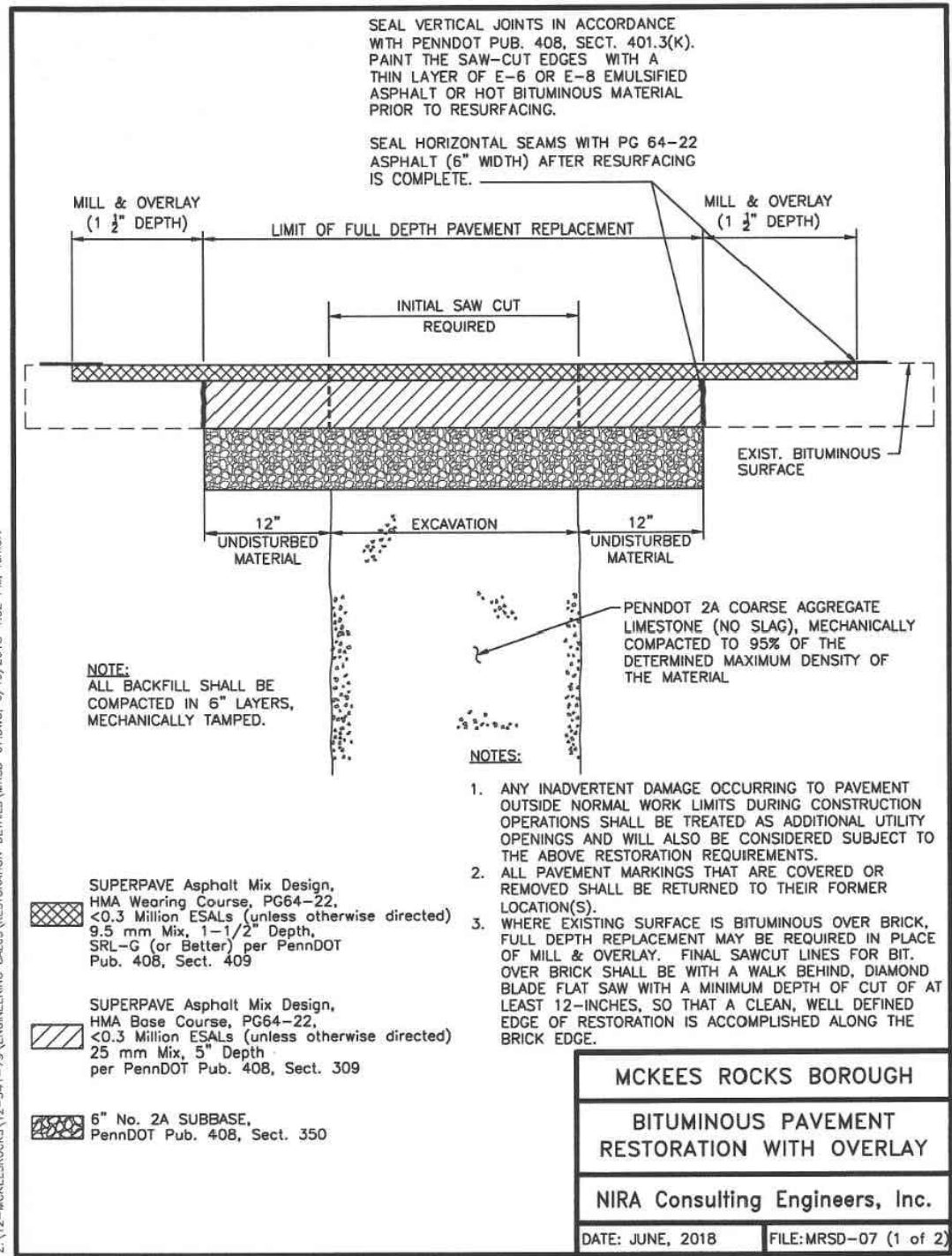
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N.T.S.

C-89



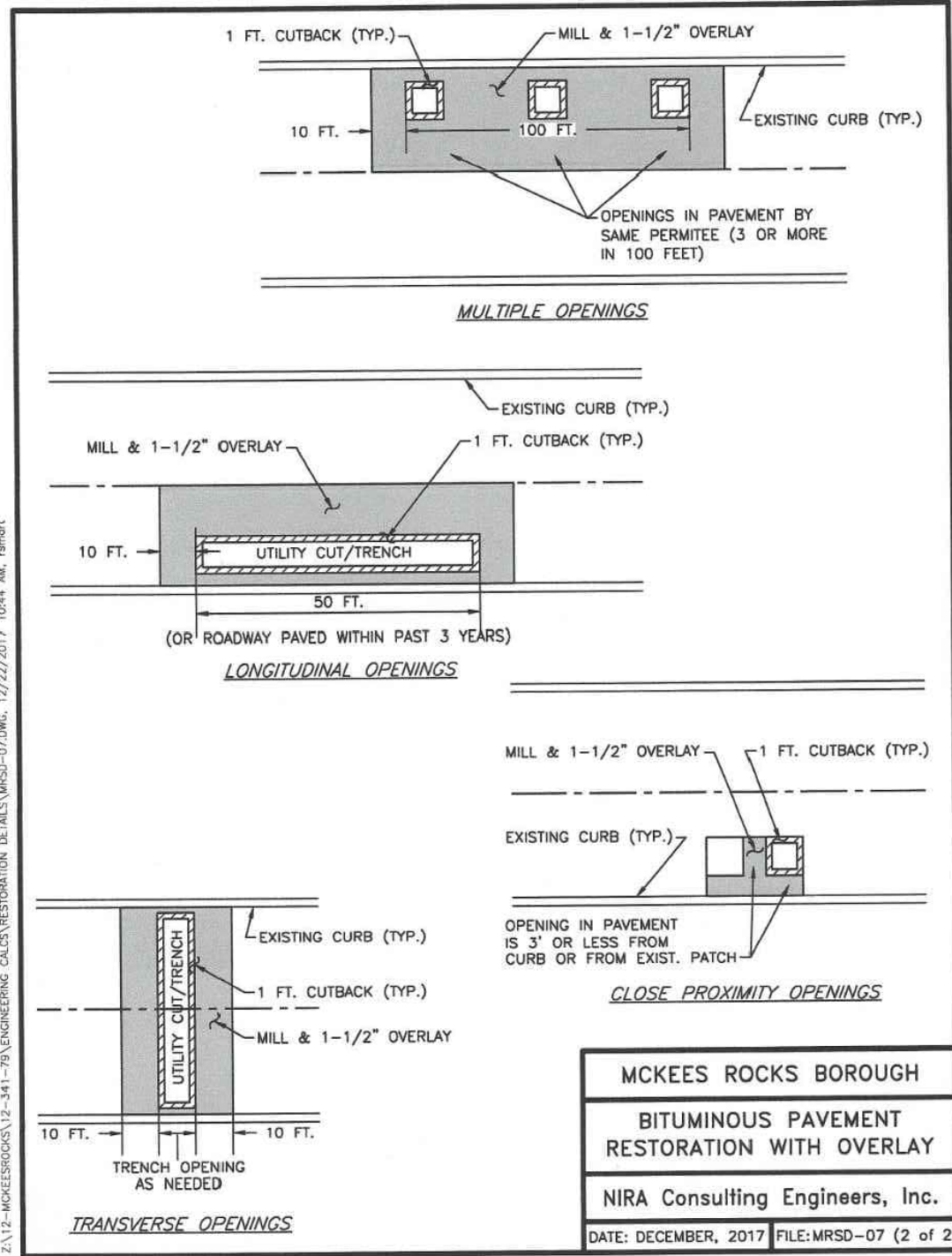
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C-90



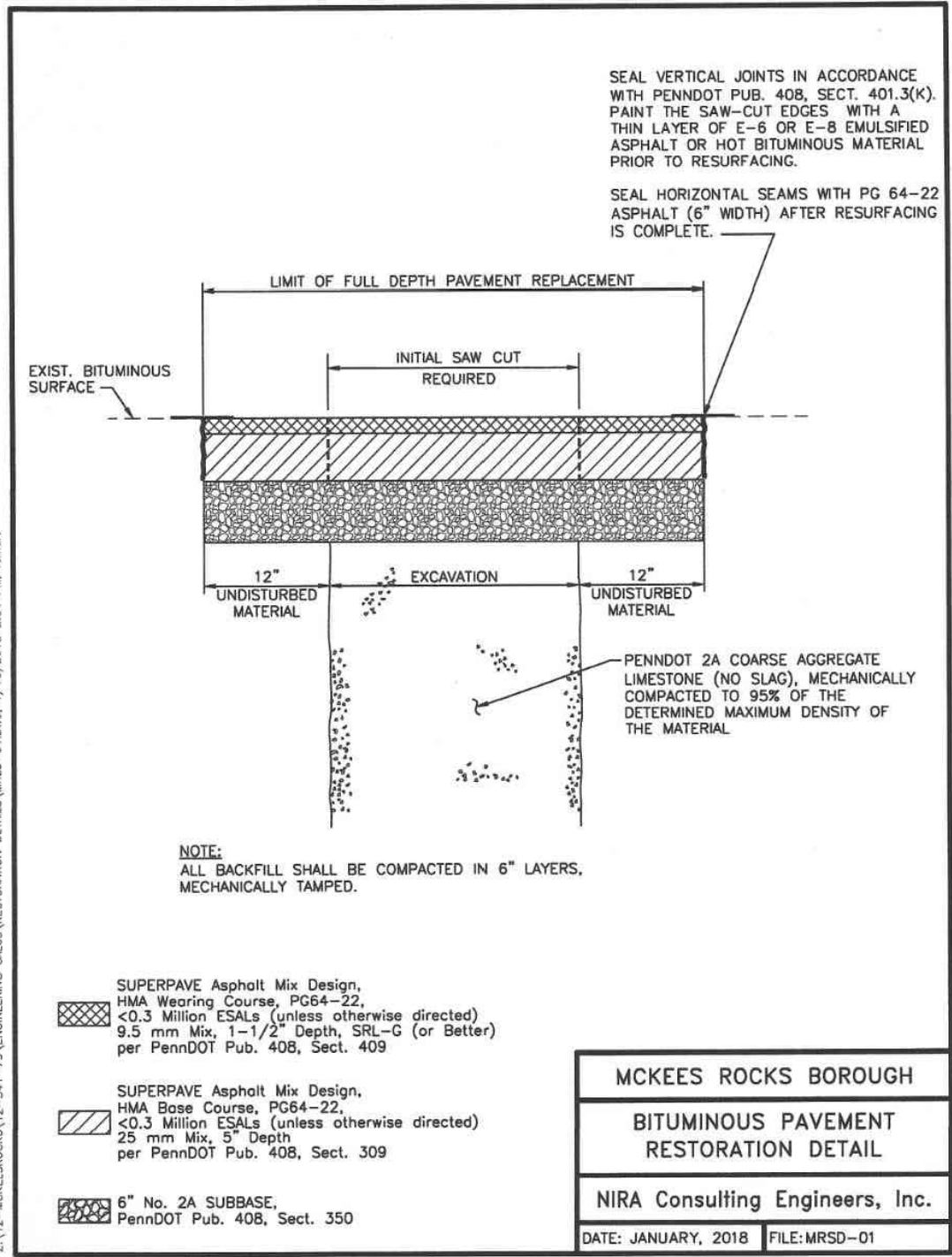
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C-91



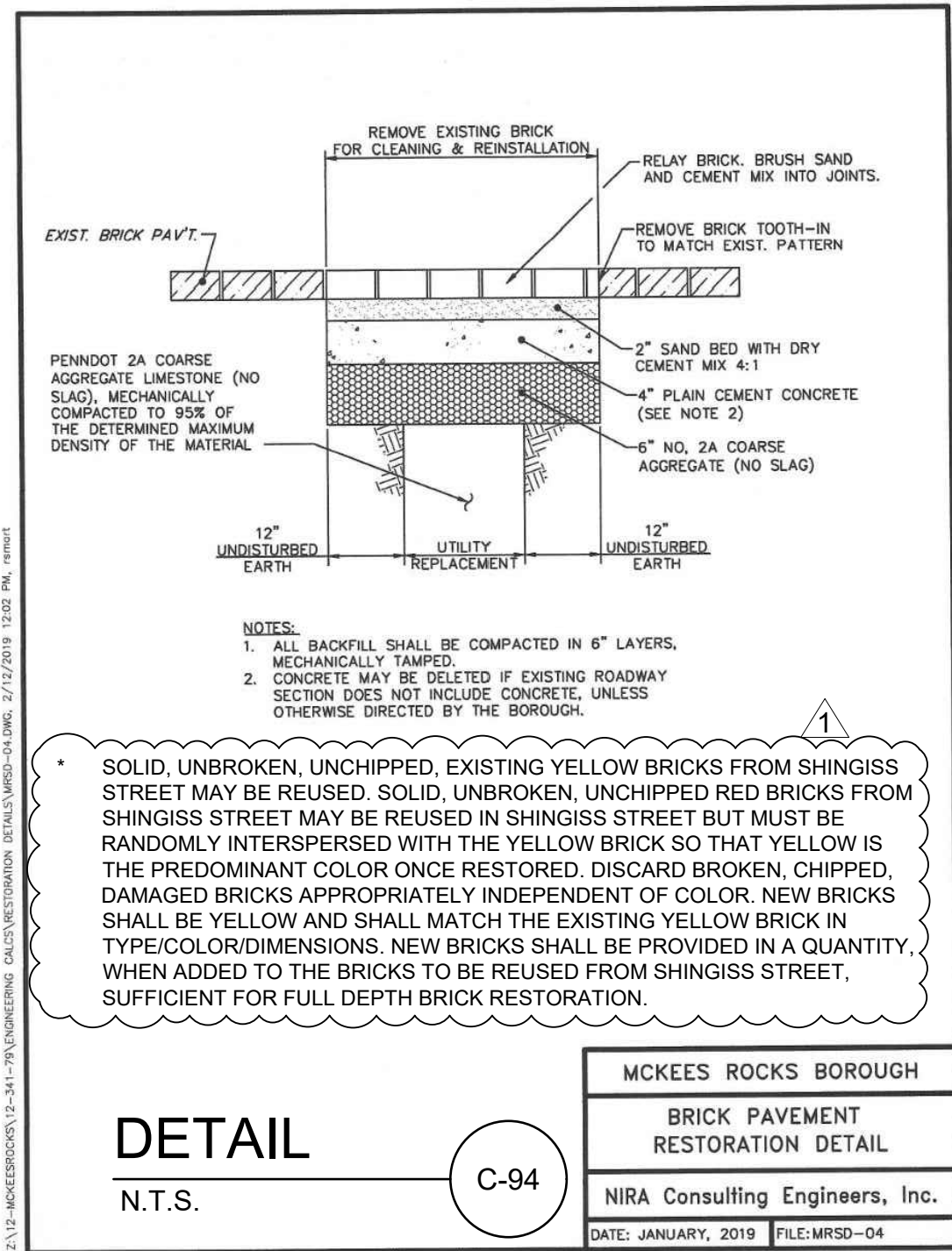
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C-92



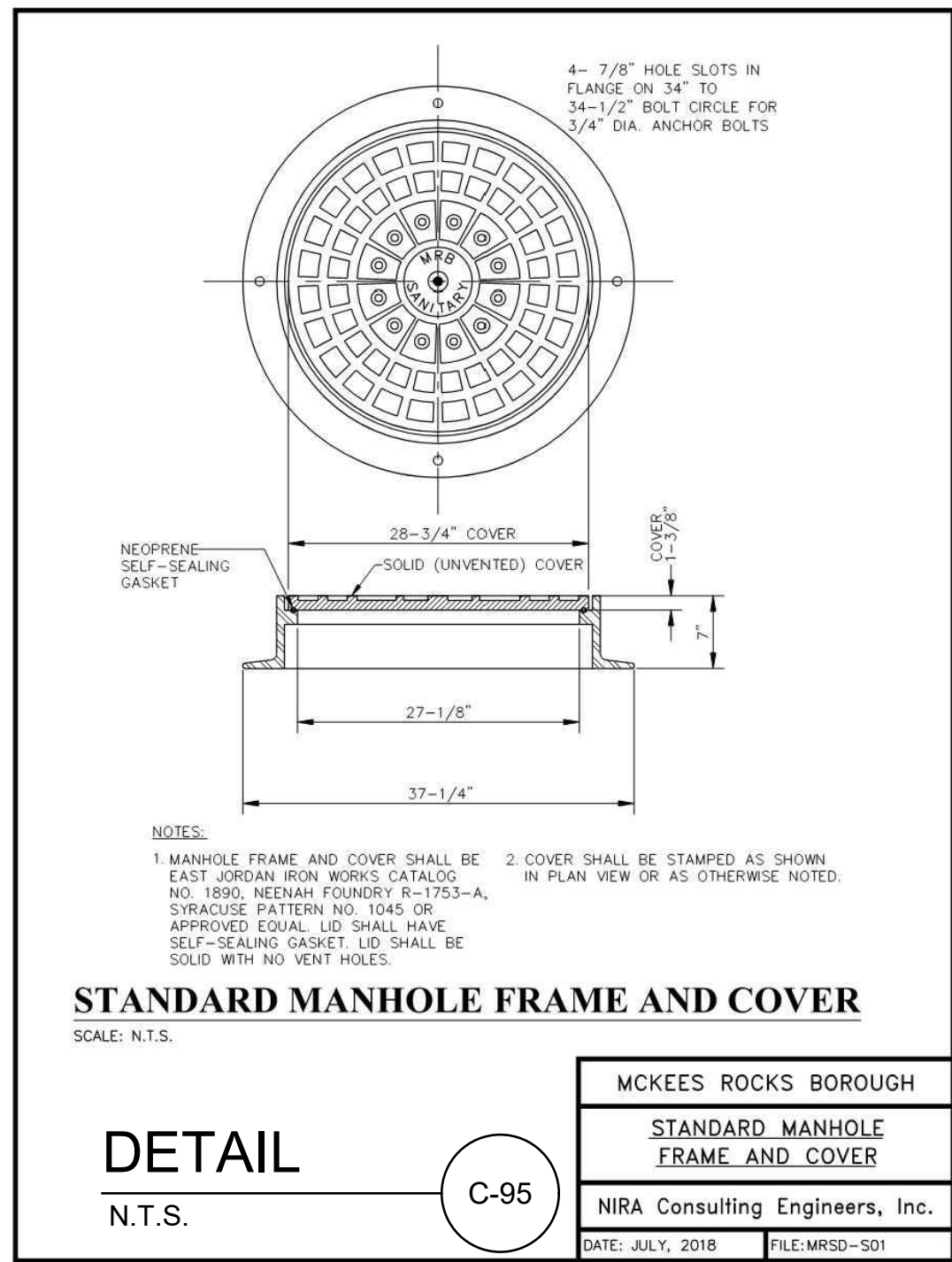
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C-93



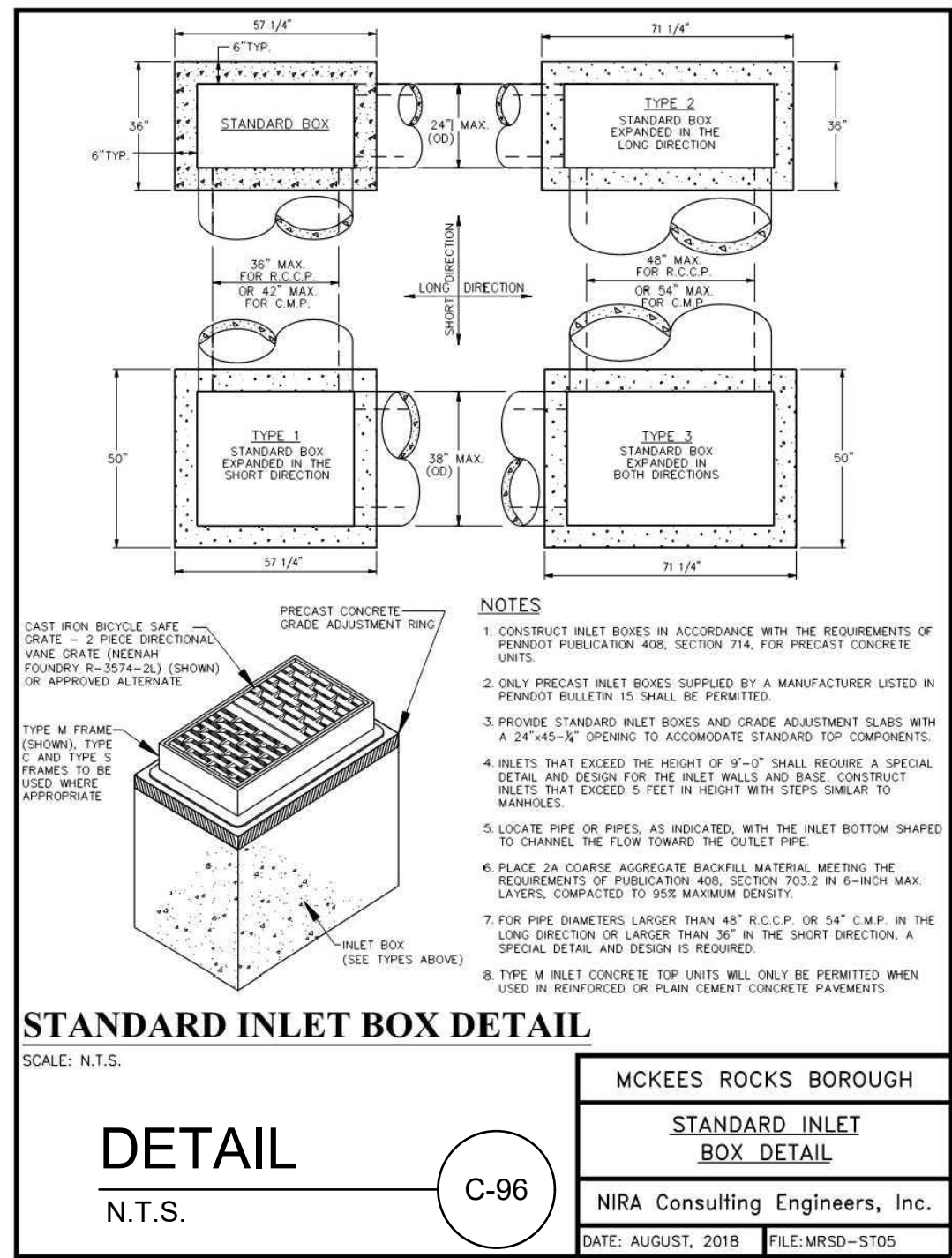
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C-94



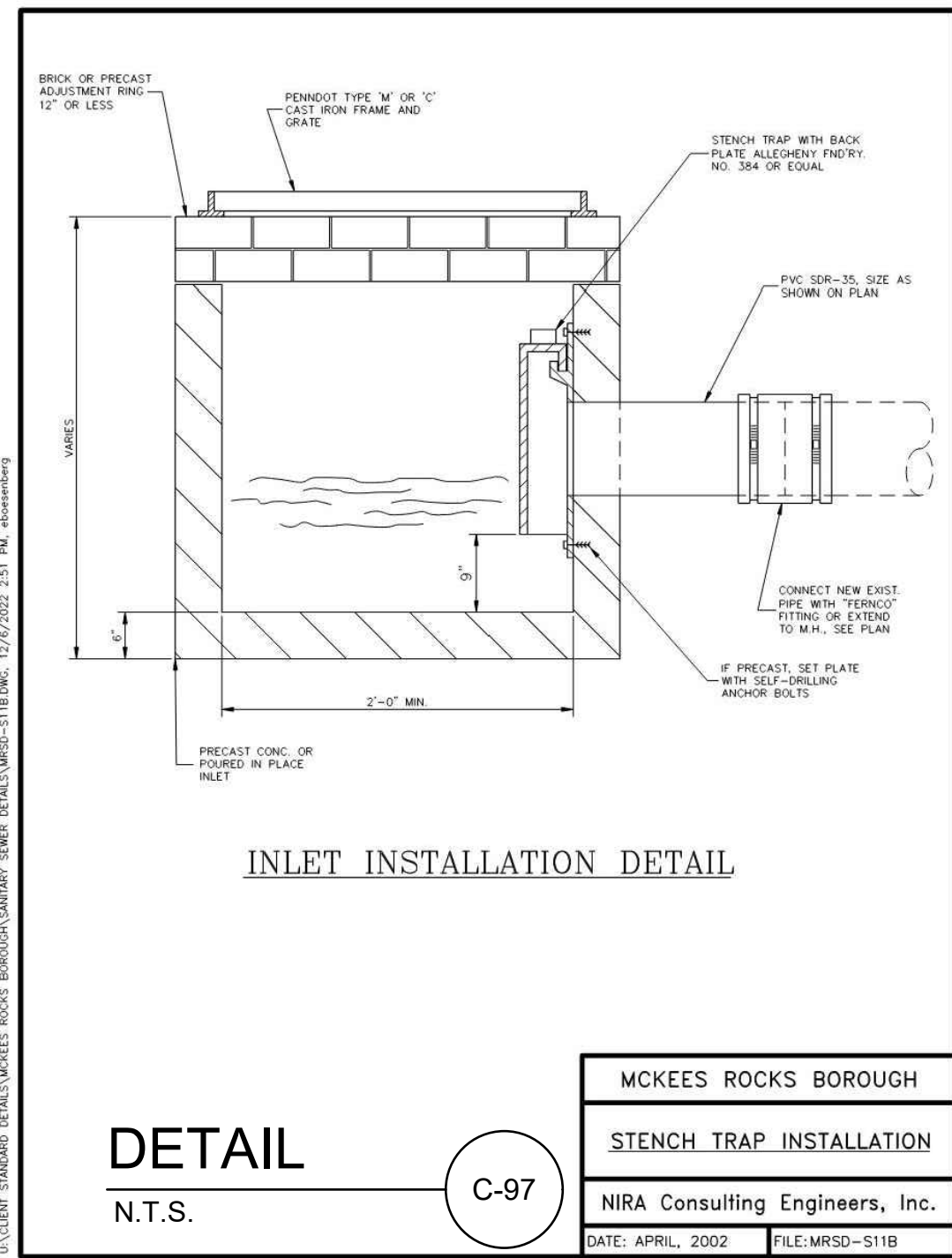
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C-95



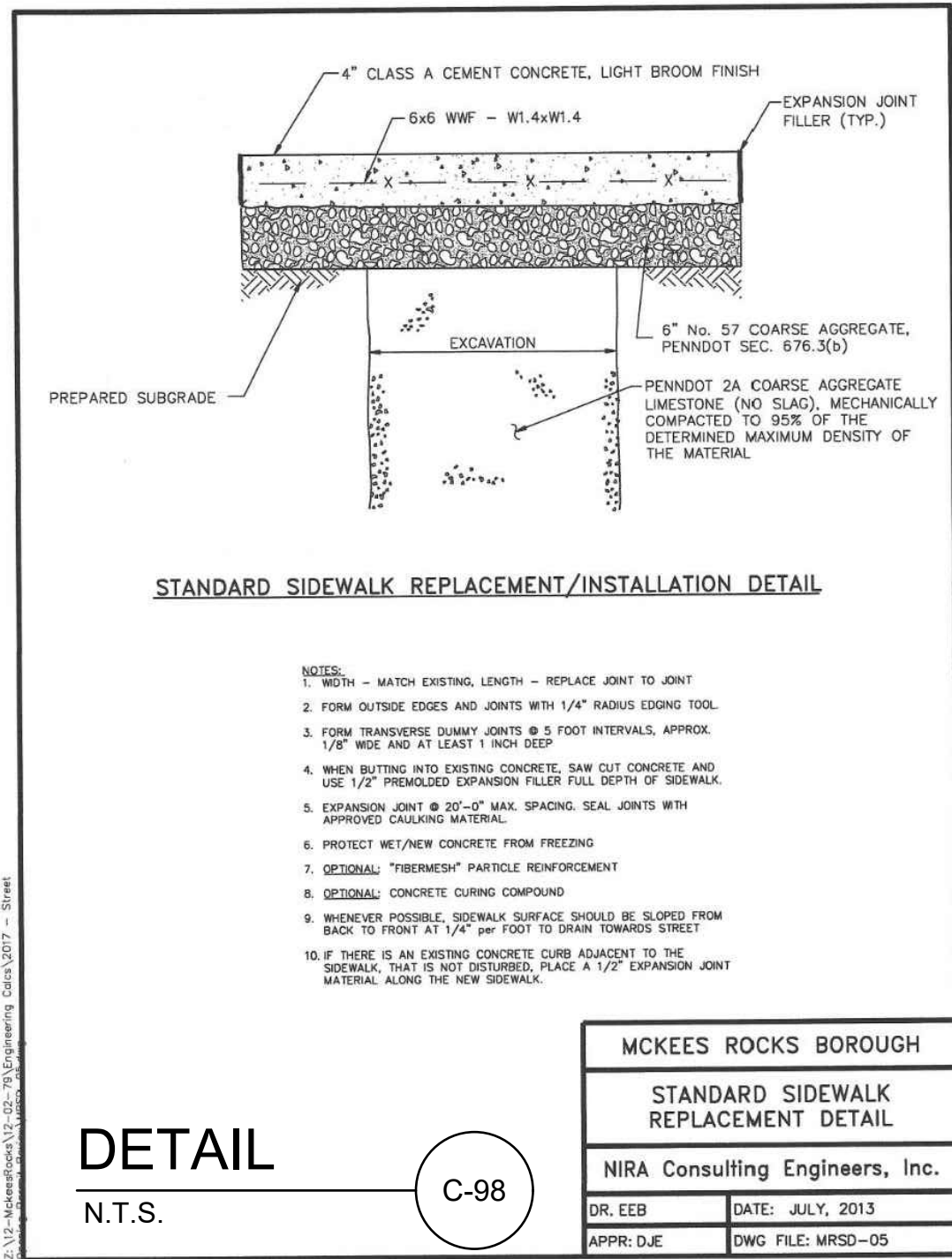
DETAIL
N.T.S.

C-96



DETAIL
N.T.S.

C-97



DETAIL
N.T.S.

C-98

Designed by:	REVISION			APPV
	REV No.	DATE	DESCRIPTION	
JRL	1	11/21/25	REVISION FOR ADDENDUM 7	MS
Drawn by:				
JMS				
Checked by:				
DLM				

M

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MACDONALD

Two Allegheny Center
Nova Tower 2, Suite 1301
Pittsburgh, PA 15212
(412) 497 - 2900

REGISTERED
PROFESSIONAL
ENGINEER
STEPHEN B. FOLEY
No. 10366-R

alcosan
allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
PITTSBURGH, PA 15233
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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

ORT-MD-032
MCKEES ROCKS DETAILS
SHEET 1 OF 2

Contract: 1797

File: ORT-MD-032.dwg

Date: 11/21/2025

Sheet: 679 OF 770

Addendum No. 7

Attachment E

APPENDIX E – SUPPLEMENTAL INFORMATION (FOR REFERENCE ONLY)

SECTION 9

- **Add Section 9 – Line Information Summary from Duquesne Light Company (2 pages)**

Addendum No. 7

Attachment E

APPENDIX E – SUPPLEMENTAL INFORMATION (FOR REFERENCE ONLY)

SECTION 9

Line Information Summary from Duquesne Light Company

Site:	Line Location:	Line Type:	Voltage:	Additional Notes:
O41	North side of North Point Drive	Open Wire	4kV	The "above ground clearances" should meet or exceed the below DLC and/or NESC Code values: •DLC 23kV or 4kV – 18.5’ •DLC < 600V – 16.5’ •DLC Neutral & any voltage Aerial Cable – 15.5’ •Telecom – 15.5’
O41	South side of North Point Drive from intersection of Belmont Street and North Point Drive heading east	Open Wire	23kV	
O41	East side of Belmont Street from intersection of Belmont Street and North Point Drive heading south; crossing west across Belmont Street to the 1MW transformer primary	Open Wire	23kV	
A48	From pole at northeast corner of intersection of Merchant Street and Martindale Street heading west on the north side of Martindale Street	Open Wire	<600V	
A48	From pole at northeast corner of intersection of Merchant Street and Martindale Street heading east on the north side of Martindale Street to the transition pole (OH to UG transition)	Open Wire	23kV	
A58	From intersection of Progress Street and Madison Avenue along the east side of Madison; turning west and heading across Madison Avenue along the north side of East Lacock Street	Open Wire	23kV	
A58	Running from the east along the north side of River Avenue to the western-most transition pole (OH to UG transition) for ductbank leading to the line side of the DLC switch	Aerial Cable	23kV	
A58	Running on the north side of River Avenue between the western-most transition pole (OH to UG transition) for ductbank leading to the line side of the DLC switch and the next pole in line (located on the northeast corner of the intersection of River Avenue and Voeghtly Street)	Open Wire	23kV	
A58	Running on the north side of River Avenue from the pole located on the northeast corner of the intersection of River Avenue and Voeghtly Street, crossing over Voeghtly Street and continuing on to the west	Aerial Cable	23kV	
A58	Running along the south side of River Avenue	Aerial Cable	23kV	
AS1	From intersection of Chestnut Street and South Canal Street, heading west along the south side of South Canal Street to pole 118/2 at the southeast corner of South Canal Street and Warfield Street	Open Wire	23kV	
AS1	From pole located at southeast corner of intersection of South Canal Street and Chesbro Street heading south on the east side of Chesbro Street to the pole at the northeast corner of Chesbro Street and Carpenter Way	Open Wire	23kV	
AS1	From pole located at southwest corner of intersection of South Canal Street and Chesbro Street heading south on the west side of Chesbro Street to the pole at the northwest corner of Chesbro Street and Carpenter Way	Open Wire	23kV	
AS1	From pole located at the northeast corner of Chesbro Street and Carpenter Way to the existing multi-story brick industrial building	Open Wire	<600V	
AS1	From pole located at the northwest corner of Chesbro Street and Carpenter Way to the pole located at the southwest corner of the multi-story brick industrial building	Open Wire	23kV	
AS1	From pole 7296 located adjacent to the southwest corner of the intersection of Chestnut Street and Progress Street, running northwest across the street to a pole adjacent to the intersection of Bolin Way and Progress Street, running west to a pole at the northwest of the intersection of Progress Street and Chesbro Street, the heading south across Progress Street to a pole at the southwest corner of Progress Street and Chesbro Street	See Notes		No DLC power cabling; Telecommunications only; The "above ground clearances" should meet or exceed the below DLC and/or NESC Code values: •Telecom – 15.5’
AS1	From pole 20669 located adjacent to the southwest corner of the intersection of Chestnut Street and Progress Street, running west along the south side of Progress Street through pole 41686 (to the west of the intersection of Warfield Street and Progress Street)	Open Wire	23kV	The "above ground clearances" should meet or exceed the below DLC and/or NESC Code values: •DLC 23kV or 4kV – 18.5’ •DLC < 600V – 16.5’ •DLC Neutral & any voltage Aerial Cable – 15.5’ •Telecom – 15.5’
AS1	From River Road along the east side of Warfield Street up to pole 41688, then west on the south side of Progress Street to pole #475747, then north across Progress Street to pole #475746	Open Wire	23kV	
AS1	From DLC pole #475746 to pole #475745 and onto the proposed DLC TBM feed pole	Aerial Cable	23kV	
O14	From pole 182668 (to the west side of Musk Way) heading north to the pole located at the southwest corner of the intersection of Musk Way and Riverside Street	Open Wire	23kV	
O14	From transition pole (UG to OH) on the south side of Riverside Street to existing DLC pole to the north of Hunt Glass	Open Wire	23kV	
O14	From transition pole (UG to OH) on the north side of the project site to the poles feeding the AMO site, and from the poles feeding the AMO site back to the existing DLC pole at the southeast side of the barge company access tunnel	Open Wire	23kV	
O07	From intersection of Locust Street and West Carson Street, running south on the east side of West Carson Street to a pole northeast of the intersection of West Carson Street and River Road, running west across West Carson Street to a transition pole (OH to UG) to feed the 1MW transformer primary	Open Wire	23kV	
O06A	From pole #122/4 located on the north side of Ella Street heading west towards the intersection of Ella Street and Olivia Street	Open Wire	4kV	
O06A	From pole #122/5 at the northern corner of Ella Street and Shingiss Street heading north on the east side of Shingiss Street	Aerial Cable	23kV	
O06A	From the intersection of Ella Street and Gardner Street on the north side of Ella Street to pole #122/5 at the northern corner of Ella Street and Shingiss Street, then heading south on the east side of Shingiss Street to pole #169490 located on the northern corner of the intersection of Shingiss Street and Campbell Street	Open Wire (4kV) and Aerial Cable (23kV)		
O06A	From pole #169490 at the northern corner of the intersection of Shingiss Street and Campbell Street heading west on the north side of Campbell Street	Open Wire	4kV	
O06A	From pole #169490 at the northern corner of the intersection of Shingiss Street and Campbell Street heading west across Shingiss Street to the transition pole (OH to UG) that feeds the ductbank running to the line side of the DLC switch	Aerial Cable	23kV	
O06A	From pole #189/8 north of the northern corner of the intersection of Shingiss Street and Campbell Street heading west across Shingiss Street to the transition pole (OH to UG) that feeds the ductbank running to the line side of the DLC switch	Aerial Cable	23kV	
Revised 11/19/2025				

Addendum No. 7

Attachment F

APPENDIX A – TECHNICAL SPECIFICATIONS

- **SECTION 01 45 23 – PRE-CONSTRUCTION AND POST-CONSTRUCTION
INSPECTIONS - REVISED ATTACHMENT 2**

ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
O27	Existing O27 Combined Sewer Flow Regulator	ALCOSAN	Concrete structure with hydro- mechanical equipment	Partially below normal river pool. Internal flap gate. Gate condition unknown.	Manhole(s) at grade	Structure inlet(s)	Structure outlet(s)	30 feet x 25 feet x 20 feet (WxLxD)
O27	Existing O27 Combined Sewer Outfall	ALCOSAN	144-inch dia. brick sewer	Fully below normal river pool. No flap gate.	None	Manhole, ALCOSAN MH 044B002	Outfall, ALCOSAN OF 044BO27	350 feet (L)
O27	Existing Sanitary Sewer	ALCOSAN	144-inch dia. unk sewer	--	--	Manhole, ALCOSAN MH ADC044B027B	Manhole, ALCOSAN MH ADC044B027C	16 feet (L)
O27	Existing Sanitary Sewer	Unknown	15-inch dia. PVC sewer	--	--	Manhole, Unknown MH 075P001	Junction, Unknown JCT 044B001	266 feet (L)
O41	Existing O41 Combined Sewer Flow Regulator	ALCOSAN	Concrete structure with hydro- mechanical equipment	Partially below normal river pool. Internal flap gate. Gate condition unknown.	Manhole(s) at grade	Structure inlet(s)	Structure outlet(s)	6 feet x 15 feet x 15 feet (WxLxD)
O41	Existing Storm Sewer	PWSA	24-inch dia. RCP sewer	--	--	Manhole, PWSA MH 007F059	Manhole, PennDOT MH 007F078	142 feet (L)
O41	Existing Storm Sewer	PennDOT	48-inch dia. RCP sewer	--	--	Manhole, PennDOT MH 007F097	Manhole, PennDOT MH 007F078	126 feet (L)
O41	Existing Storm Sewer	PennDOT	18-inch dia. RCP sewer	--	--	Manhole, PennDOT MH 007F005	Manhole, PennDOT MH 007F078	41 feet (L)
O41	Existing Storm Sewer	PennDOT	30-inch dia. RCP sewer	--	--	Manhole, PennDOT MH 007F064	Manhole, PennDOT MH 007F078	193 feet (L)
O41	Existing Storm Sewer	PennDOT	18-inch dia. RCP sewer	--	--	Manhole, PennDOT MH 007F006	Manhole, PennDOT MH 007F078	95 feet (L)
O41	Existing Storm Sewer	PennDOT	54-inch dia. RCP sewer	--	--	Manhole, PennDOT MH 007F078	Outfall, ALCOSAN OF 007KO40	471 feet (L)
O41	Existing Combined Sewer	PWSA	18-inch dia. VCP sewer	--	--	Manhole, PWSA MH 007F051	Manhole, ALCOSAN MH ADC007F040	211 feet (L)
O41	Existing Outfall Sewer	ALCOSAN	18-inch dia. VCP sewer	--	--	Manhole, ALCOSAN MH ADC007F040	Manhole, PennDOT MH 007F074	73 feet (L)
O41	Existing Sanitary Sewer	PWSA	15-inch dia. PVC sewer	--	--	Manhole, PWSA MH 007G130	Manhole, ALCOSAN MH ADC007F040	788 feet (L)
O41	Existing Combined Sewer	ALCOSAN	8-inch dia. VCP sewer	--	--	Manhole, ALCOSAN MH ADC007F041	Manhole, PWSA MH 007F073	329 feet (L)

*Sewer data reflects ORT survey data, received Alcosan GIS data (dated 04/11/2021), and received PWSA GIS data (dated 10/06/2015).

ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
O41	Existing Combined Sewer	PWSA	24-inch dia. BR sewer	--	--	Manhole, PWSA MH 007G108	Manhole, ALCOSAN MH ADC007F041	414 feet (L)
O41	Existing Combined Sewer	PWSA	15-inch dia. VCP sewer	--	--	Manhole, PWSA MH 007F007	Manhole, PWSA MH 007F008	34 feet (L)
O41	Existing Combined Sewer	PWSA	36-inch dia. RCP & 48-inch dia. BR sewer	--	--	Manhole, PWSA MH 007F063	Manhole, ALCOSAN MH ADC007F041	225 feet (36-inch) & 33 feet (48-inch) (L)
A48	Existing Combined Sewer	PWSA	54"x72" brick Sewer	Above normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, PWSA MH 008F002	Junction, PWSA JCT 008F092	633 feet (L)
A48	Existing A48 Combined Sewer	PWSA	108-inch dia. brick sewer w/gunite lining	Above normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, PWSA MH 008F074	Manhole, PWSA MH 008G134	785 feet (L)
A48	Existing Combined Sewer	PWSA	15-inch dia. VCP sewer	--	--	Manhole, PWSA MH 008F003	Manhole, PWSA MH 008F059	93 feet (L)
A48	Existing Combined Sewer	PWSA	36-inch dia. UNK & 108-inch dia. BR sewer	--	--	Manhole, PWSA MH 008G067	Manhole, PWSA MH 008G070	306 feet (36-inch) & 39 feet (108-inch) (L)
A48	Existing Combined Sewer	PWSA	48-inch dia. RCP sewer	--	--	Manhole, PWSA MH 008G080	Manhole, PWSA MH 008G070	16 feet (L)
A48	Existing Combined Sewer	PWSA	18-inch dia. RCP & 24-inch dia. RCP sewer	--	--	Endcap, PWSA EC 008F004	Manhole, PWSA MH 008G074	17 feet (18-inch) & 361 feet (24-inch) (L)
A48	Existing Combined Sewer	PennDOT	21-inch dia. RCP, 24-inch dia. RCP, 27-inch, & 30-inch RCP sewer	--	--	Manhole, PennDOT MH 008F083	Manhole, PennDOT MH 008G137	233 feet (21-inch), 151 feet (24-inch), 246 feet (27-inch), & 83 feet (30-inch) (L)
A48	Existing Storm Sewer	PWSA	15-inch dia. PVC & 14-inch dia. DIP sewer	--	--	Manhole, PWSA MH 008F109	54"x72" Brick Sewer Connection	24 feet (15-inch) & 31 feet (14-inch) (L)

*Sewer data reflects ORT survey data, received Alcosan GIS data (dated 04/11/2021), and received PWSA GIS data (dated 10/06/2015).

ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
A48	Existing Combined Sewer	PWSA	15-inch dia. VCP sewer	--	--	Manhole, PWSA MH 008F058	Junction, PWSA JCT 008F071	21 feet (L)
A58	Existing A58 Combined Sewer (Madison Ave.)	ALCOSAN	102-inch dia. brick sewer w/gunite lining	Below normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, ALCOSAN MH 009A100	A58 Outfall, ALCOSAN OF ACSO009EA58	651 feet (L)
A58	Existing Combined Sewer Outfall (Voegtly St.)	PennDOT	10-foot x 12-foot (HxW) reinforced concrete box culvert	Varies from fully (at outfall) to partially (upstream) below normal river pool. No flap gate.	None	Manhole, Unknown MH 009A0099	Manhole, Unknown MH 009E087	1051 feet (L)
A58	Existing Combined Sewer (E. Lacock St.)	PWSA	15-inch dia. VCP sewer	Below normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, PWSA MH 009A071	Direct connection to existing A58 Combined Sewer (Madison Ave.), PWSA JCT009A015	205 feet (L)
A58	Existing Combined Sewer (Voeghly St.)	PWSA	15-inch dia. VCP sewer	Below normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, PWSA MH 009A009	Manhole, PWSA MH 009E064	537 feet (L)
A58	Existing Combined Sewer	Unknown	15-inch dia. UNK sewer	--	--	End Cap, Unknown EC 009A004	Manhole, PWSA MH 009A016	74 feet (L)
A58	Existing Combined Sewer	PWSA	15-inch dia. VCP sewer	--	--	Manhole, PWSA MH 009A015	Manhole, PWSA MH 009B026	327 feet (L)
A58	Existing Combined Sewer	PWSA	15-inch dia. VCP sewer	--	--	Manhole, PWSA MH 009B038	Junction, PWSA JCT 009E027	292 feet (L)

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ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
AS1	Existing Combined Sewer (Warfield Street)	PWSA	24-inch dia. VCP Sewer	MH invert above normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, PWSA MH 009B022	Manhole, PWSA MH 009B036	451 feet (L)
AS1	Existing Combined Sewer (Carpenter Way)	PWSA	15-inch dia. VCP Sewer	MH invert above normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, PWSA MH 024P150	Manhole, PWSA MH 009B022	572 feet (L)
AS1	Existing Combined Sewer (Carpenter Way)	PWSA	15-inch dia. VCP Sewer	MH invert above normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Endcap, PWSA EC 009B003	Manhole, PWSA MH 009B022	103 feet (L)
AS1	Existing Combined Sewer	ALCOSAN	8-inch dia. VCP Sewer	--	--	Manhole, ALCOSAN MH A-59Z-02	Manhole, ALCOSAN MH ADC009BA59A	255 feet (L)
AS1	Existing Combined Sewer	PWSA	15-inch dia. VCP Sewer	--	--	Manhole, PWSA MH 009B026	Manhole, PWSA MH 009B027	129 feet (L)
AS1	Existing Combined Sewer	PWSA	15-inch dia. VCP Sewer	--	--	Manhole, PWSA MH 009B076	Manhole, PWSA MH 009B027	562 feet (L)
O14	Existing O14 Combined Sewer Flow Regulator	ALCOSAN	Concrete structure with hydro- mechanical equipment	Partially below normal river pool. Internal flap gate. Gate condition unknown.	Manhole(s) at grade	Structure inlet(s)	Structure outlet(s)	35 feet x 35 feet x 15 feet (WxLxD)

*Sewer data reflects ORT survey data, received Alcosan GIS data (dated 04/11/2021), and received PWSA GIS data (dated 10/06/2015).

ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
O14	Existing O14 Combined Sewer (East)	ALCOSAN	42-inch dia. RCP sewer	Below normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, ALCOSAN MH N03	Manhole, ALCOSAN MH O-14-PS	385 feet (L)
O14	Existing O14 Combined Sewer (West)	ALCOSAN	48-inch dia. RCP sewer	Below normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, ALCOSAN MH 1A	Manhole, ALCOSAN MH O-14-PS	537 feet (L)
O14	Existing Combined Sewer (Riverside St.)	PWSA	15-inch dia. VCP sewer & 30-inch dia. RCP sewer	Below normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, PWSA MH 007P029	Manhole, ALCOSAN MH 1D	625 feet (15-inch) & 12 feet (30-inch) (L)
O14	Existing Combined Sewer Outfall	ALCOSAN	48-inch dia. RCP sewer	--	--	Manhole, ALCOSAN MH O-14-PS	Outfall, ALCOSAN OF O-14	160 feet (L)
O14	Existing Combined Sewer Outfall	ALCOSAN	42-inch dia. RCP sewer	--	--	Manhole, ALCOSAN MH O-14-PS	Outfall, ALCOSAN OF O-14A	155 feet (L)
O14	Existing Combined Sewer	PWSA	24-inch dia. VCP sewer	--	--	Manhole, PWSA MH 006B043	Manhole, ALCOSAN MH N02	676 feet (L)
O14	Existing Combined Sewer	ALCOSAN	54-inch dia. RCP sewer	--	--	Manhole, ALCOSAN MH O-14-PS	Manhole, ALCOSAN MH ADC007P014A	13 feet (L)
O06A	Existing Combined Sewer (Shingiss St, south of Ella St.)	McKees Rocks	12-inch dia. VCP sewer	Below normal river pool. Downstream river backflow controlled by Ella St. pump station.	Manhole(s) at grade	Manhole, MROCK MH 0287	Manhole, MROCK MH 0324	834 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	60-inch dia. brick sewer	Below normal river pool. Downstream river backflow controlled by Ella St. pump station.	Manhole(s) at grade	Manhole, MROCK MH 0340	Manhole, MROCK MH 0295A	696 feet (L)

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ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
O06A	Existing Combined Sewer	McKees Rocks	15-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0292	Manhole, MROCK MH 0340A	254 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	12-inch dia. VCP sewer	--	--	Manhole, Unknown UK_MH-1	Manhole, MROCK MH 0295	193 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	12-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0322	Manhole, MROCK MH 0295	289 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	12-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0332	Manhole, MROCK MH 0334	376 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	12-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0320	Manhole, MROCK MH 0335	389 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	18-inch RCP & 18-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0282	Manhole, MROCK MH 0283	170 feet (RCP) & 143 feet (VCP) (L)
O06A	Existing Combined Sewer	McKees Rocks	12-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0464	Manhole, MROCK MH 0328	417 feet (L)

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ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
O06A	Existing Combined Sewer	McKees Rocks	15-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0318	Manhole, MROCK MH 0328	227 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	18-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0326	Dropshaft, ALCOSAN DS O-06	1267 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	18-inch & 36-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0285	Manhole, MROCK MH 0329	991 feet (18-inch) & 5 feet (36-inch) (L)
O06A	Existing Combined Sewer	McKees Rocks	36-inch dia. CP sewer	--	--	Manhole, MROCK MH 0535	Manhole, MROCK MH 0329	222 feet (L)
O06A	Existing Combined Sewer	McKees Rocks	36-inch & 24-inch & 18-inch dia. VCP sewer	--	--	Manhole, MROCK MH 0329	Outfall, MROCK O-06	44 feet (36-inch) & 60 feet (24-inch) & 395 feet (18-inch) (L)
O06A	Existing Combined Sewer	McKees Rocks	36-inch dia. UNK sewer	--	--	Manhole, MROCK MH 0329A	Outfall, MROCK OF Robb St PS	473 feet (L)
O07	Existing Combined Sewer	McKees Rocks	24-inch dia. VCP sewer	Below normal river pool. Flap gate at downstream flow regulator outfall. Gate condition unknown.	Manhole(s) at grade	Manhole, MROC MH 0366A	C-04 flow regulator, ALCOSAN C-04-00	483 feet (L)
O07	Existing Combined Sewer	McKees Rocks	18-inch dia. VCP sewer	--	--	Manhole, MROC MH 0376	Manhole, MROC MH 0370	258 feet (L)
O07	Existing Combined Sewer	ALCOSAN	8-inch dia. CAS sewer	--	--	Manhole, ACSA MH C-03A-00	Regulator, ASCA RG C-04-00	24 feet (L)

*Sewer data reflects ORT survey data, received Alcosan GIS data (dated 04/11/2021), and received PWSA GIS data (dated 10/06/2015).

ATTACHMENT 2 - List of Utilities for Inspection and Cleaning*								Revised 11/21/2025
Site	Facility(s)	Facility Owner	Description		Existing Constructed Access	Extent(s) of Inspection/Cleaning		
			Type/ Dia.	Exposure to river pool		Upstream (US)	Downstream (DS)	Approx. Dimension(s)
O07	Existing Combined Sewer	ALCOSAN	36-inch & 34-inch dia. RCP sewer	--	--	Manhole, ACSA MH C-03A-00	Outfall, ASCA OF C-03A-OVF	17 feet (36-inch) & 15 feet (34-inch) (L)
O07	Existing Combined Sewer	ALCOSAN	8-inch dia. CAS sewer	--	--	Regulator, ACSA RG C-03-00	Manhole, ACSA MH C-03A-00	181 feet (L)
O07	Existing Combined Sewer	PWSA	18-inch dia. VCP sewer	--	--	Regulator, ACSA RG C-03-00	Manhole, PWSA MH 043S001	149 feet (L)
O07	Existing Combined Sewer	ALCOSAN & PWSA	8-inch dia. CAS & 15-inch dia. UNK sewer	--	--	Manhole, PWSA MH 043S013	Regulator, ACSA RG C-03-00	102 feet (8-inch) & 98 feet (15-inch) (L)

*Sewer data reflects ORT survey data, received Alcosan GIS data (dated 04/11/2021), and received PWSA GIS data (dated 10/06/2015).

Addendum No. 7

Attachment G

APPENDIX A – TECHNICAL SPECIFICATIONS

- **SECTION 31 29 00 – MONITORING WELL AND INSTRUMENTATION
ABANDONMENT - REVISED TABLE 1-1**

TABLE 1-1 WELLS AND PIEZOMETERS FOR ABANDONMENT				<u>Revised 11/21/25</u>
Well ID	Type	Easting	Northing	General Location/Address
PP-01-01	Vibrating Wire Piezometer (Inactive)	1330313.69	423296.1 <u>0</u>	ORT Alignment; Near Westhall Street
PP-01-01	Open Standpipe Well (Inactive)	1330313.69	423296.1 <u>0</u>	ORT Alignment; Near Westhall Street
PP-01-02	Vibrating Wire Piezometer	1332942.1 <u>0</u>	418139.91	End of Branchport
PP-01-02	Open Standpipe (IS THIS INACTIVE?)	1332942.1 <u>0</u>	418139.91	Off ORT Alignment; End of Branchport
PP-01-03	Vibrating Wire Piezometer	1334649.91	414543.26	Off ORT Alignment, west of SMRT-O41; Kroll Drive near intersection with North Shore Trail
PP-01-03	Open Standpipe Well	1334649.91	414543.26	Off ORT Alignment, west of SMRT-O41; Kroll Drive near intersection with North Shore Trail
PP-01-04A	Vibrating Wire Piezometer	1343922.15	415230.5 <u>0</u>	Off of ORT Alignment between ORT-A58 and ORT-AS1; Warfield St and Saw mill way
PP-01-04B	Open Standpipe	1343922.15	415230.5 <u>0</u>	Off of ORT Alignment between ORT-A58 and ORT_AS1; Warfield St and Saw mill way

TABLE 1-1 WELLS AND PIEZOMETERS FOR ABANDONMENT				<u>Revised 11/21/25</u>
Well ID	Type	Easting	Northing	General Location/Address
PP-01-12	Open Standpipe Well	1343922.15	415230.5 <u>0</u>	Warfield St and Saw mill way
PP-01-013*	VWPZ (Inactive)	1333002.77	411268.52	Off alignment southeast of SMRT-O14; Alexander Street
PP-02-01 (VWPZ-1, 2, 3, 4)	Vibrating Wire Piezometer	1330521.22 <u>4</u>	423101.29 <u>4</u>	ORT-O27; Westhall Street
PP-02-01A	Open Standpipe Well	1330524.6 <u>986</u>	423100.8 <u>7988</u>	Westhall Street
PP-02-01B	Open Standpipe Well	1330524.86 <u>4</u>	423098.3 <u>4832</u>	Westhall Street
PP-02-01C	Open Standpipe Well	1330522.0 <u>326</u>	423098.33 <u>4</u>	ORT-O27; Westhall Street
PP-02-05 (VWPZ-1, VWPZ-2)	Vibrating Wire Piezometer	1335357.7 <u>0695</u>	414338.95 <u>3</u>	Northeast of SMRT-O41; North Point Dr and Belmont Street
PP-02-06	Vibrating Wire Piezometer	1334779.8 <u>326</u>	412805.8 <u>876</u>	West of SMRT-O14; 1756 W. Carson St
PP-02-06A	Open Standpipe Well	1334779.01 <u>4</u>	412803.8 <u>988</u>	West of SMRT-O14; 1756 W. Carson St
PP-02-06B	Open Standpipe Well	1334777.9 <u>106</u>	412801.96 <u>2</u>	West of SMRT-O14; SMRT-O14; 1756 W. Carson St
PP-02-12	Vibrating Wire Piezometer	1346586.3 <u>985</u>	417448.84 <u>2</u>	River Ave on N Shore Trail
PP-02-12A	Open Standpipe Well	1346584.66 <u>2</u>	417447.5 <u>8959</u>	Second parking lot
PP-02-12B	Open Standpipe Well	1346584.6 <u>0661</u>	417450.75 <u>2</u>	Park in first stall walk to large rocks

TABLE 1-1 WELLS AND PIEZOMETERS FOR ABANDONMENT				<u>Revised 11/21/25</u>
Well ID	Type	Easting	Northing	General Location/Address
PP-02-12C	Open Standpipe Well	1346582.9 327	417449.20 0	Heinz St to River Ave to N Shore Trail
PP-03-27A	Open Standpipe Well	1327523.78 2	420650.46 4	CCT-007; W Carson and Chartiers Ave
PP-04-001A	Open Standpipe Well	1330286.920 423867.190	1330286.920 423867.19	DWT; Wastewater Treatment Plant area
PP-04-001B	Open Standpipe Well	1330284.46 423872.350	1330284.460 423872.35	DWT; Wastewater Treatment Plant area
FD-01-003	Vibrating Wire Piezometer	1327776.01	423368.53	CCT-006A-AD; offset from Sproul Street at corner of Shingiss Street
FD-01-006	Open Standpipe Well	1330463.98	423217.8 0	ORT-O27
FD-01-009	Vibrating Wire Piezometer	1331307.86	421338.3 0	ORT Alignment; Three Rivers Heritage Trail southwest of Doerr Street and southwest of Norfolk Southern Railroad Bridge
FD-01-012	Vibrating Wire Piezometer	1332823.47	417179.27	ORT Alignment; Along Three Rivers Heritage Trail North of N. Franklin Street and West of Preble Avenue
FD-02-017	Vibrating Wire Piezometer	1327385.86	420658.3 0	CCT-007; off W. Carson Street
FD-02-018	Open Standpipe Well	1327334.21	420669.32	CCT-007; off W. Carson Street

TABLE 1-1 WELLS AND PIEZOMETERS FOR ABANDONMENT				<u>Revised 11/21/25</u>
Well ID	Type	Easting	Northing	General Location/Address
FD-02-020	Vibrating Wire Piezometer	1327816.66	421260.12	CCT Alignment; off River Road
FD-02-022	Vibrating Wire Piezometer	1328261.68	422535.02	CCT/CCT-O06A-AD Blind Connection; on Frank Bryan property
FD-02-023	Open Standpipe Well	1328202.03	422551.87	CCT/CCT-O06A-AD Blind Connection; on Frank Bryan property
FD-02-025	Open Standpipe Well	1327310.13	424203.32	CCT-O06A; corner of Ella Street and Shingiss Street
FD-02-027	Vibrating Wire Piezometer	1327319.34	424172.47	CCT-O06A; off Shingiss Street
FD-02-028	Vibrating Wire Piezometer	1330351.13	423494.06	DWT; Wastewater Treatment Plant area
FD-02-029	Vibrating Wire Piezometer	1330409.46	423246.65	ORT-O27
FD-02-030	Vibrating Wire Piezometer	1334919.88	412783.60	SMRT-O14
FD-02-031	Open Standpipe Well	1334947.61	412733.00	SMRT-O14
FD-02-033	Vibrating Wire Piezometer	1335179.84	414235.47	SMRT-O41
FD-02-034A	Open Standpipe Well	1335219.68	414145.29	SMRT-O41
FD-02-039	Vibrating Wire Piezometer	1338796.84	415045.93	ORT Alignment
FD-02-042	Open Standpipe Well	1340227.68	414485.00	ORT-A48

TABLE 1-1 WELLS AND PIEZOMETERS FOR ABANDONMENT				<u>Revised 11/21/25</u>
Well ID	Type	Easting	Northing	General Location/Address
FD-02-043	Vibrating Wire Piezometer	1340192.71	414482.86	ORT-A48
FD-02-046	Vibrating Wire Piezometer	1341115.45	414851.83	ORT Alignment
FD-02-048	Vibrating Wire Piezometer	1342422.02	415108.78	ORT Alignment
FD-02-051	Open Standpipe Well	1343579.09	414890.75	ORT-A58
FD-02-052	Vibrating Wire Piezometer	1343549.91	414920.80	ORT-A58
FD-02-053	Open Standpipe Well	1343977.03	415597.18	ORT-AS1
FD-02-056	Vibrating Wire Piezometer	1344039.97	415598.51	ORT-AS1
<u>HISTORICAL WELL</u>	<u>N/A</u>	<u>1344056.59</u>	<u>415614.17</u>	<u>ORT-AS1</u>
<u>SB-1/MW-1</u>	<u>Open Standpipe</u>	<u>1344126.70</u>	<u>415835.36</u>	<u>ORT-AS1</u>
<u>SB-2/MW-2</u>	<u>Open Standpipe</u>	<u>1344230.87</u>	<u>415728.12</u>	<u>ORT-AS1</u>
<u>SB-5/MW-5</u>	<u>Open Standpipe</u>	<u>1343919.73</u>	<u>415359.22</u>	<u>ORT-AS1</u>

END OF SECTION

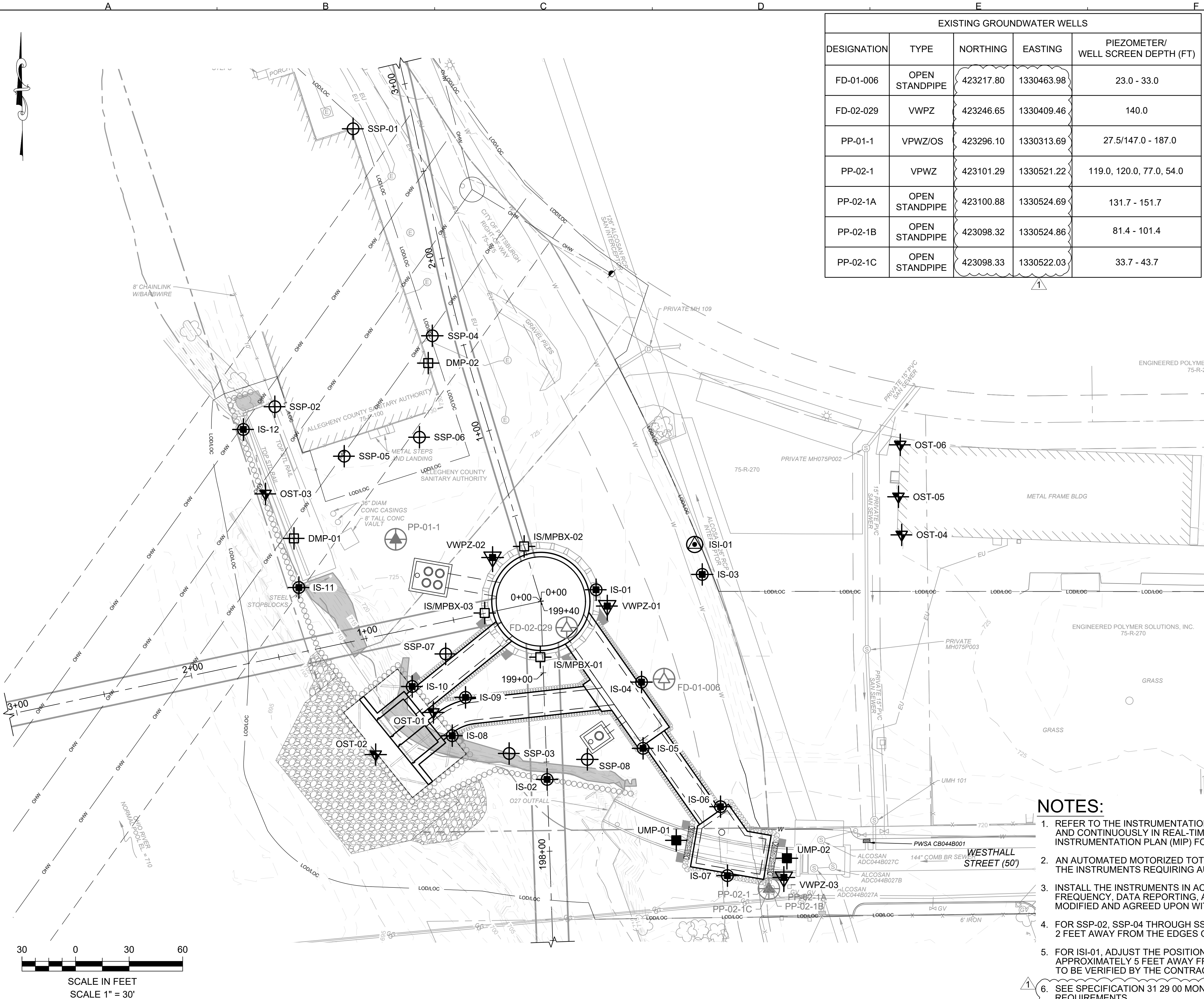
Addendum No. 7

Attachment H

APPENDIX B – CONTRACT DRAWINGS

- Revised O27-GI-100 (Sheet 716 of 770) (1 page)
- Revised O41-GI-200 (Sheet 717 of 770) (1 page)
- Revised A48-GI-300 (Sheet 718 of 770) (1 page)
- Revised A58-GI-400 (Sheet 719 of 770) (1 page)
- Revised AS1-GI-500 (Sheet 720 of 770) (1 page)
- Revised O14-GI-600 (Sheet 721 of 770) (1 page)
- Revised O07-GI-700 (Sheet 722 of 770) (1 page)
- Revised O06A-GI-800 (Sheet 723 of 770) (1 page)
- Revised ORT-GI-900 (Sheet 724 of 770) (1 page)
- Revised ORT-GI-901 (Sheet 725 of 770) (1 page)
- Revised ORT-GI-902 (Sheet 726 of 770) (1 page)
- Revised ORT-GI-903 (Sheet 727 of 770) (1 page)
- Revised ORT-GI-904 (Sheet 728 of 770) (1 page)
- Revised ORT-GI-905 (Sheet 729 of 770) (1 page)

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonaldd507105621 - ALCOSAN Ohio River Tunnel Design - T&M\Project Files\1 - ORT06-Geotechnical\Sheets - 027-GI-100 PLOT DATE: 11/19/2025 10:50:23 AM LAST SAVED BY: BOW101681



EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-01-006	OPEN STANDPIPE	423217.80	1330463.98	23.0 - 33.0
FD-02-029	VWPZ	423246.65	1330409.46	140.0
PP-01-1	VPWZ/OS	423296.10	1330313.69	27.5/147.0 - 187.0
PP-02-1	VPWZ	423101.29	1330521.22	119.0, 120.0, 77.0, 54.0
PP-02-1A	OPEN STANDPIPE	423100.88	1330524.69	131.7 - 151.7
PP-02-1B	OPEN STANDPIPE	423098.32	1330524.86	81.4 - 101.4
PP-02-1C	OPEN STANDPIPE	423098.33	1330522.03	33.7 - 43.7

INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
DMP-01	---	---	423296.62	1330256.75
DMP-02	---	---	423394.83	1330331.93
IS-01	YES	660	423267.84	1330425.92
IS-02	YES	659	423161.58	1330398.49
IS-03	YES	660	423276.43	1330485.35
IS-04	YES	667	423216.11	1330451.36
IS-05	YES	670	423178.99	1330452.21
IS-06	YES	670	423146.30	1330495.58
IS-07	YES	670	423107.68	1330499.47
IS-08	YES	662	423186.07	1330345.36
IS-09	YES	667	423207.55	1330352.79
IS-10	YES	662	423213.64	1330322.94
IS-11	YES	664	423269.09	1330259.48
IS-12	YES	664	423357.66	1330228.41
IS/MPBX-01	YES	660	423230.08	1330394.68
IS/MPBX-02	YES	660	423292.13	1330385.63
IS/MPBX-03	YES	660	423254.82	1330363.56
ISI-01	---	624	423293.22	1330481.13
OST-01	YES	---	423199.11	1330334.82
OST-02	YES	---	423175.49	1330302.50
OST-03	YES	---	423321.55	1330240.82
OST-04	YES	---	423298.59	1330597.07
OST-05	YES	---	423319.93	1330595.25
OST-06	YES	---	423349.04	1330596.24
SSP-01	---	20.0 FT BELOW GRADE	423526.09	1330289.84
SSP-02	---	20.0 FT BELOW GRADE	423370.39	1330246.03
SSP-03	---	20.0 FT BELOW GRADE	423176.12	1330377.23
SSP-04	---	20.0 FT BELOW GRADE	423410.14	1330334.20
SSP-05	---	20.0 FT BELOW GRADE	423342.66	1330284.88
SSP-06	---	20.0 FT BELOW GRADE	423353.29	1330327.01
SSP-07	---	20.0 FT BELOW GRADE	423231.89	1330341.70
SSP-08	---	20.0 FT BELOW GRADE	423172.79	1330421.02
UMP-01	---	TOP OF 144" COMB BRICK SEWER	423127.46	1330470.82
UMP-02	---	TOP OF 144" COMB BRICK SEWER	423117.43	1330532.78
VWPZ-01	YES	658	423258.71	1330432.18
VWPZ-02	YES	658	423285.89	1330367.96
VWPZ-03	YES	668	423106.66	1330531.06

NOTES:

- REFER TO THE INSTRUMENTATION SCHEDULE ABOVE FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
- AN AUTOMATED MOTORIZED TOTAL STATION (AMTS) SYSTEM AS SPECIFIED IN SECTION 31 09 13 SHALL BE INSTALLED AT THIS SITE TO MONITOR ALL THE INSTRUMENTS REQUIRING AUTOMATED AND CONTINUOUS MONITORING.
- INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
- FOR SSP-02, SSP-04 THROUGH SSP-06, ADJUST THE POSITIONS OF THE BOREHOLES AS NECESSARY SO THAT THEY WILL BE LOCATED APPROXIMATELY 2 FEET AWAY FROM THE EDGES OF THE ADJACENT FACILITY FOUNDATION, TO BE VERIFIED BY THE CONTRACTOR.
- FOR ISI-01, ADJUST THE POSITION OF THE BOREHOLE AS NECESSARY SO THAT IT WILL BE LOCATED APPROXIMATELY 5 FEET AWAY FROM THE EDGE OF THE EXISTING DTI (BUT KEPT INSIDE OF THE LOC), TO BE VERIFIED BY THE CONTRACTOR.
- SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.

Designed by:	REVISION				APPV
	REV No.	DATE	DESCRIPTION	ELDS	
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ELDS					

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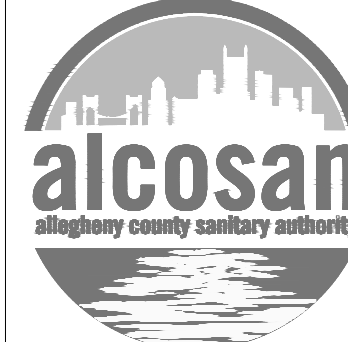
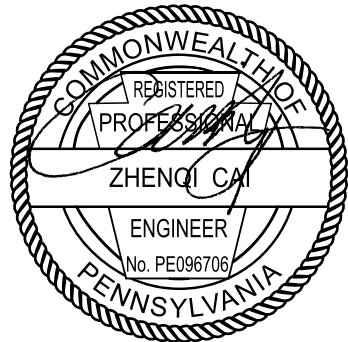
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ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

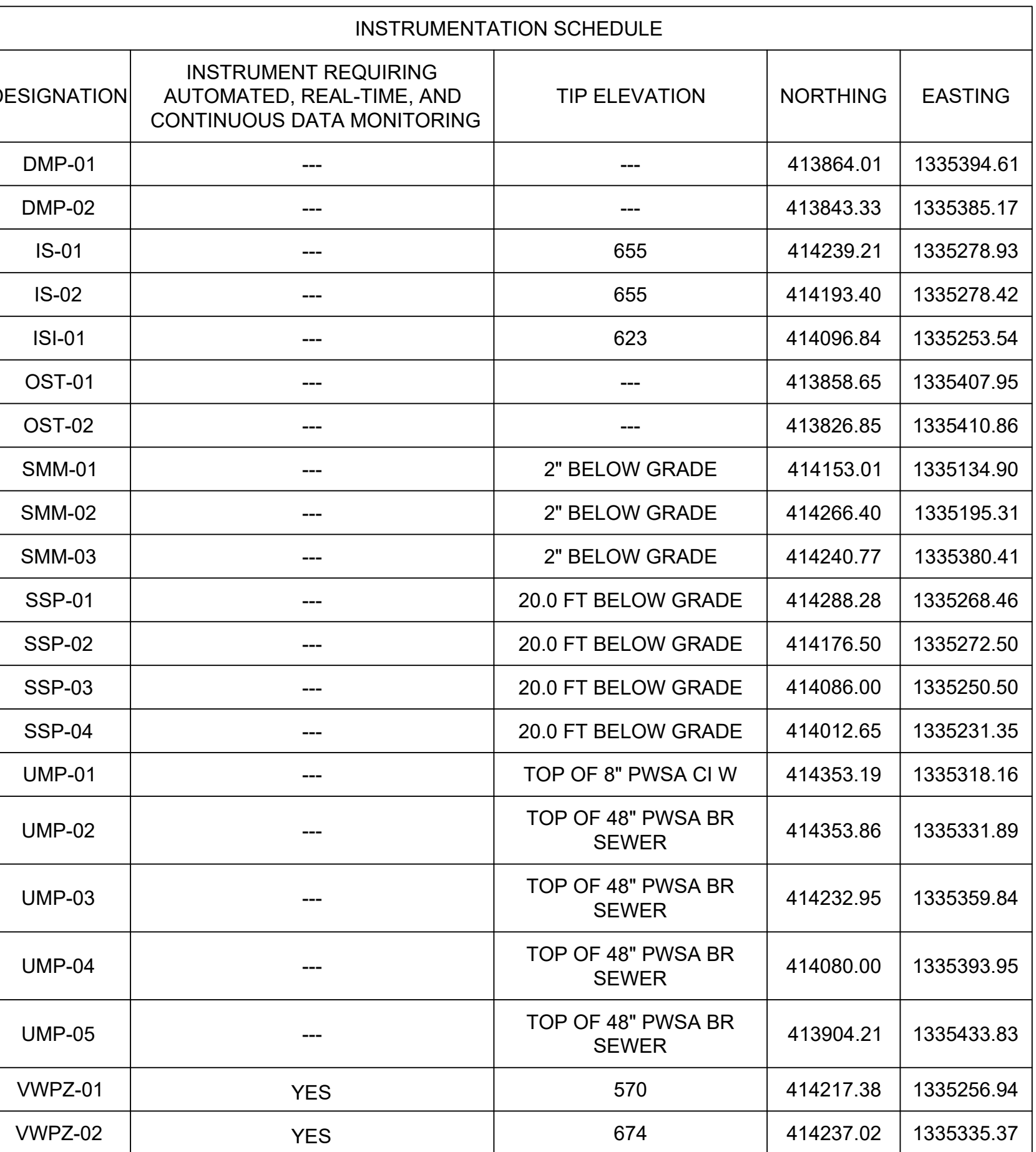
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OHIO RIVER TUNNEL (ORT)

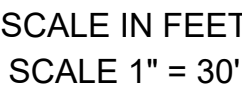
O27-GI-100
GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:	1797
File:	O27-GI-100.dwg
Date:	11/21/2025
Sheet:	716 OF 770



EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-033	VWPZ	414235.47	1335179.84	148.0
FD-02-034A	OPEN STANDPIPE	414145.29	1335219.68	36.0 - 46.0
PP-02-5	VWPZ	414338.95	1335357.70	87.0; 134.0

1. REFER TO THE INSTRUMENTATION SCHEDULE ABOVE FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
2. INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
3. FOR ISI-01, ADJUST THE POSITION OF THE BOREHOLE AS NECESSARY SO THAT IT WILL BE LOCATED APPROXIMATELY 3 FEET AWAY FROM THE EDGE OF THE EXISTING DTI, TO BE VERIFIED BY THE CONTRACTOR.
4. SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.



Designed by:	REVISION			
SAA	REV No.	DATE	DESCRIPTION	APPV
	1	11/21/25	REVISION FOR ADDENDUM 7	ELDS
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ELDS				

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No. PE096706



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ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

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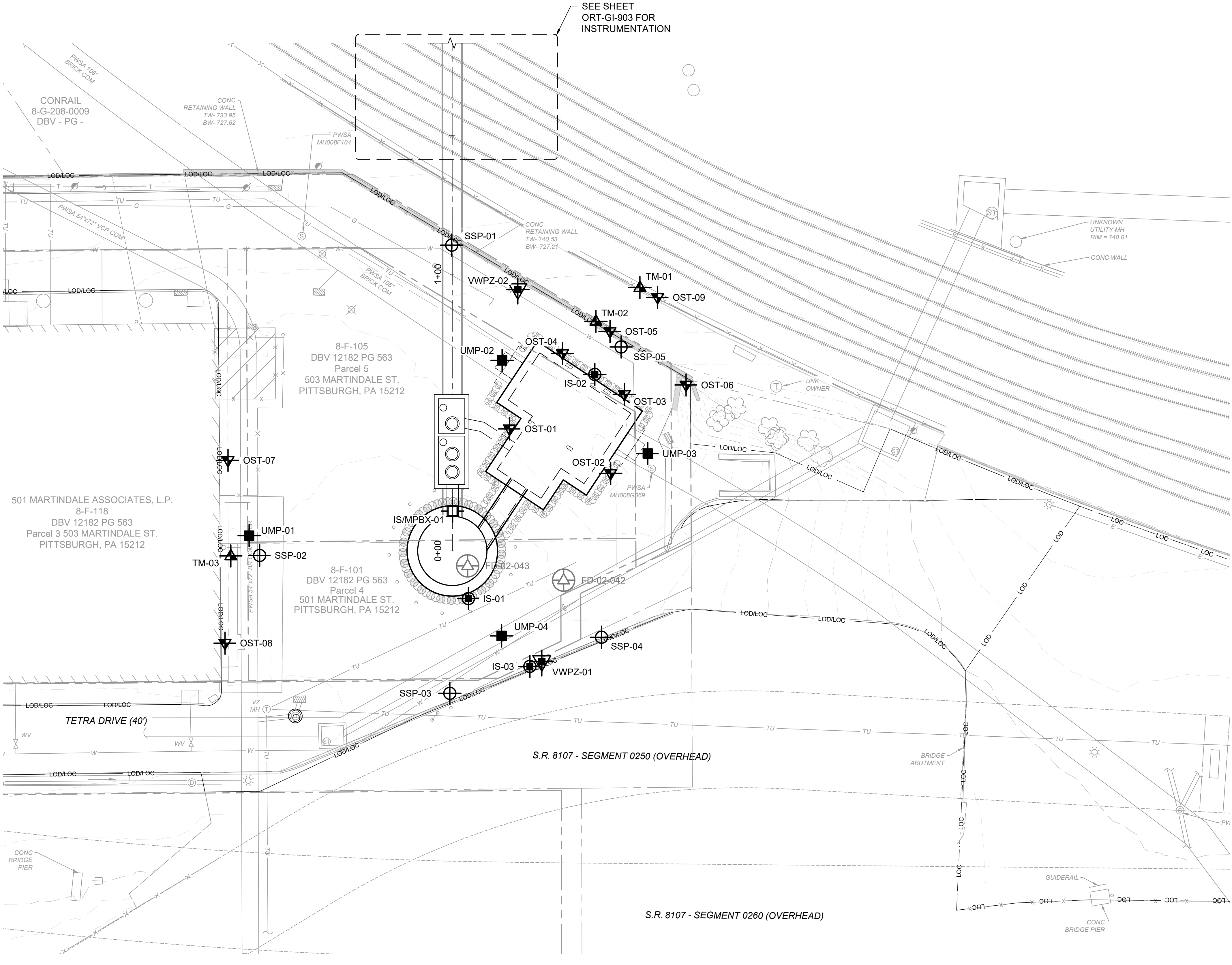
ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

O41-GI-200

GEOTECHNICAL INSTRUMENTATION LAYOUT

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Date:	11/21/2025
Sheet:	717 OF 770

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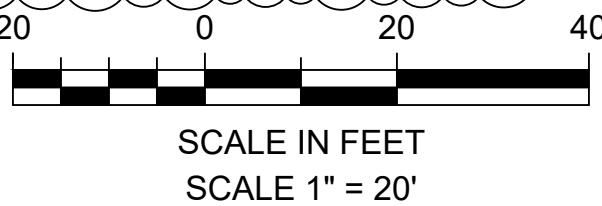


INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
IS-01	YES	687	414471.36	1340195.40
IS-02	YES	691	414560.05	1340223.27
IS-03	YES	687	414452.00	1340222.21
IS/MPBX-01	YES	687	414501.10	1340183.28
OST-01	YES	---	414534.42	1340197.22
OST-02	YES	---	414526.26	1340236.29
OST-03	YES	---	414555.19	1340235.19
OST-04	YES	---	414565.04	1340210.31
OST-05	YES	---	414576.35	1340225.43
OST-06	YES	---	414563.15	1340256.30
OST-07	YES	---	414502.21	1340100.14
OST-08	YES	---	414437.37	1340112.78
OST-09	YES	---	414591.99	1340239.69
SSP-01	---	20.0 FT BELOW GRADE	414595.02	1340163.04
SSP-02	---	20.0 FT BELOW GRADE	414470.96	1340118.45
SSP-03	---	20.0 FT BELOW GRADE	414436.48	1340195.96
SSP-04	---	20.0 FT BELOW GRADE	414467.67	1340245.35
SSP-05	---	20.0 FT BELOW GRADE	414571.72	1340230.51
TM-01	YES	---	414594.12	1340232.70
TM-02	YES	---	414578.89	1340219.68
TM-03	YES	---	414468.63	1340108.30
UMP-01	---	TOP OF 72" BR COM SEWER	414477.17	1340113.24
UMP-02	---	TOP OF 108" COM SEWER	414558.06	1340189.48
UMP-03	---	TOP OF 108" COM SEWER	414536.04	1340247.92
UMP-04	---	TOP OF STEAMED DUCT BANK	414460.66	1340209.94
VWPZ-01	YES	579	414454.64	1340226.06
VWPZ-02	YES	689	414584.32	1340189.71

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-042	OPEN STANDPIPE	414485.00	1340227.68	24.0 - 34.0
FD-02-043	VWPZ	414482.86	1340192.71	144.0

NOTES:

- REFER TO THE INSTRUMENTATION SCHEDULE ABOVE FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
- AN AUTOMATED MOTORIZED TOTAL STATION (AMTS) SYSTEM AS SPECIFIED IN SECTION 31 09 13 SHALL BE INSTALLED AT THIS SITE TO MONITOR ALL THE INSTRUMENTS REQUIRING AUTOMATED AND CONTINUOUS MONITORING.
- INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
- SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.



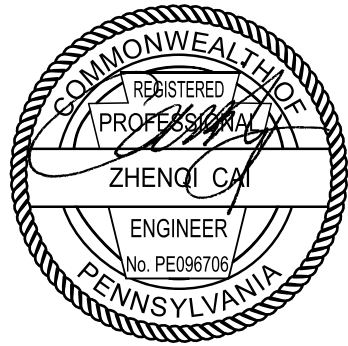
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	REV No.	DATE	DESCRIPTION	ELDS	
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OHIO RIVER TUNNEL (ORT)
A48-GI-300
GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract: 1797
File: A48-GI-300.dwg
Date: 11/21/2025
Sheet: 718 OF 770

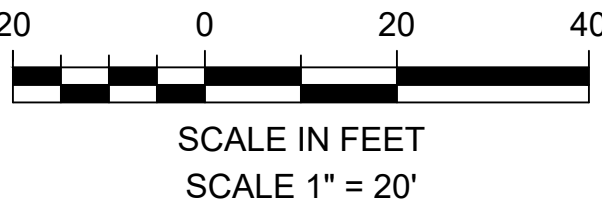
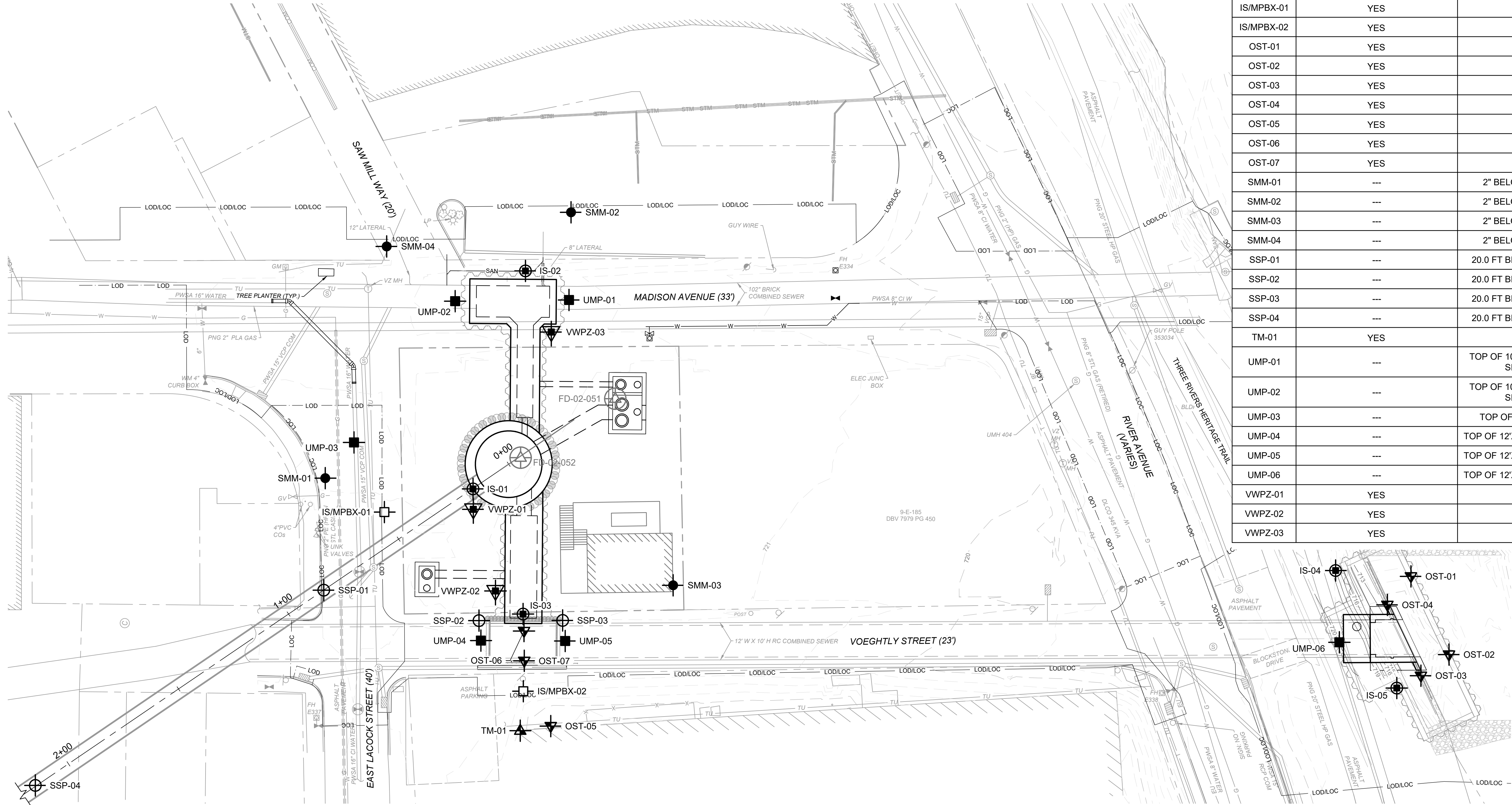
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NOTES:

1. REFER TO THE INSTRUMENTATION SCHEDULE TO THE RIGHT FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
2. AN AUTOMATED MOTORIZED TOTAL STATION (AMTS) SYSTEM AS SPECIFIED IN SECTION 31 09 13 SHALL BE INSTALLED AT THIS SITE TO MONITOR ALL THE INSTRUMENTS REQUIRING AUTOMATED AND CONTINUOUS MONITORING. INSTALL A SECOND AMTS AT THE OUTFALL SITE.
3. INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
4. SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-051	OPEN STANDPIPE	414890.75	1343579.09	30.0 - 40.0
FD-02-052	VWPZ	414920.80	1343549.91	128.0

INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
IS-01	YES	658	414935.80	1343534.66
IS-02	YES	669	414933.89	1343618.86
IS-03	YES	670	414907.48	1343492.70
IS-04	YES	665	414612.72	1343573.27
IS-05	YES	665	414580.92	1343534.99
IS/MPBX-01	YES	658	414966.48	1343519.11
IS/MPBX-02	YES	670	414901.24	1343464.39
OST-01	YES	---	414584.59	1343577.12
OST-02	YES	---	414564.40	1343551.44
OST-03	YES	---	414573.03	1343541.43
OST-04	YES	---	414590.97	1343564.78
OST-05	YES	---	414888.39	1343453.76
OST-06	YES	---	414905.78	1343486.53
OST-07	YES	---	414903.31	1343475.63
SMM-01	---	2" BELOW GRADE	414990.88	1343526.86
SMM-02	---	2" BELOW GRADE	414921.82	1343644.00
SMM-03	---	2" BELOW GRADE	414854.68	1343515.18
SMM-04	---	2" BELOW GRADE	414986.76	1343616.81
SSP-01	---	20.0 FT BELOW GRADE	414982.52	1343485.61
SSP-02	---	20.0 FT BELOW GRADE	414923.13	1343486.79
SSP-03	---	20.0 FT BELOW GRADE	414892.44	1343493.50
SSP-04	---	20.0 FT BELOW GRADE	415072.85	1343391.01
TM-01	YES	---	414899.23	1343449.65
UMP-01	---	TOP OF 102" COMBINED SEWER	414915.59	1343611.65
UMP-02	---	TOP OF 102" COMBINED SEWER	414957.28	1343602.16
UMP-03	---	TOP OF 16" WATER	414983.17	1343542.26
UMP-04	---	TOP OF 12"X10" RC SEWER	414920.84	1343479.60
UMP-05	---	TOP OF 12"X10" RC SEWER	414889.87	1343486.15
UMP-06	---	TOP OF 12"X10" RC SEWER	414605.62	1343547.22
VWPZ-01	YES	581	414934.06	1343527.19
VWPZ-02	YES	668	414919.44	1343498.98
VWPZ-03	YES	667	414919.54	1343598.47



Designed by:	REVISION				APPV ELDS
SAA	REV No.	DATE	DESCRIPTION		
Drawn by:	1	11/21/25	REVISION FOR ADDENDUM 7		
MAB					
Checked by:					
ELDS					

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(412) 497 - 2900

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Dial 8-1-1 or 1-800-242-1776 not less than 3 business days nor more than 10 business days prior to the start of excavation.

Pennsylvania One Call System Serial Number
FINAL DESIGN TICKET # 20250040204

COMMONWEALTH OF PENNSYLVANIA

REGISTERED PROFESSIONAL ENGINEER

ZHENQI CAI

ENGINEER

No. PE069705

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allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

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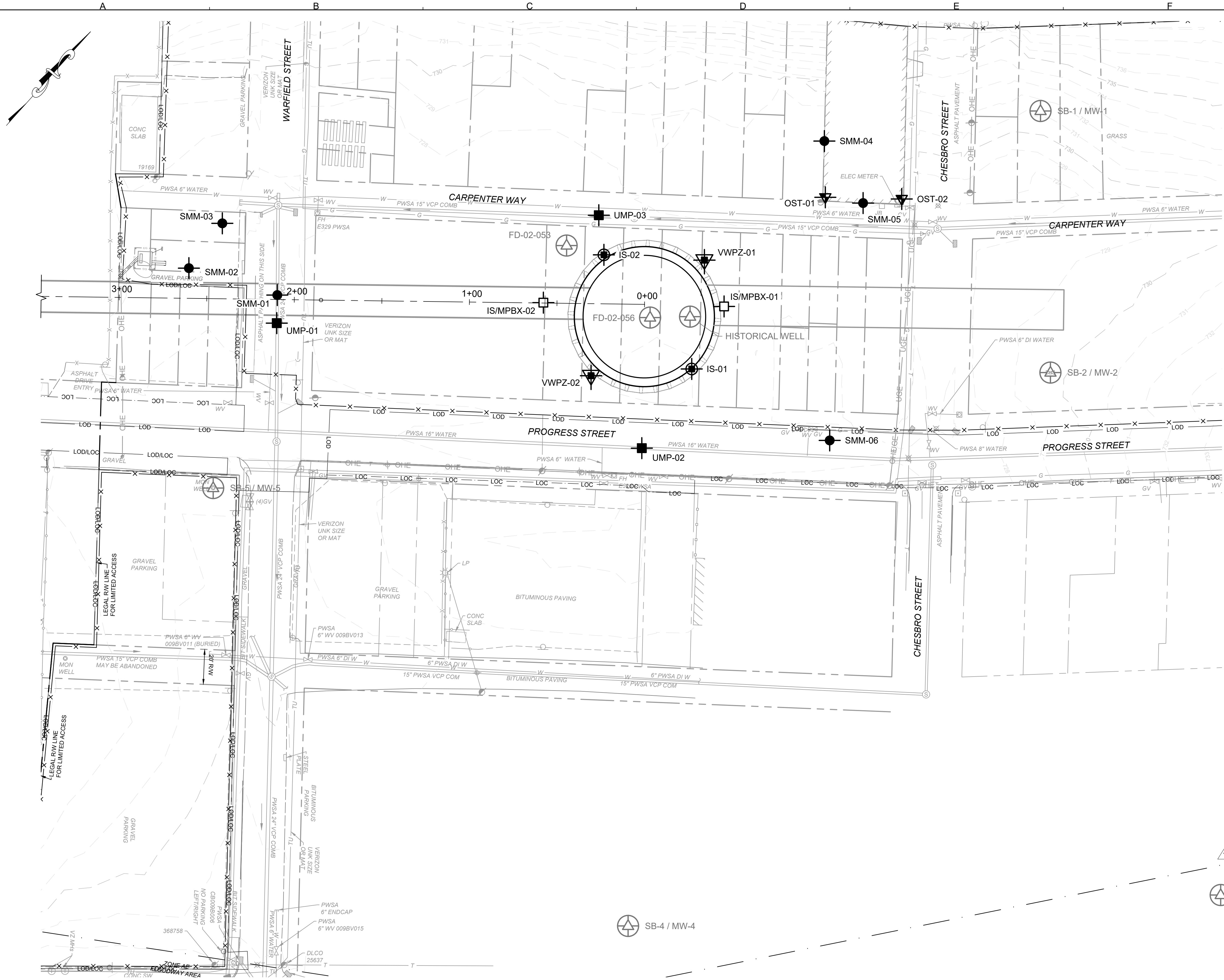
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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

A58-GI-400
GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:	1797
File:	A58-GI-400.dwg
Date:	11/21/2025
Sheet:	719 OF 770

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonald\507105621 - ALCOSAN Ohio River Tunnel Design - T&MP\Project Files\1 - ORT06-Geotechnical\Sheets - AS1-GI-500 PLOT DATE: 11/19/2025 10:45:40 AM LAST SAVED BY: BOW101681

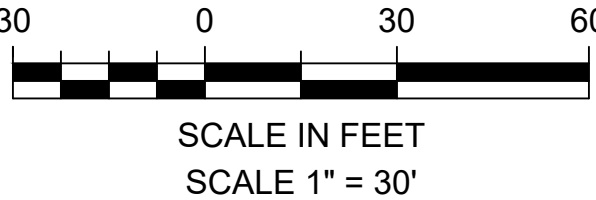


INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
IS-01	YES	670	415592.59	1344077.28
IS-02	YES	670	415607.48	1343996.40
IS/MPBX-01	YES	670	415631.50	1344067.12
IS/MPBX-02	YES	670	415564.07	1343988.99
OST-01	---	---	415716.50	1344068.37
OST-02	---	---	415744.98	1344101.45
SMM-01	---	2" BELOW GRADE	415465.62	1343873.19
SMM-02	---	2" BELOW GRADE	415443.27	1343825.39
SMM-03	---	2" BELOW GRADE	415475.06	1343822.45
SMM-04	---	2" BELOW GRADE	415740.01	1344046.48
SMM-05	---	2" BELOW GRADE	415728.49	1344086.60
SMM-06	---	2" BELOW GRADE	415615.00	1344163.13
UMP-01	---	TOP OF 24" VCP COMB SEWER	415453.51	1343883.69
UMP-02	---	TOP OF 16" WATER	415539.92	1344086.37
UMP-03	---	TOP OF 15" VCP COMB SEWER	415622.35	1343979.11
VWPZ-01	YES	569	415643.64	1344041.08
VWPZ-02	YES	569	415551.27	1344037.15

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-053	OPEN STANDPIPE	415597.18	1343977.03	29.0 - 39.0
FD-02-056	VWPZ	415598.51	1344039.97	135.0
HISTORICAL WELL	N/A	415614.17	1344056.59	SEE GBR SECTION 6.6
SB-1 / MW-1	OPEN STANDPIPE	415835.36	1344126.70	15.0 - 25.0
SB-2 / MW-2	OPEN STANDPIPE	415728.12	1344230.87	10.0 - 20.0
SB-3 / MW-3	OPEN STANDPIPE	415571.44	1344502.77	8.0 - 18.0
SB-4 / MW-4	OPEN STANDPIPE	415331.91	1344263.12	10.0 - 20.0
SB-5 / MW-5	OPEN STANDPIPE	415359.22	1343919.73	15.0 - 25.0

NOTES:

- REFER TO THE INSTRUMENTATION SCHEDULE ABOVE FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
- INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION. PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
- SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.

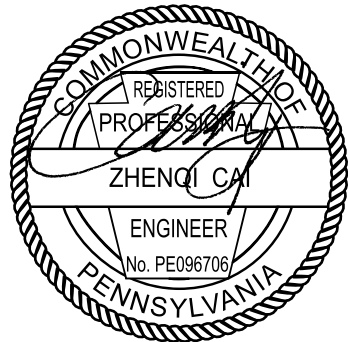


Designed by:	SAA	REV No.	DATE	DESCRIPTION	APPV
Drawn by:	MAB	1	11/21/25	REVISION FOR ADDENDUM 7	ELDS
Checked by:	ELDS				

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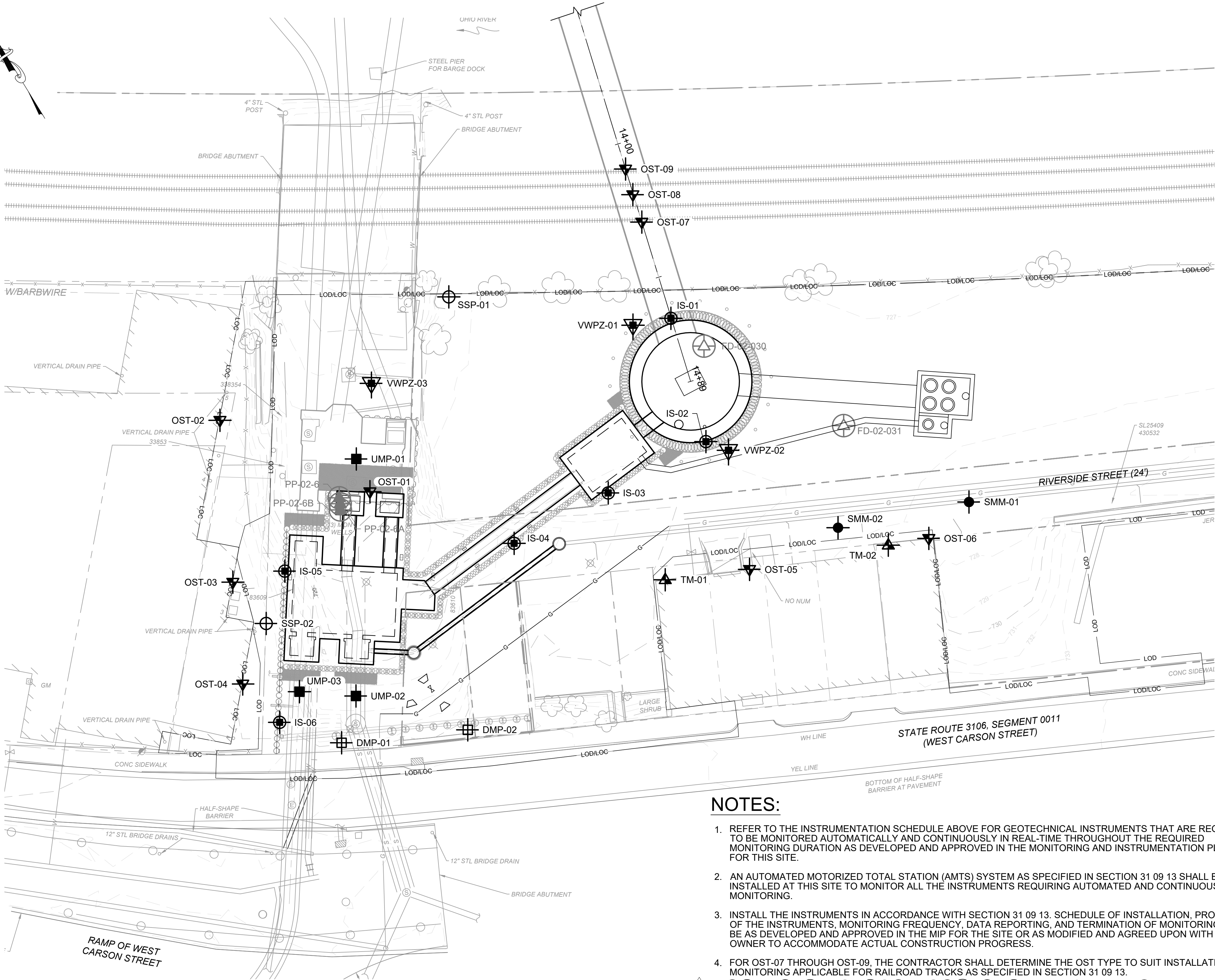
ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

AS1-GI-500

GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:	1797
File:	AS1-GI-500.dwg
Date:	11/21/2025
Sheet:	720 OF 770

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonal\507105621 - ALCOSAN Ohio River Tunnel Design - T&M\Project Files\3 - O14-GI-600 - LAST SAVED BY: BOW101681 PLOT DATE: 11/19/2025 9:57:20 AM

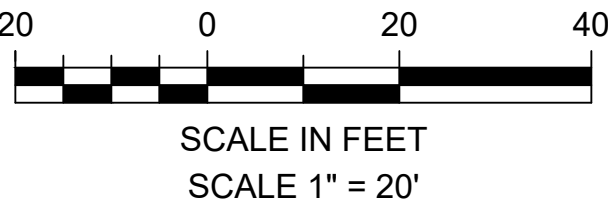


NOTES:

- REFER TO THE INSTRUMENTATION SCHEDULE ABOVE FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
- AN AUTOMATED MOTORIZED TOTAL STATION (AMTS) SYSTEM AS SPECIFIED IN SECTION 31 09 13 SHALL BE INSTALLED AT THIS SITE TO MONITOR ALL THE INSTRUMENTS REQUIRING AUTOMATED AND CONTINUOUS MONITORING.
- INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
- FOR OST-07 THROUGH OST-09, THE CONTRACTOR SHALL DETERMINE THE OST TYPE TO SUIT INSTALLATION AND MONITORING APPLICABLE FOR RAILROAD TRACKS AS SPECIFIED IN SECTION 31 09 13.
- SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.

INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
DMP-01	---	---	412730.56	1334734.45
DMP-02	---	---	412710.77	1334775.45
IS-01	YES	668	412798.32	1334914.99
IS-02	YES	668	412754.04	1334902.48
IS-03	YES	672	412756.74	1334862.96
IS-04	YES	672	412759.05	1334824.71
IS-05	YES	668	412793.71	1334749.40
IS-06	YES	668	412748.47	1334719.36
OST-01	YES	---	412801.96	1334790.36
OST-02	YES	---	412852.02	1334757.96
OST-03	YES	---	412800.13	1334731.43
OST-04	YES	---	412767.14	1334715.29
OST-05	YES	---	412706.77	1334891.78
OST-06	YES	---	412682.50	1334952.41
OST-07	YES	---	412833.20	1334924.22
OST-08	YES	---	412843.26	1334926.63
OST-09	YES	---	412852.47	1334929.23
SMM-01	---	2" BELOW GRADE	412686.06	1334971.52
SMM-02	---	2" BELOW GRADE	412702.86	1334926.66
SSP-01	---	20' BELOW GRADE	412846.67	1334851.14
SSP-02	---	20' BELOW GRADE	412781.22	1334733.85
TM-01	YES	---	412719.47	1334864.04
TM-02	YES	---	412688.06	1334938.75
UMP-01	---	TOP OF EXISTING REGULATOR	412814.53	1334792.36
UMP-02	---	TOP OF 48" RCP SEWER	412742.16	1334747.65
UMP-03	---	TOP OF 42" RCP SEWER	412754.11	1334731.17
VWPZ-01	YES	577	412803.34	1334902.10
VWPZ-02	YES	577	412747.13	1334907.75
VWPZ-03	YES	673	412834.81	1334811.21

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-030	VWPZ	412783.60	1334919.88	150.0
FD-02-031	OPEN STANDPIPE	412733.00	1334947.61	11.5 - 21.5
PP-02-6	VWPZ	412805.88	1334779.83	165.0
PP-02-6A	OPEN STANDPIPE	412803.89	1334779.01	113.7 - 133.7
PP-02-6B	OPEN STANDPIPE	412801.96	1334777.91	74.7 - 94.7

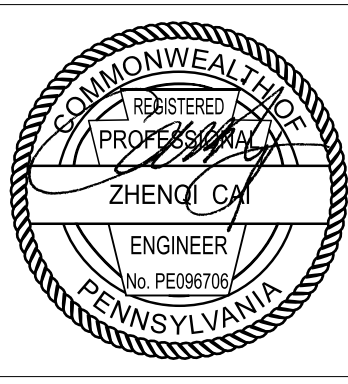


Designed by:	REVISION				APPV
	REV No.	DATE	DESCRIPTION	ELDS	
Drawn by:	1	11/21/25	REVISION FOR ADDENDUM 7		
Checked by:					

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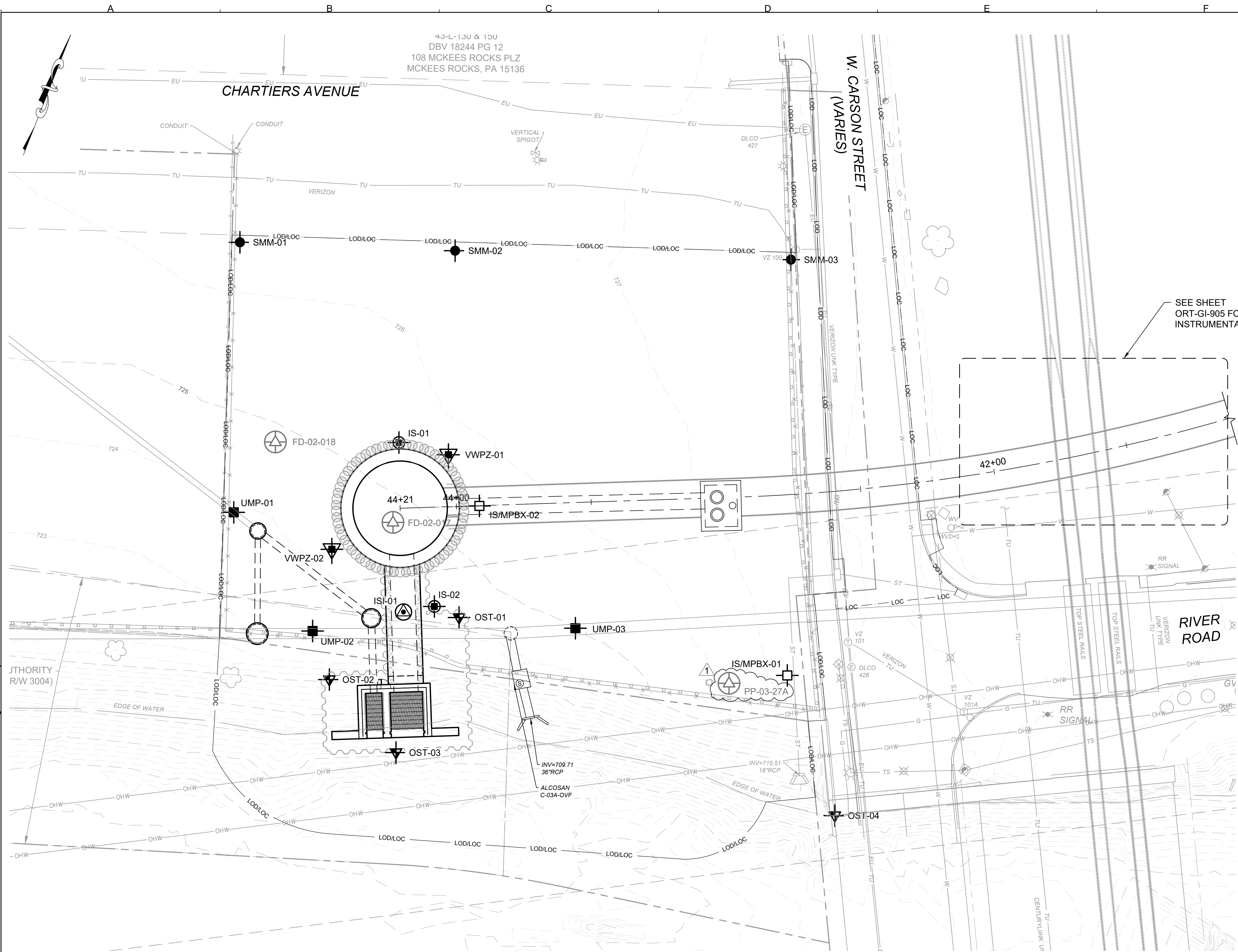


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EXECUTIVE DIRECTOR, ALCOSAN

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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN) OHIO RIVER TUNNEL (ORT)		Contract: 1797
O14-GI-600 GEOTECHNICAL INSTRUMENTATION LAYOUT		File: O14-GI-600.dwg
		Date: 11/21/2025
		Sheet: 721 OF 770

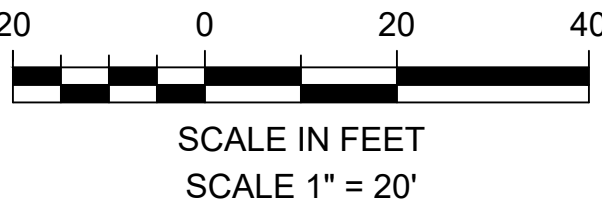


INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
IS-01	YES	662	420686.52	1327376.65
IS-02	YES	671	420635.29	1327411.88
IS/MPBX-01	YES	563	420661.37	1327542.68
IS/MPBX-02	YES	563	420676.11	1327413.19
ISI-01	---	694	420629.05	1327402.09
OST-01	---	---	420634.98	1327421.93
OST-02	---	---	420595.43	1327386.18
OST-03	---	---	420579.79	1327419.32
OST-04	---	---	420619.98	1327578.71
SMM-01	---	2" BELOW GRADE	420732.79	1327293.93
SMM-02	---	2" BELOW GRADE	420760.22	1327368.92
SMM-03	---	2" BELOW GRADE	420804.45	1327485.37
UMP-01	---	TOP OF 24" RCP COM SEWER	420639.32	1327329.83
UMP-02	---	TOP OF 45" RCP INTERCEPTOR	420609.73	1327373.59
UMP-03	YES	TOP OF 45" RCP INTERCEPTOR	420647.71	1327463.35
VWPZ-01	YES	565	420689.29	1327395.36
VWPZ-02	---	565	420640.45	1327368.69

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-017	VWPZ	420658.30	1327385.86	140.0
FD-02-018	OPEN STANDPIPE	420669.32	1327334.21	34.0 - 44.0
PP-03-27A	OPEN STANDPIPE	420650.46	1327523.78	40.3 - 60.3

NOTES:

1. REFER TO THE INSTRUMENTATION SCHEDULE ABOVE FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
2. INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
3. FOR ISI-01, ADJUST THE POSITION OF THE BOREHOLE AS NECESSARY SO THAT IT WILL BE LOCATED APPROXIMATELY 3 FEET AWAY FROM THE EDGE OF THE EXISTING CCI, TO BE VERIFIED BY THE CONTRACTOR.
4. SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.



Designed by:	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
SAA	1	11/21/25	REVISION FOR ADDENDUM 7	ELDS
Drawn by:				
MAB				
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ELDS				

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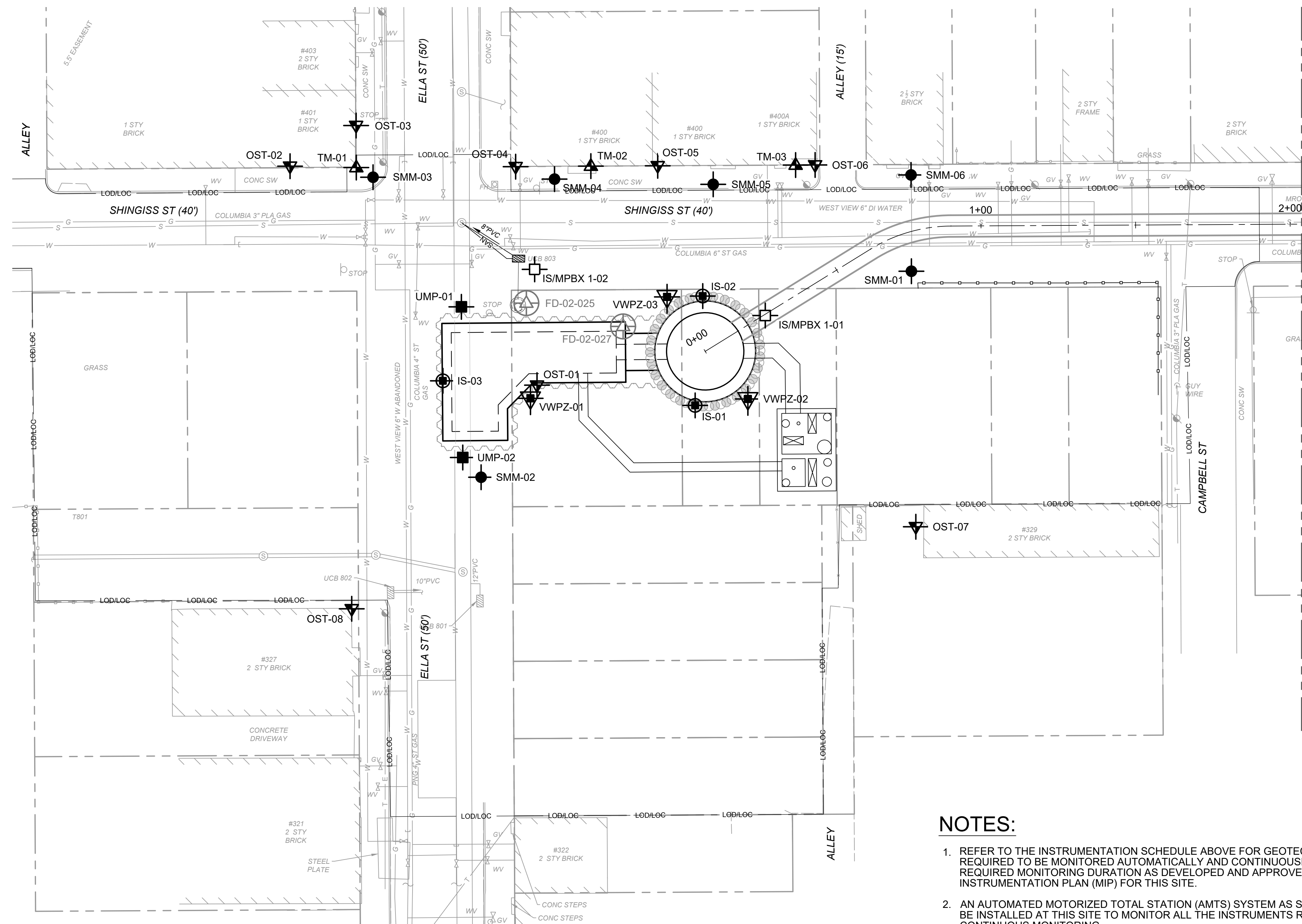
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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

O07-GI-700

GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:	1797
File:	ORT-GI-700.dwg
Date:	11/21/2025
Sheet:	722 OF 770

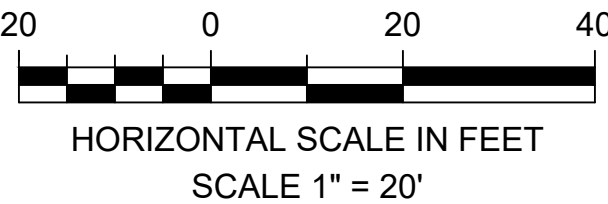


INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
IS-01	YES	655	424139.50	1327308.95
IS-02	YES	655	424155.14	1327340.75
IS-03	YES	655	424214.03	1327274.83
IS/MPBX 1-01	YES	655	424134.49	1327345.48
IS/MPBX 1-02	YES	665	424206.49	1327320.91
OST-01	YES	---	424187.01	1327288.91
OST-02	YES	---	424291.66	1327310.00
OST-03	YES	---	424279.79	1327332.11
OST-04	YES	---	424228.49	1327346.53
OST-05	YES	---	424188.90	1327369.87
OST-06	YES	---	424145.02	1327395.69
OST-07	YES	---	424058.05	1327310.88
OST-08	YES	---	424202.48	1327196.26
SMM-01	---	2" BELOW GRADE	424100.82	1327381.61
SMM-02	---	2" BELOW GRADE	424187.68	1327254.08
SMM-03	---	2" BELOW GRADE	424266.65	1327320.41
SMM-04	---	2" BELOW GRADE	424215.60	1327349.38
SMM-05	---	2" BELOW GRADE	424170.37	1327373.71
SMM-06	---	2" BELOW GRADE	424116.56	1327408.48
TM-01	YES	---	424272.92	1327320.39
TM-02	YES	---	424207.54	1327358.91
TM-03	YES	---	424150.46	1327392.49
UMP-01	---	TOP OF 60" COMB SEWER	424220.88	1327298.52
UMP-02	---	TOP OF 60" COMB SEWER	424196.02	1327256.62
VWPZ-01	YES	663	424186.70	1327284.16
VWPZ-02	YES	586	424125.79	1327319.32
VWPZ-03	YES	586	424164.98	1327334.73

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-025	OPEN STANDPIPE	424203.32	1327310.13	50.0 - 60.0
FD-02-027	VWPZ	424172.47	1327319.34	125.0

NOTES:

1. REFER TO THE INSTRUMENTATION SCHEDULE ABOVE FOR GEOTECHNICAL INSTRUMENTS THAT ARE REQUIRED TO BE MONITORED AUTOMATICALLY AND CONTINUOUSLY IN REAL-TIME THROUGHOUT THE REQUIRED MONITORING DURATION AS DEVELOPED AND APPROVED IN THE MONITORING AND INSTRUMENTATION PLAN (MIP) FOR THIS SITE.
2. AN AUTOMATED MOTORIZED TOTAL STATION (AMTS) SYSTEM AS SPECIFIED IN SECTION 31 09 13 SHALL BE INSTALLED AT THIS SITE TO MONITOR ALL THE INSTRUMENTS REQUIRING AUTOMATED AND CONTINUOUS MONITORING.
3. INSTALL THE INSTRUMENTS IN ACCORDANCE WITH SECTION 31 09 13. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THE SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
4. SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.



Designed by:	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
SAA	1	11/21/25	REVISION FOR ADDENDUM 7	ELDS
Drawn by:				
MAB				
Checked by:				
ELDS				

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Nova Tower 2, Suite 1301
Pittsburgh, PA 15212
(412) 497 - 2900



Dial 8-1-1 or 1-800-242-1776 not less than 3 business days nor more than 10 business days prior to the start of excavation.

Pennsylvania One Call System Serial Number

FINAL DESIGN TICKET # 20250404203



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ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

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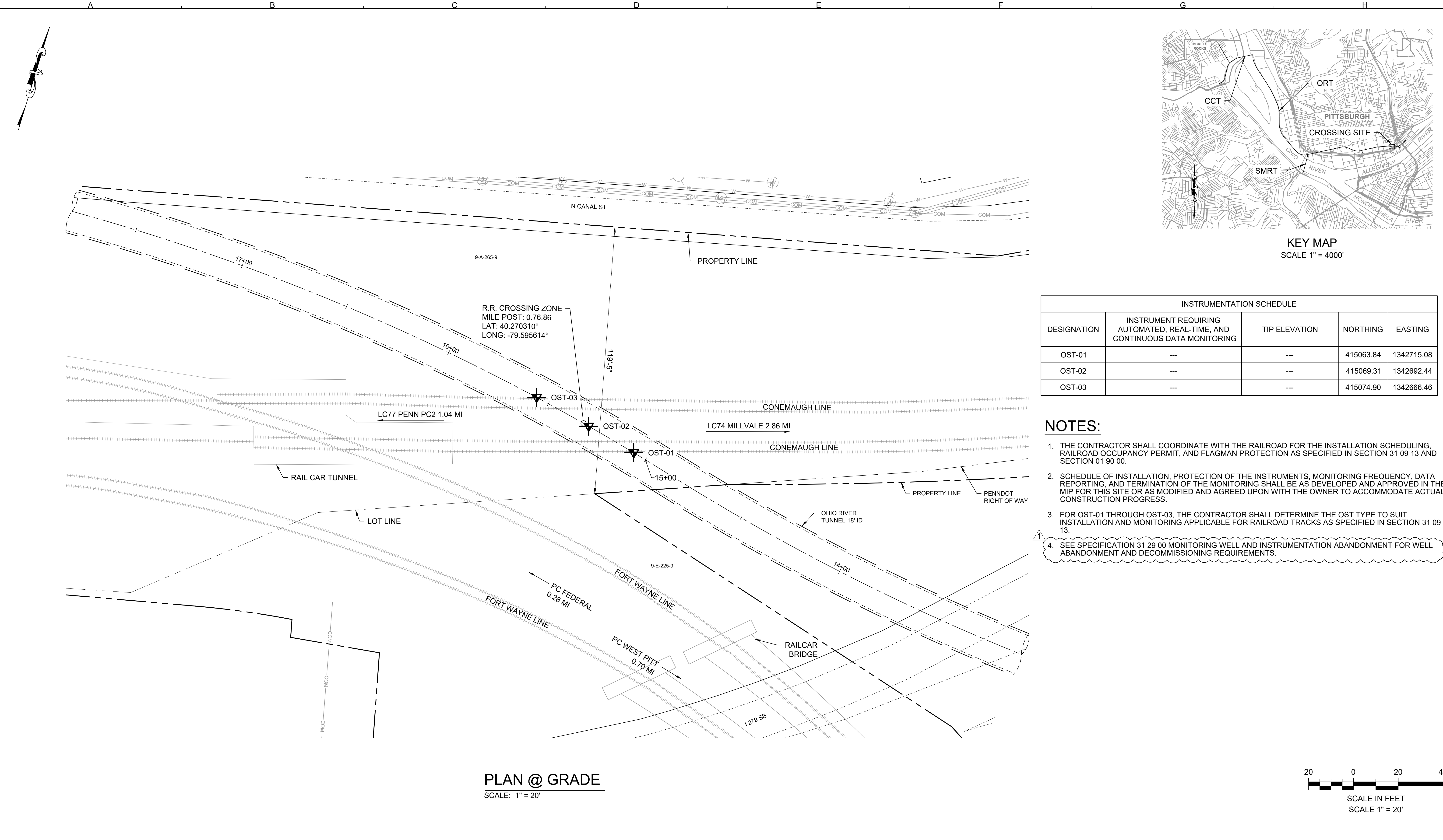
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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

O06A-GI-800
GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:	1797
File:	O06A-GI-800.dwg
Date:	11/21/2025
Sheet:	723 OF 770

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonaldd\507105621 - ALCOSAN Ohio River Tunnel Design - T&MP\Project Files\1 - ORT\06-Geotechnical\Sheets - ORT-GI-900 PLOT DATE: 11/19/2025 10:20:55 AM LAST SAVED BY: BOW101681

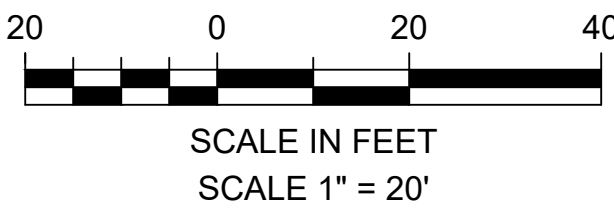


PLAN @ GRADE
SCALE: 1" = 20'

INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
OST-01	---	---	415063.84	1342715.08
OST-02	---	---	415069.31	1342692.44
OST-03	---	---	415074.90	1342666.46

NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD FOR THE INSTALLATION SCHEDULING, RAILROAD OCCUPANCY PERMIT, AND FLAGMAN PROTECTION AS SPECIFIED IN SECTION 31 09 13 AND SECTION 01 90 00.
2. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF THE MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THIS SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
3. FOR OST-01 THROUGH OST-03, THE CONTRACTOR SHALL DETERMINE THE OST TYPE TO SUIT INSTALLATION AND MONITORING APPLICABLE FOR RAILROAD TRACKS AS SPECIFIED IN SECTION 31 09 13.
4. SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.



Designed by:	SAA	REV No.	DATE	REVISION	DESCRIPTION	APPV
Drawn by:	MAB	1	11/21/25	REVISION FOR ADDENDUM 7		ELDS
Checked by:	DM					

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Pittsburgh, PA 15212
(412) 497 - 2900

COMMONWEALTH OF
PENNSYLVANIA
REGISTERED
PROFESSIONAL
ENGINEER
No. PE006708
ZHENQI CAI

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allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
PITTSBURGH, PA 15233
(412) 766 - 4810

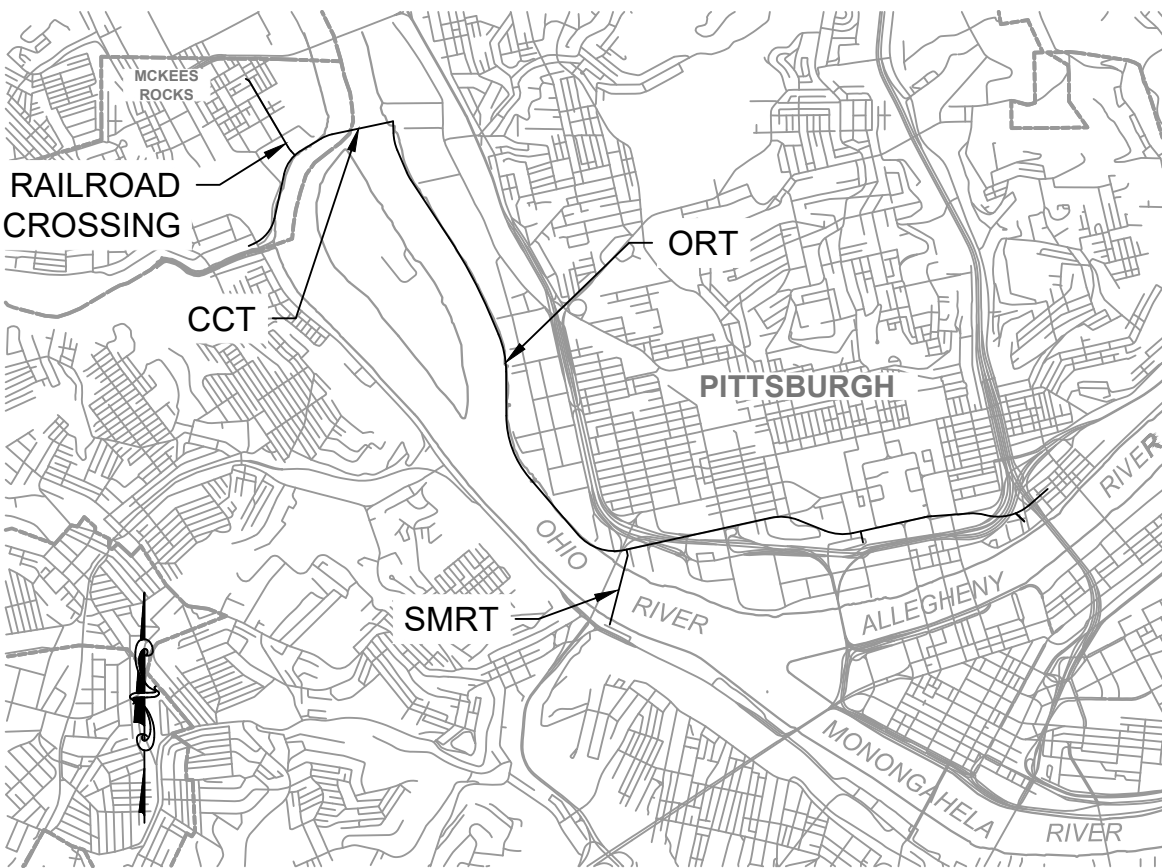
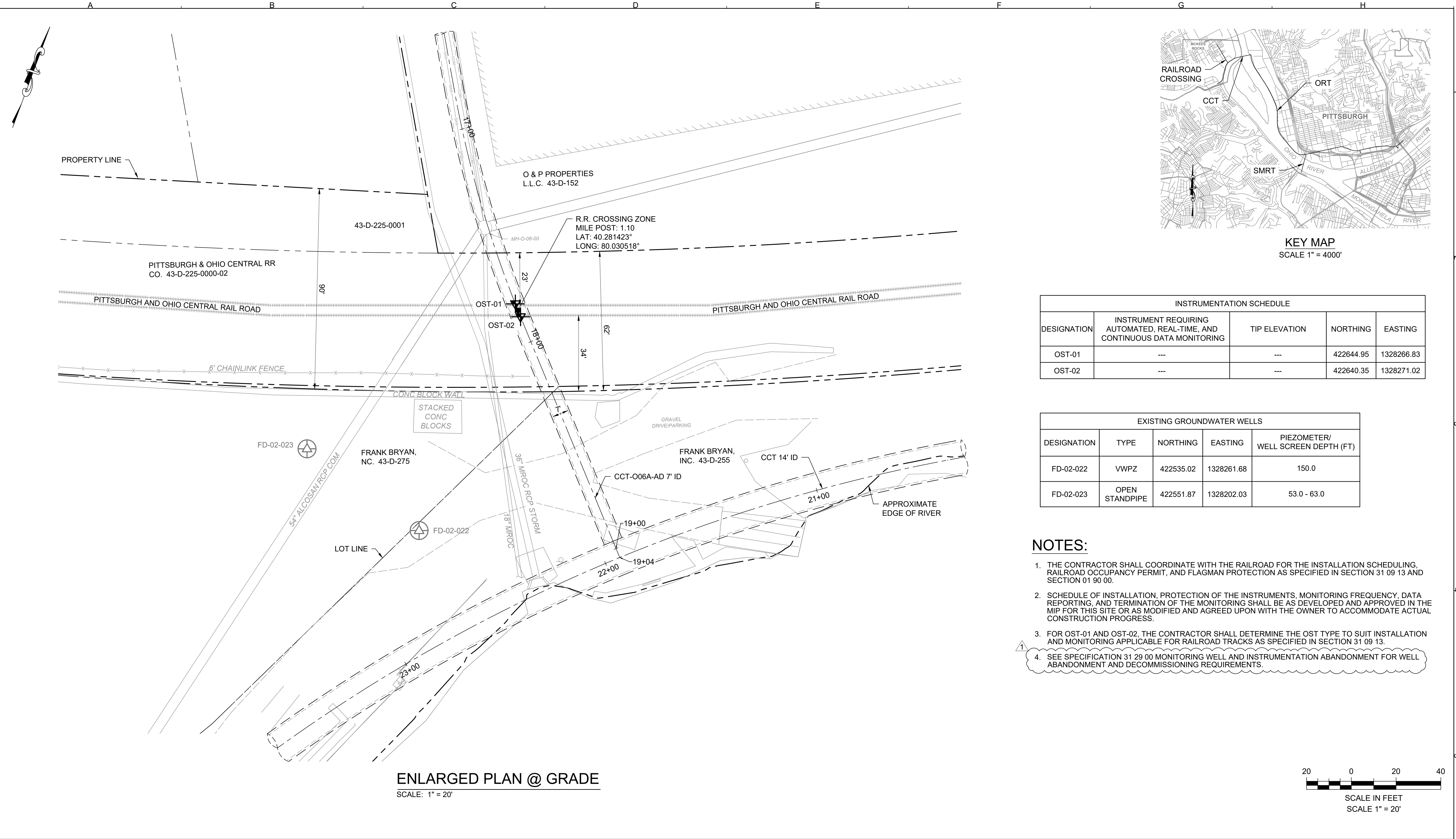
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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

ORT-GI-900
GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:
1797
File:
ORT-GI-900.dwg
Date:
11/21/2025
Sheet:
724 OF 770

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonaldd1507105621 - ALCOSAN Ohio River Tunnel Design - T&MP\Project Files\1 - ORT\06-Geotechnical\Sheets - ORT-GI-901 PLOT DATE: 11/19/2025 10:23:59 AM LAST SAVED BY: BOW101681



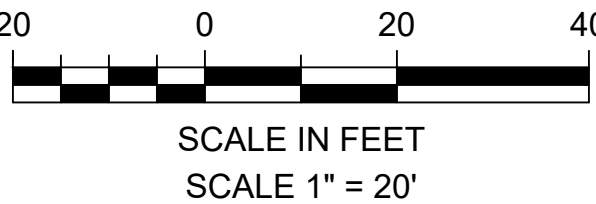
KEY MAP
SCALE 1" = 4000'

INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
OST-01	---	---	422644.95	1328266.83
OST-02	---	---	422640.35	1328271.02

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	PIEZOMETER/ WELL SCREEN DEPTH (FT)
FD-02-022	VWPZ	422535.02	1328261.68	150.0
FD-02-023	OPEN STANDPIPE	422551.87	1328202.03	53.0 - 63.0

NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD FOR THE INSTALLATION SCHEDULING, RAILROAD OCCUPANCY PERMIT, AND FLAGMAN PROTECTION AS SPECIFIED IN SECTION 31 09 13 AND SECTION 01 90 00.
2. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF THE MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THIS SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
3. FOR OST-01 AND OST-02, THE CONTRACTOR SHALL DETERMINE THE OST TYPE TO SUIT INSTALLATION AND MONITORING APPLICABLE FOR RAILROAD TRACKS AS SPECIFIED IN SECTION 31 09 13.
4. SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.



Designed by:

SAA

Drawn by:

MAB

Checked by:

ELDS

REVISION			
REV No.	DATE	DESCRIPTION	APPV
1	11/21/25	REVISION FOR ADDENDUM 7	ELDS

M

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Nova Tower 2, Suite 1301
Pittsburgh, PA 15212
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COMMONWEALTH OF
PENNSYLVANIA
REGISTERED
PROFESSIONAL
ENGINEER
No. PE009670
ZHENQI CAI

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allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
PITTSBURGH, PA 15233
(412) 766 - 4810

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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

ORT-GI-901
GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:

1797

File:

ORT-GI-901.dwg

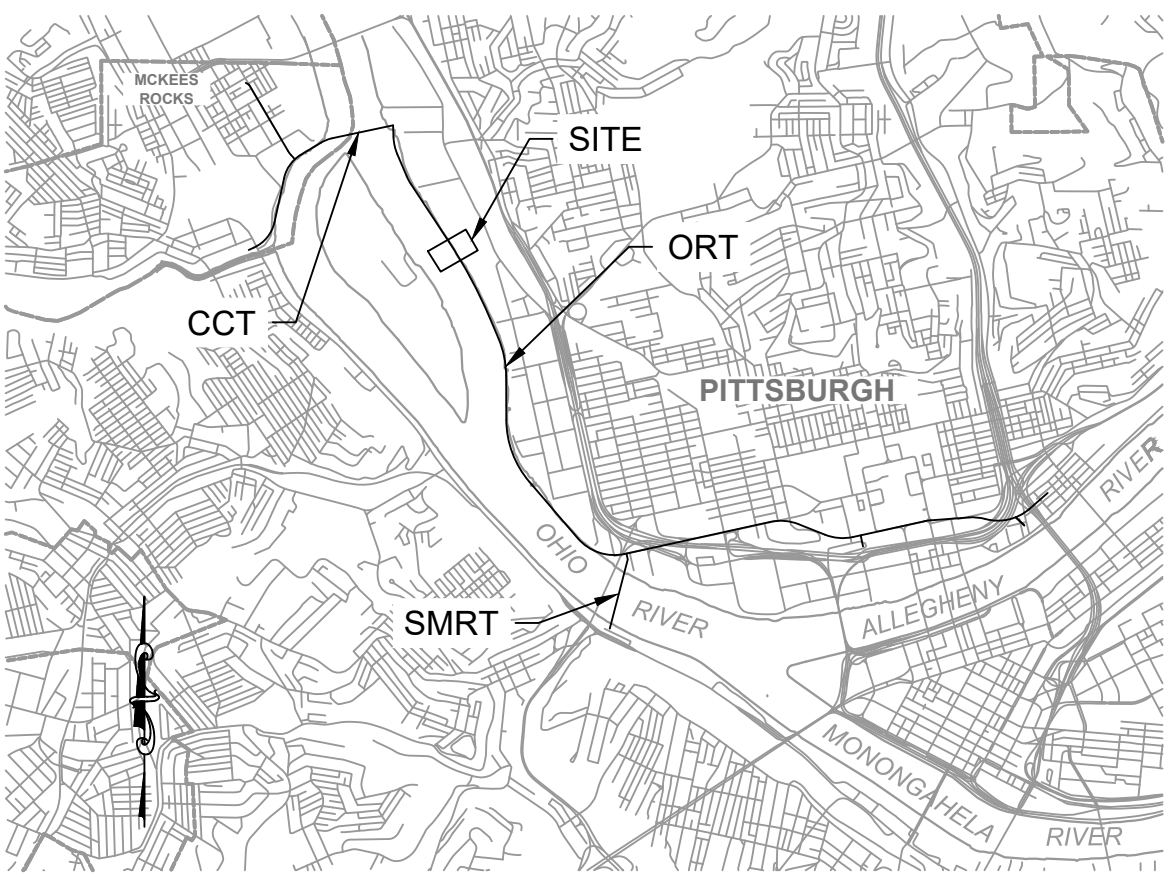
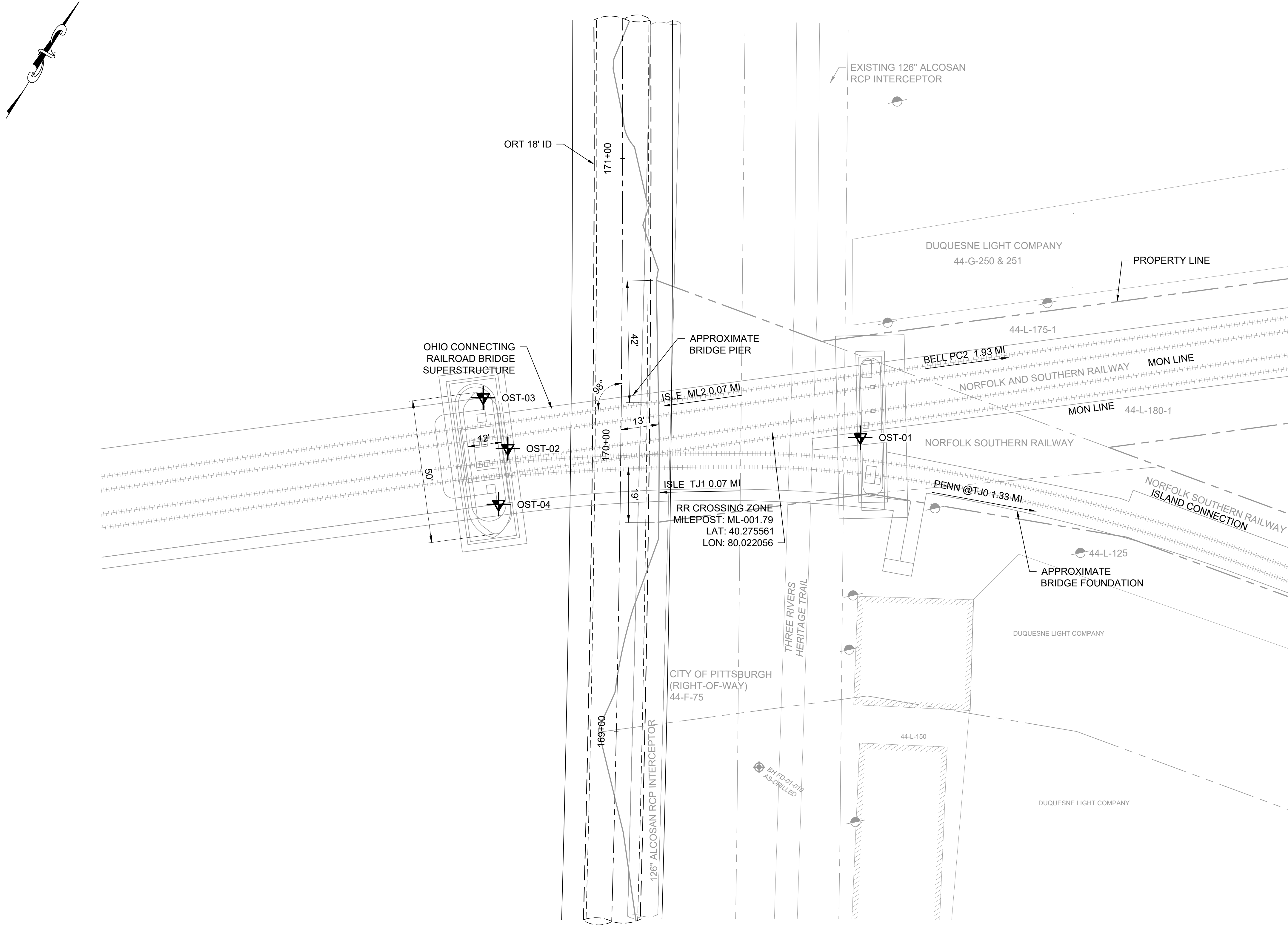
Date:

11/21/2025

Sheet:

725 OF 770

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonald\507105621 - ALCOSAN Ohio River Tunnel Design - T&MP\Project Files\1 - ORT\06-Geotechnical\Sheets - ORT-GI-902 PLOT DATE: 11/19/2025 10:26:33 AM LAST SAVED BY: BOW101681



KEY MAP
SCALE 1" = 4000'

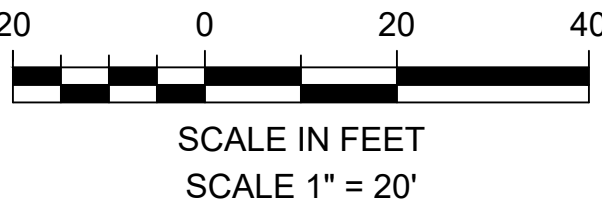
INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
OST-01	---	---	420712.25	1331737.66
OST-02	---	---	420642.31	1331636.36
OST-03	---	---	420652.56	1331619.55
OST-04	---	---	420624.23	1331644.22

NOTES:

- AS REQUIRED BY NORFOLK SOUTHERN RAILROAD, THE MONITORING INSTRUMENTS SHALL BE INSTALLED AT THE BRIDGE DECK ELEVATION. THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD FOR INSTALLATION SCHEDULING, RAILROAD OCCUPANCY PERMIT, AND FLAGMAN PROTECTION AS SPECIFIED IN SECTION 31 19 03 AND SECTION 01 90 00.
- SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF THE MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THIS SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.

LOCATION AND SIZING OF BRIDGE PIERS AND FOUNDATIONS WERE APPROXIMATED FROM AERIAL IMAGERY. THE CONTRACTOR SHALL SURVEY THE SITE FOR ACTUAL ACCESS REQUIREMENTS FOR INSTRUMENT INSTALLATION AND MONITORING.
- SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.

PLAN @ BRIDGE DECK
SCALE: 1" = 20' 0"

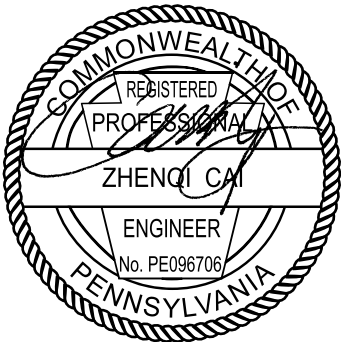


Designed by:	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
SAA	1	11/21/25	REVISION FOR ADDENDUM 7	ELDS
Drawn by:				
MAB				
Checked by:				
DM				

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EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
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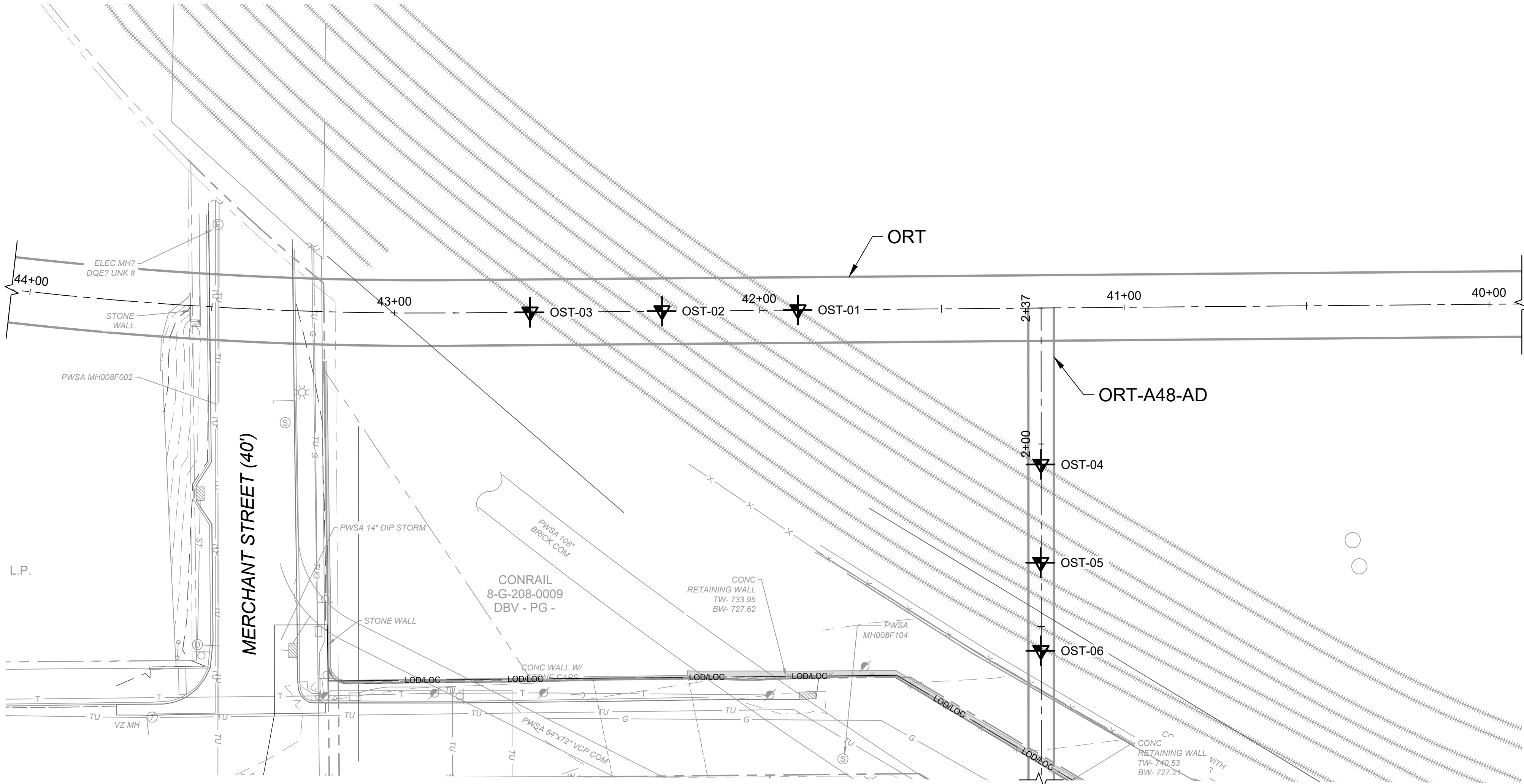
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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

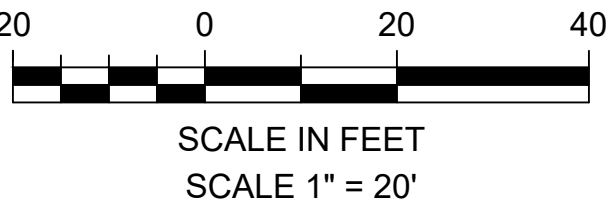
ORT-GI-902
GEOTECHNICAL INSTRUMENTATION LAYOUT

Contract:	1797
File:	ORT-GI-902.dwg
Date:	11/21/2025
Sheet:	726 OF 770

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonaldd1507105621 - ALCOSAN Ohio River Tunnel Design - T&M\Project Files\1 - ORT\06-Geotechnical\Sheets - ORT-GI-903 PLOT DATE: 11/19/2025 10:28:32 AM LAST SAVED BY: BOW101681



ORT CROSSING
SCALE: 1" = 20'



INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
OST-01	YES	---	414704.74	1340071.82
OST-02	YES	---	414696.73	1340035.44
OST-03	YES	---	414688.90	1340000.10
OST-04	YES	---	414677.16	1340145.74
OST-05	YES	---	414650.80	1340151.26
OST-06	YES	---	414627.19	1340156.32

NOTES:

- THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD FOR THE INSTALLATION SCHEDULING, RAILROAD OCCUPANCY PERMIT, AND FLAGMAN PROTECTION AS SPECIFIED IN SECTION 31 09 13 AND SECTION 01 90 00.
- SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF THE MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THIS SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
- MONITORING OF THESE OSTs SHALL BE COVERED BY THE ATMS AT THE ORT-A48 SITE (SEE SHEET A48-GI-300)
- FOR OST-01 THROUGH OST-06, THE CONTRACTOR SHALL DETERMINE THE OST TYPE TO SUIT INSTALLATION AND MONITORING APPLICABLE FOR RAILROAD TRACKS AS SPECIFIED IN SECTION 31 09 13.

SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.

Designed by:	REVISION			
SAA	REV No.	DATE	DESCRIPTION	APPV
	1	11/21/25	REVISION FOR ADDENDUM 7	ELDS
Drawn by:				
MAB				
Checked by:				
ELDS				

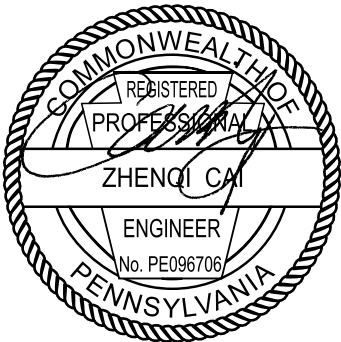


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Pittsburgh, PA 15212
(412) 497 - 2900



Dial 8-1-1 or 1-800-242-1776 not less than 3 business days nor more than 10 business days prior to the start of excavation.

Pennsylvania One Call System Serial Number
FINAL DESIGN TICKET # 20250040205



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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN) OHIO RIVER TUNNEL (ORT)		Contract:	1797
		File:	ORT-GI-903.dwg
		Date:	11/21/2025
		Sheet:	727 OF 770

ORT-GI-903
GEOTECHNICAL INSTRUMENTATION LAYOUT

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonald\507105621 - ALCOSAN Ohio River Tunnel Design - T&M\Project Files\1 - ORT\06-Geotechnical\Sheets - ORT-GI-904 LAST SAVED BY: BOW101681 PLOT DATE: 11/19/2025 10:31:11 AM

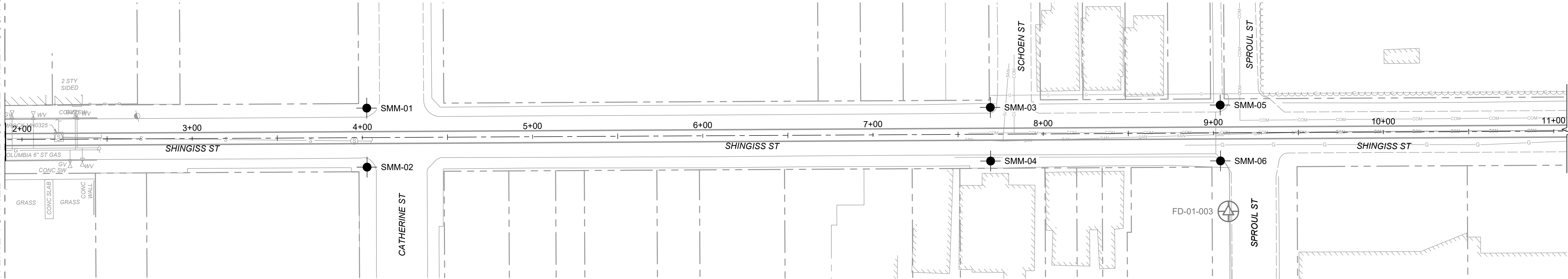
MATCH LINE TUNNEL STA 2+00 SEE SHEET O06A-GI-800

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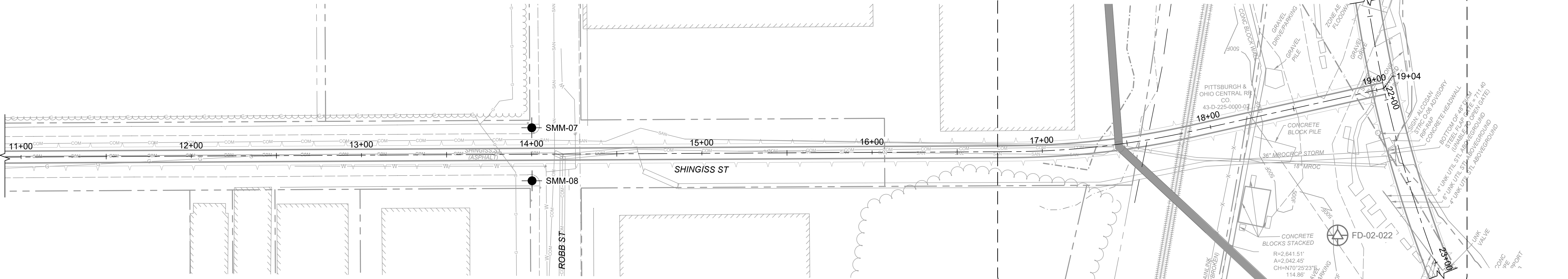
- SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF THE MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THIS SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
- SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.

EXISTING GROUNDWATER WELLS				
DESIGNATION	TYPE	NORTHING	EASTING	WELL SCREEN/PIEZOMETER DEPTH (FT)
FD-01-003	VPWZ	423368.53	1327776.01	145.0
FD-02-022	VPWZ	422535.02	1328261.68	150.0

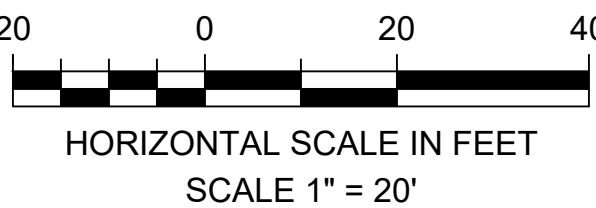
INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
SMM-01	---	---	423836.66	1327574.05
SMM-02	---	---	423819.08	1327544.18
SMM-03	---	---	423520.09	1327758.49
SMM-04	---	---	423504.13	1327731.36
SMM-05	---	---	423404.03	1327827.55
SMM-06	---	---	423387.40	1327799.29
SMM-07	---	---	422976.10	1328078.41
SMM-08	---	---	422960.30	1328051.57



CCT-O06A-AD
STA. 2+00 - 11+00



CCT-O06A-AD
STA. 11+00 - 19+04



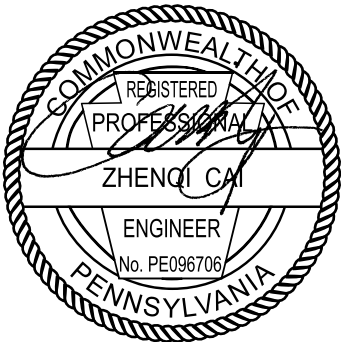
Designed by:	REVISION				APPV
	REV No.	DATE	DESCRIPTION		
SA	1	11/21/25	REVISION FOR ADDENDUM 7		ELDS
Drawn by:					
MAB					
Checked by:					
ELDS					



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Pennsylvania One Call System Serial Number
FINAL DESIGN TICKET # 20250040203



ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

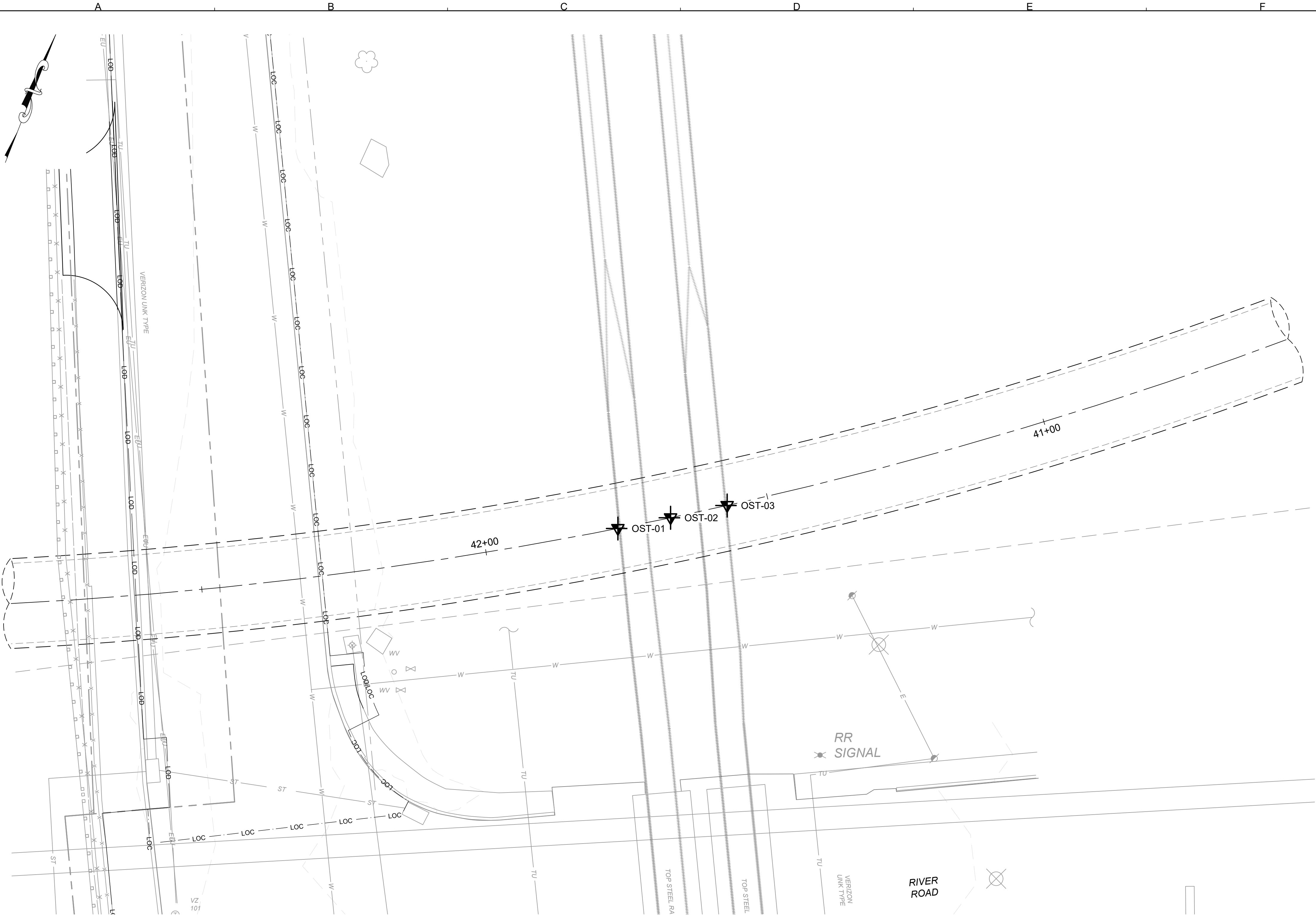
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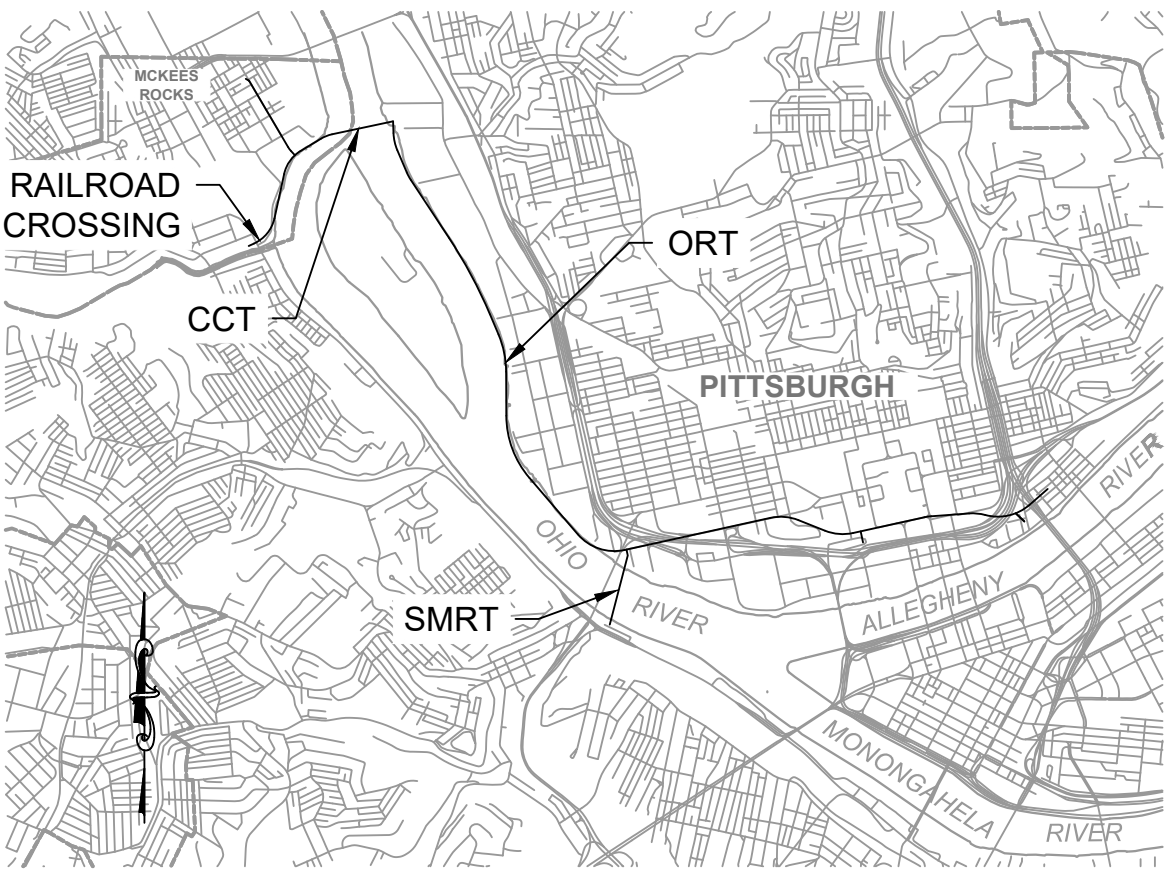
ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN) OHIO RIVER TUNNEL (ORT)		Contract:	1797
		File:	ORT-GI-904.dwg
		Date:	11/21/2025
		Sheet:	728 OF 770

ORT-GI-904
GEOTECHNICAL INSTRUMENTATION LAYOUT

FILE NAME: C:\Users\bow101681\Documents\Mott MacDonalddocs\Mott MacDonalddocs\T&M\Project Files\1 - ORT\06-Geotechnical\Sheets - ORT-GI-905 LAST SAVED BY: BOW101681 PLOT DATE: 11/19/2025 10:35:13 AM



ENLARGED PLAN @ GRADE
SCALE: 1" = 10'



KEY MAP
SCALE 1" = 4000'

INSTRUMENTATION SCHEDULE				
DESIGNATION	INSTRUMENT REQUIRING AUTOMATED, REAL-TIME, AND CONTINUOUS DATA MONITORING	TIP ELEVATION	NORTHING	EASTING
OST-01	---	---	420772.98	1327604.62
OST-02	---	---	420778.21	1327612.42
OST-03	---	---	420783.93	1327620.73

NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD FOR THE INSTALLATION SCHEDULING, RAILROAD OCCUPANCY PERMIT, AND FLAGMAN PROTECTION AS SPECIFIED IN SECTION 31 09 13 AND SECTION 01 90 00.
2. SCHEDULE OF INSTALLATION, PROTECTION OF THE INSTRUMENTS, MONITORING FREQUENCY, DATA REPORTING, AND TERMINATION OF THE MONITORING SHALL BE AS DEVELOPED AND APPROVED IN THE MIP FOR THIS SITE OR AS MODIFIED AND AGREED UPON WITH THE OWNER TO ACCOMMODATE ACTUAL CONSTRUCTION PROGRESS.
3. FOR OST-01 THROUGH OST-03, THE CONTRACTOR SHALL DETERMINE THE OST TYPE TO SUIT INSTALLATION AND MONITORING APPLICABLE FOR RAILROAD TRACKS AS SPECIFIED IN SECTION 31 09 13.
4. SEE SPECIFICATION 31 29 00 MONITORING WELL AND INSTRUMENTATION ABANDONMENT FOR WELL ABANDONMENT AND DECOMMISSIONING REQUIREMENTS.



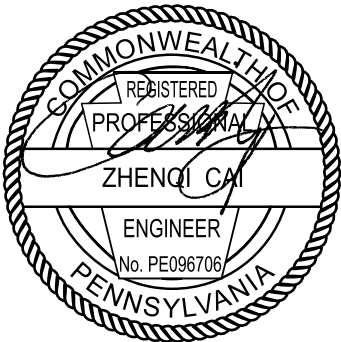
SCALE IN FEET
SCALE 1" = 10'

Designed by:	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
SAA	1	11/21/25	REVISION FOR ADDENDUM 7	ELDS
Drawn by:				
MAB				
Checked by:				
DM				

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EXECUTIVE DIRECTOR, ALCOSAN

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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN) OHIO RIVER TUNNEL (ORT)	
ORT-GI-905 GEOTECHNICAL INSTRUMENTATION LAYOUT	

Contract:	1797
File:	ORT-GI-905.dwg
Date:	11/21/2025
Sheet:	729 OF 770

Addendum No. 7

Attachment I

APPENDIX E – SUPPLEMENTAL INFORMATION (FOR REFERENCE ONLY)

SECTION 10

- **Add Section 10 – Former Crivelli Chevrolet Drawing Sheets (5 pages)**

Addendum No. 7

Attachment I

APPENDIX E – SUPPLEMENTAL INFORMATION (FOR REFERENCE ONLY)

SECTION 10

Former Crivelli Chevrolet Drawing Sheets

Facility Image Renovation for:

CRIVELLI CHEVROLET

108 Mc Kees Rocks Plaza Mc Kees Rocks, Pennsylvania 15136



Baker
Bednar
Snyder
& ASSOCIATES INC
628 Niles Corland Road SE
Warren, Ohio 44494
Phone 330 856 7222
Fax 330 856 7226

PHOENIX
DESIGN &
ENGINEERING
MECHANICAL,
ELECTRICAL & PLUMBING
CONSULTANT



FACILITY IMAGE RENOVATION
CRIVELLI CHEVROLET
108 MC KEES ROCKS PLAZA MC KEES ROCKS, PENNSYLVANIA 15136

BID DOCUMENTS

COVER SHEET
CODE COMPLIANCE
DRAWING INDEX

REVISIONS

DRAWN BY RKM

DATE 2-15-2012

PROJECT NUMBER
11070

SHEET NUMBER

COVER

ACSA FILE No 2273-20.0

2009 INTERNATIONAL BUILDING CODE

CODE COMPLIANCE

BUILDING INSPECTION
DEPT. OF JURISDICTION ALLEGHANY COUNTY, PA
NEW CONSTRUCTION ☐ ADDITION / RENOVATION ☒

Building is divided into (2) buildings by a 3 hr. fire wall

Building #1:

Mixed Use, Non-Separated;
Use Group 'B' Vehicle Showroom / 'S1'
Construction Type: '3B'

Allowable Height & Area per IBC

Table 503 (S1) Controls:

2 Story, 55 ft., 17,500 s.f.

Area Increase Due to Frontage (IBC 506.2):

$I_s = [(516/822) - 0.25] (950)$

$I_s = 37.8\%$

$17,500 \times (0.378) + 17,500 = 24,115$ s.f.

Actual : 1 Story, 21,854 s.f.

No Sprinkler Required

Building #2: Use Group 'S1'- Vehicle Repair

Construction Type: '3B'

Allowable Height & Area per IBC Table 503:

2 Story, 55 ft., 17,500 s.f.

Area Increase Due to Frontage (IBC 506.2):

$I_s = [(927/1106) - 0.25] (950)$

$I_s = 58.8\%$

$17,500 \times (0.588) + 17,500 = 27,790$ s.f.

Actual : 2 Story, 35,301 s.f. (Existing 'S1' No Work)

957 s.f. (Existing 'S1' to be Renovated)

Total = 36,258 s.f.

LOADING AND STRUCTURAL CRITERIA

SOIL BEARING CAPACITY 2500 PSF

LIVE LOADS:

Floor Live load N/A

Roof Live load 20 PSF

DEAD LOADS:

Floor Dead load N/A

Roof Dead load 20 PSF

ROOF SNOW LOADS:

Ground Snow Load (Pg) 25

Flat Roof Snow Load (Pf) 30 PSF

Snow Exposure Factor (Ce) 0.9

Snow Load Importance Factor (Is) 1.0 PSF

Thermal Factor (Ct) 1.1 PSF

WIND LOAD:

Basic Wind Speed 90 MPH

Wind Importance Factor (Iw) 1.0

Building Category II

Wind Exposure EXPOSURE B

Internal Pressure Coefficient 1.0

SEISMIC LOAD:

Seismic Design Category A

Site Class D

OCCUPANCY LOAD

Use Group : B BUSINESS: 20,915 / 100 GROSS = 210

S1 SERVICE/ STORAGE: 38,560 / 300 GROSS = 129

TOTAL OCCUPANTS = 339

BAC #113443
CONSTRUCTION DOCUMENTS
2-15-2012

Mechanical, Plumbing &
Electrical Consultants:
**PHOENIX DESIGN
& ENGINEERING**

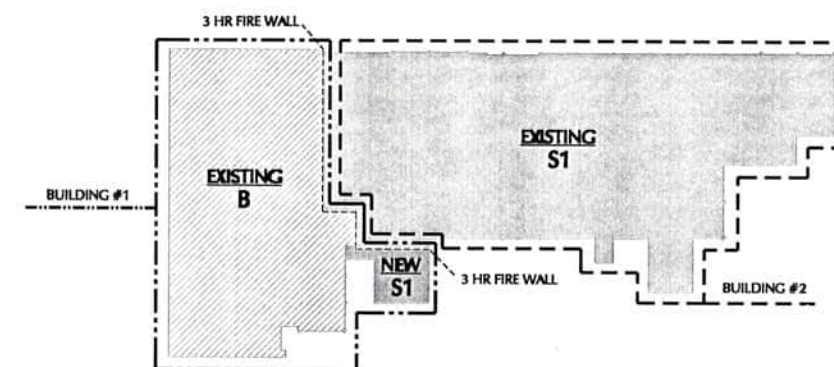
8162 Market Street, Suite H
Boardman, Ohio 44512 (330) 726-3477



Baker
Bednar
Snyder
& ASSOCIATES INC
ARCHITECTURE ENGINEERING INTERIOR DESIGN

DRAWING INDEX

COVER	COVER SHEET	STRUCTURAL DRAWINGS	
ARCHITECTURAL DRAWINGS		S0.1	GENERAL NOTES
A1.1	SITE PLAN	S1.1	FOUNDATION PLAN & DETAILS
A1.2	SITE PLAN DETAILS	S2.1	FRAMING PLAN & DETAILS
A2.1	DEMOLITION PLAN	MECHANICAL DRAWINGS	
A2.2	DEMOLITION PLAN (CONT.)	MD1.1	DEMOLITION PLAN - MECHANICAL
A3.1	FLOOR PLAN	M1.1	FLOOR PLAN - MECHANICAL
A3.2	FLOOR PLAN (CONT.)	M2.0	MECHANICAL SCHEDULE & DETAILS
A3.3	FLOOR PLAN DETAILS	PLUMBING DRAWINGS	
A4.1	SOUTH & WEST ELEVATIONS	PD1.1	DEMOLITION PLAN - PLUMBING
A4.2	NORTH & EAST ELEVATIONS	P1.1	FLOOR PLAN - PLUMBING
A5.1	BUILDING SECTIONS	P2.0	ENLARGED PLANS & DETAILS
A5.2	WALL SECTIONS	ELECTRICAL DRAWINGS	
A5.3	WALL SECTIONS	ED1.1	PARTIAL DEMOLITION PLAN - ELECTRICAL
A6.1	INTERIOR ELEVATIONS	ED1.2	PARTIAL DEMOLITION PLAN - ELECTRICAL
A6.2	INTERIOR ELEVATIONS	E1.1	PARTIAL FLOOR PLAN - ELECTRICAL
A6.3	MATERIAL & FINISH / ROOM FINISH SCHEDULE	E1.2	PARTIAL FLOOR PLAN - ELECTRICAL
A6.4	DOOR / HARDWARE SCHEDULE	E2.1	PARTIAL CEILING PLAN - ELECTRICAL
A6.5	DOOR TYPES	E2.2	PARTIAL CEILING PLAN - ELECTRICAL
A6.6	DOOR / WINDOW TYPES	E3.1	ELECTRICAL SCHEDULES & DIAGRAM
A7.1	REFLECTED CEILING PLAN		
A7.2	REFLECTED CEILING PLAN (CONT.)		
A7.3	FLOOR FINISH PLAN		
A7.4	FLOOR FINISH PLAN (CONT.)		
A7.5	WALL FINISH PLAN		
A7.6	WALL FINISH PLAN (CONT.)		
A7.7	BRANDING PLAN		
A7.8	BRANDING PLAN (CONT.)		
A7.9	FURNITURE PLAN		
A7.10	FURNITURE PLAN (CONT.)		



KEY PLAN

NO SCALE





**Baker
Bednar
Snyder
& ASSOCIATES INC**

628 Niles Cortland Road SE
Warren, Ohio 44484
Phone 330 856 7222
Fax 330 856 7226

**PHOENIX
DESIGN &
ENGINEERING**

MECHANICAL,
ELECTRICAL & PLUMBING
CONSULTANT



FACILITY IMAGE RENOVATION

CRIVELLI CHEVROLET

108 MC KEES ROCKS PLAZA MC KEES ROCKS, PENNSYLVANIA 15136

BID DOCUMENTS

FLOOR PLAN

REVISIONS

DRAWN BY RKM

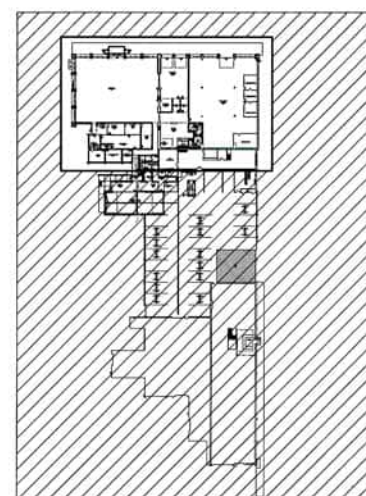
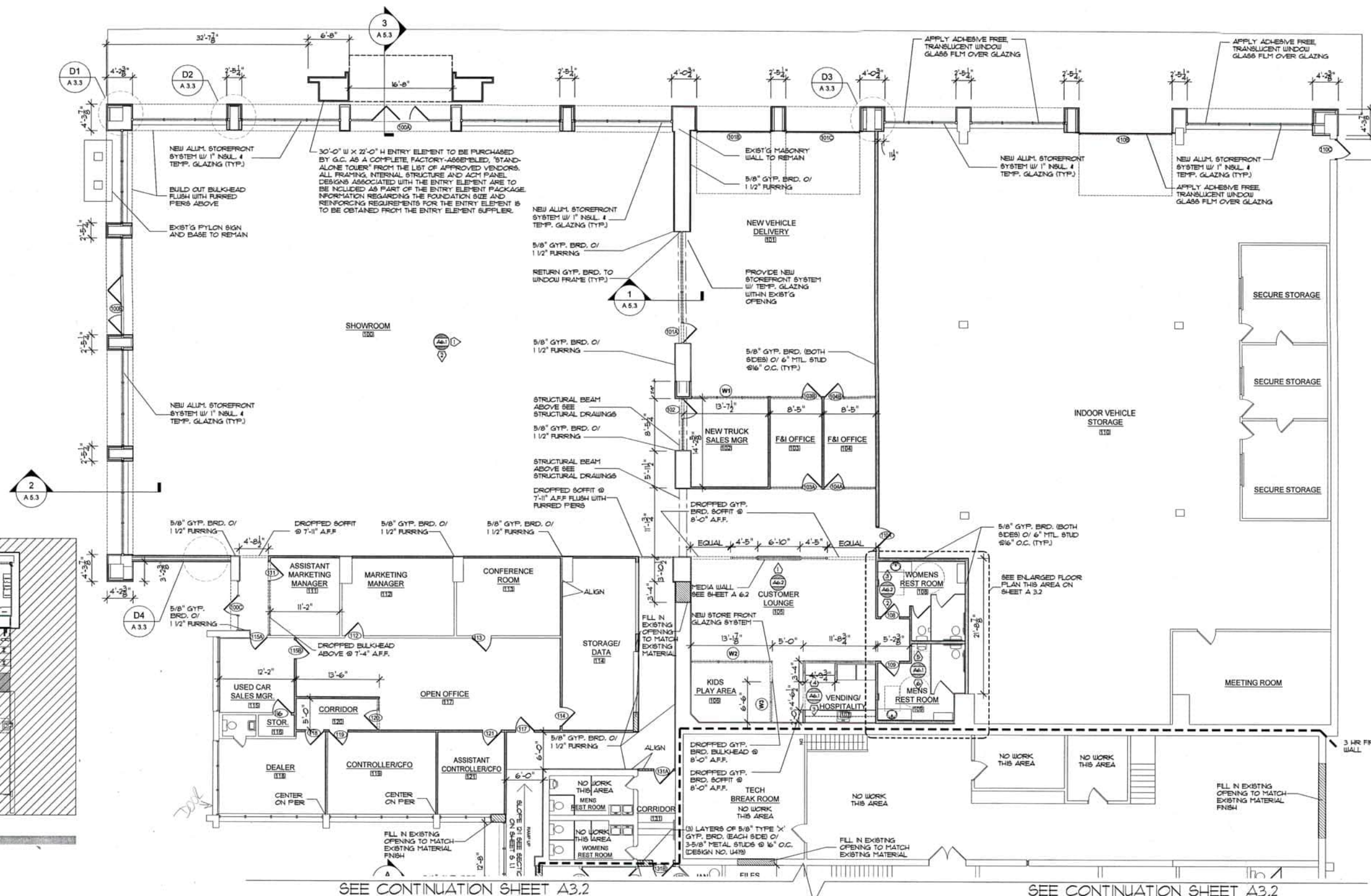
DATE 2-15-2012

PROJECT NUMBER
11070

SHEET NUMBER

A 3.1

2273-20.0



KEY PLAN

NO SCALE

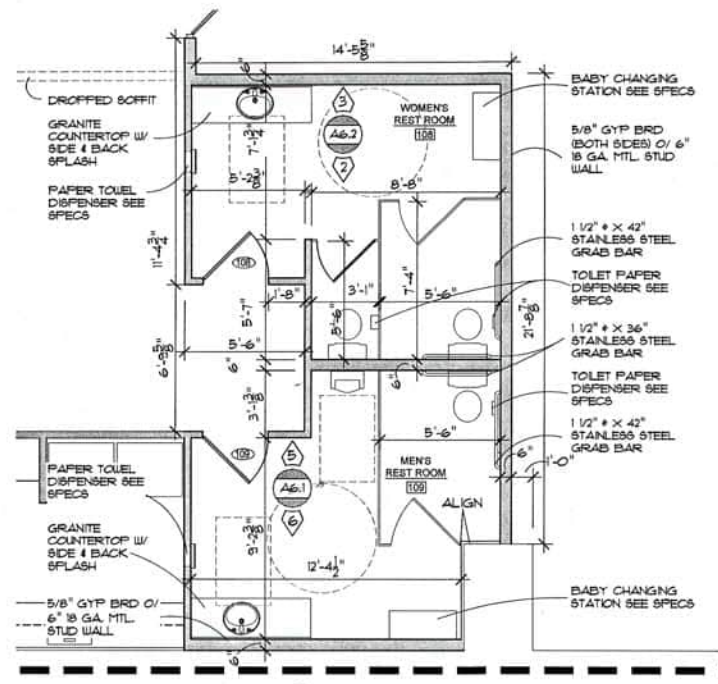
General Notes:

- ALL INTERIOR WALLS TO CONSIST OF 5/8" GYP. BRD. O/ 3 5/8" (UNLESS OTHERWISE NOTED), 20 GA. MTL. STUD @ 16" O.C. EXTEND ALL WALLS & GYP. BRD. TO UNDERSIDE OF ROOF DECK ABOVE
- ALL MASONRY WALLS TO BE 12" CONCRETE BLOCK WALLS UNLESS NOTED OTHERWISE
- G.C. TO PATCH OR REPAIR ALL EXIST'G INTERIOR WALLS SCHEDULED TO REMAIN TO A LEVEL EQUAL TO CONSTRUCTION STANDARDS NECESSARY TO RECEIVE NEW FINISHES
- ALL DIMENSIONS ARE TO ROUGH FRAMING
- ALL EXIST'G STOREFRONT IN SHOWROOM TO BE REPLACED
- ALL EXIST'G MASONRY IN SHOWROOM TO BE FURRED AND GYP. BRD. IS TO BE APPLIED

FLOOR PLAN

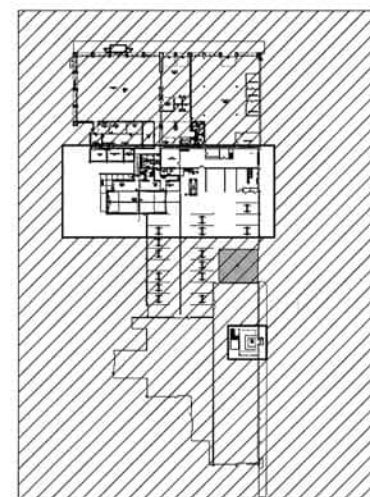
SCALE: 1/8" = 1'-0"





ENLARGED RESTROOM PLAN

SCALE: 1/4" = 1'-0"

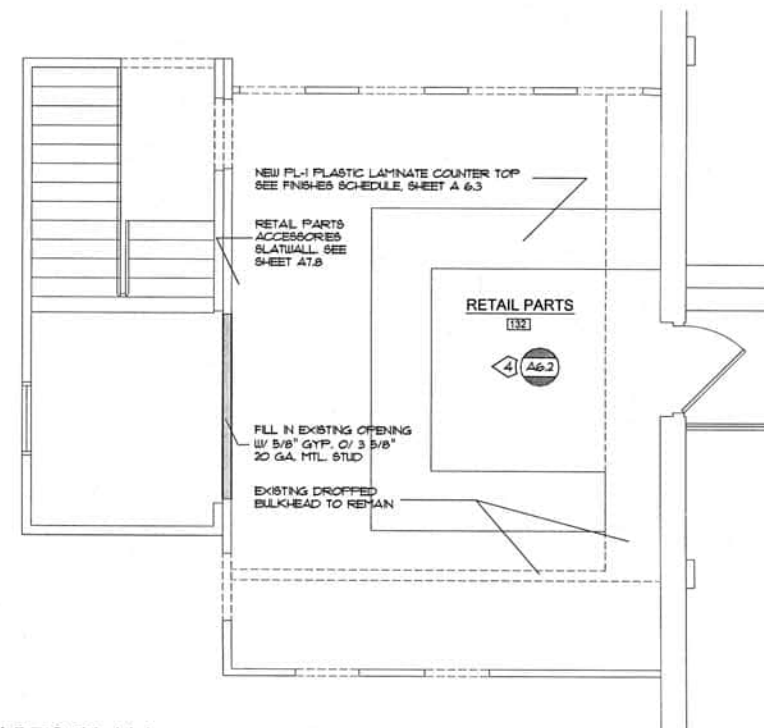


KEY PLAN

NO SCALE

General Notes:

- ALL INTERIOR WALLS TO CONSIST OF 5/8" GYP. BRD. @ 3 5/8" (UNLESS OTHERWISE NOTED), 20 GA. MTL. STUD @ 16" O.C. EXTEND ALL WALLS & GYP. BRD. TO UNDERSIDE OF ROOF DECK ABOVE
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- G.C. TO PATCH OR REPAIR ALL EXIST'G INTERIOR WALLS SCHEDULED TO REMAIN TO A LEVEL EQUAL TO CONSTRUCTION STANDARDS NECESSARY TO RECEIVE NEW FINISHES
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- ALL EXIST'G STOREFRONT IN SHOWROOM TO BE REPLACED
- ALL EXIST'G MASONRY IN SHOWROOM TO BE FURRED AND GYP. BRD IS TO BE APPLIED

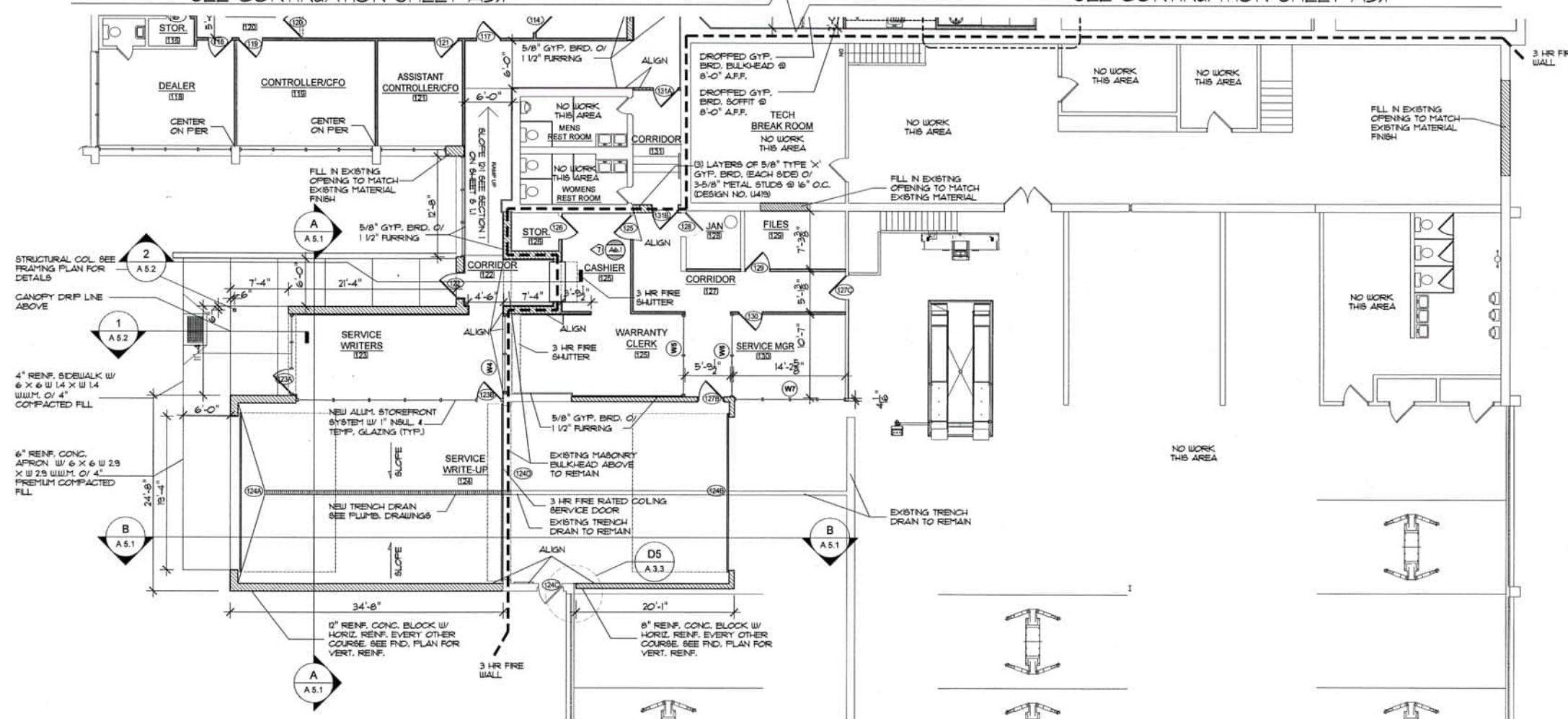


ENLARGED RETAIL PARTS PLAN

SCALE: 1/4" = 1'-0"

SEE CONTINUATION SHEET A3.1

SEE CONTINUATION SHEET A3.1



FLOOR PLAN

SCALE: 1/8" = 1'-0"



**Baker
Bednar
Snyder
& ASSOCIATES INC**

628 Niles Cortland Road SE
Warren Ohio 44484
Phone 330 856 7222
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BID DOCUMENTS

FLOOR PLAN
(CONT.)

REVISIONS

DRAWN BY: RKM

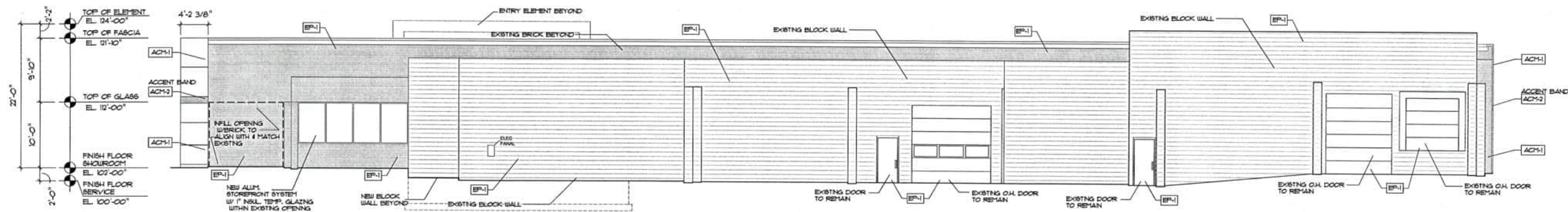
DATE: 2-15-2012

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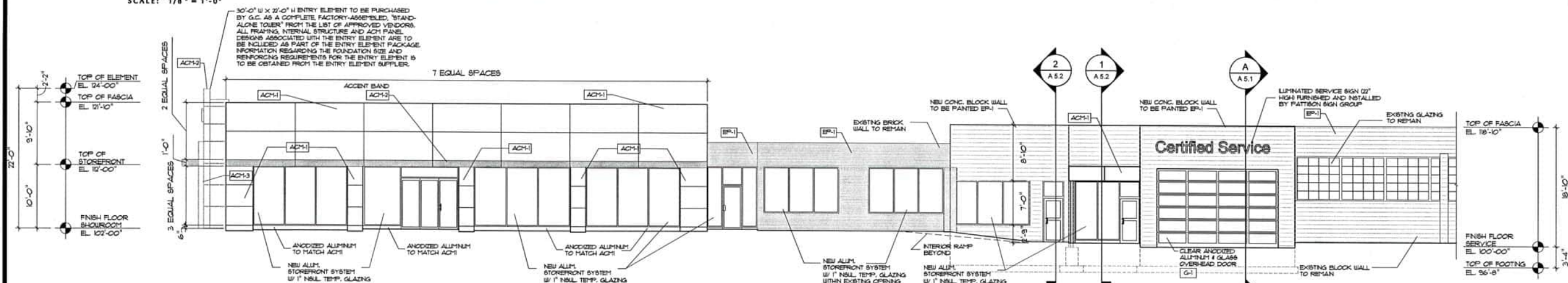
A 3.2

2273-20.0



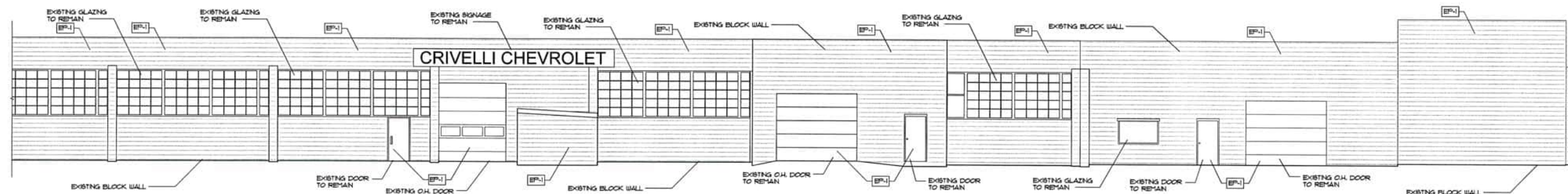
North Elevation

SCALE: 1/8" = 1'-0"



Partial East Elevation

SCALE: 1/8" = 1'-0"



Continuation of East Elevation

SCALE: 1/8" = 1'-0"

APPROVED VENDER LIST FOR ENTRY ELEMENT & ACM PANELS

AGI
412 North Cedar Bluff Rd, Suite 306
Knoxville, TN 37923
Phone: (865) 692-1242
Fax: (865) 692-1427
www.agiinc.com

Contact: Jeff Christensen
Phone: (865) 692-1427 ext. 245
jchristensen@agiinc.com

BLAIR COMPANIES
445 S. Gay Street, Suite 1001
Knoxville, TN 37902
Phone: (865) 540-4388
Fax: (865) 540-4366
www.blaircompanies.com

Contact: Rudy Worthington
Phone: (865) 540-4388 ext. 237
rworthington@blaircompanies.com

ENGINEERED ARCHITECTURAL SYSTEMS, INC.
535 Branch Drive
Alpharetta, GA 30004
Phone: (678) 495-1251
Fax: (678) 495-1255
www.EAS-Images.com

Contact: J. Andrew McIntyre
Phone: (678) 495-1251
jam@easinc.com

PATTON SIGN GROUP
410 N. Cedar Bluff Road, Suite 101
Knoxville, TN 37923
Phone: (865) 218-1976
Fax: (865) 693-1106
www.pattonsign.com

Contact: Jack Kirkland
Phone: (865) 218-1976 ext. 112
jkirkland@pattonsign.com

Note: Entry Element shop drawings shall be prepared and contain the seal of a licensed design professional registered in the State of Ohio and submitted to the architect for approval prior to fabrication.

MATERIAL AND FINISH SCHEDULE

NO.	COLOR AND MATERIAL SPECIFICATIONS	DESCRIPTIONS	MANUFACTURER SUPPLIER
EXTERIOR			
ACH1	APOLIC BRIGHT ALUMINUM METALLIC	ALUMINUM COMPOSITE MATERIAL W/ DRY ROUTE & RETURN SYSTEM	APOLIC OR EQUAL DAVE KEARNEY 751382574 ALT. SOURCES: ALUCOBOND, ALCOA
ACH2	APOLIC OVS. BLUE COLOR TO MATCH FHS 300 CHEVROLET BLUE	ALUMINUM COMPOSITE MATERIAL W/ DRY ROUTE & RETURN SYSTEM	APOLIC OR EQUAL DAVE KEARNEY 751382574 ALT. SOURCES: ALUCOBOND, ALCOA
ACH3	APOLIC DM HLZ ALUMINUM BRUSHED HARLINE ALUMINUM	ALUMINUM COMPOSITE MATERIAL W/ DRY ROUTE & RETURN SYSTEM	APOLIC OR EQUAL DAVE KEARNEY 751382574 ALT. SOURCES: ALUCOBOND, ALCOA
EP1	BENJAMIN MOORE OC-61 WHITE DIAMOND	EXTERIOR GRADE PAINT	LOCAL BENJAMIN MOORE PAINT SUPPLY STORE WWW.BENJAMINMOORE.COM
G1	CLEAR GLASS WITH ANODIZED ALUMINUM APPEARANCE FRAMING	GLAZING	GENERAL CONTRACTOR



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BID DOCUMENTS

NORTH & EAST
ELEVATIONS

REVISIONS

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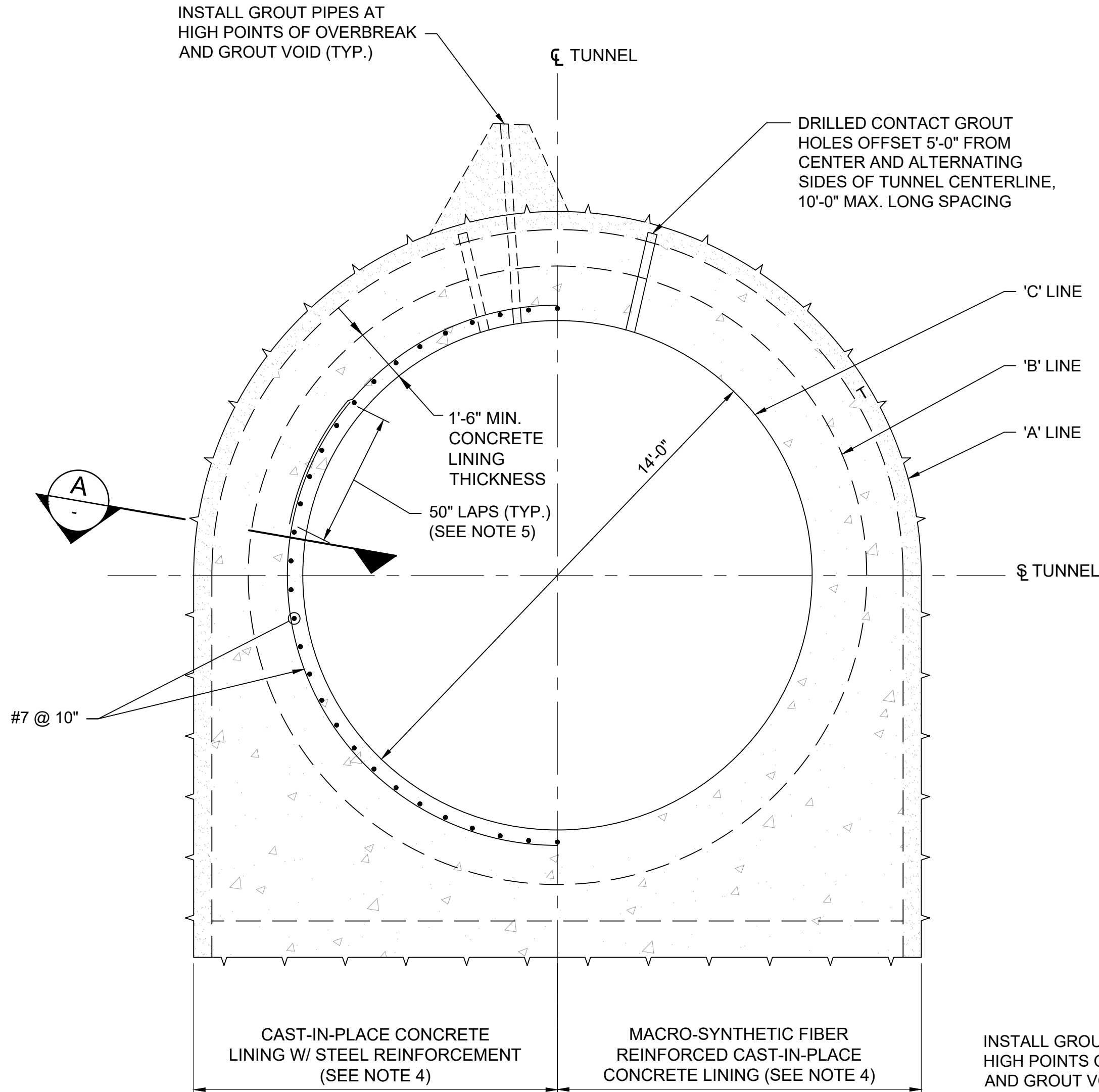
Addendum No. 7

Attachment J

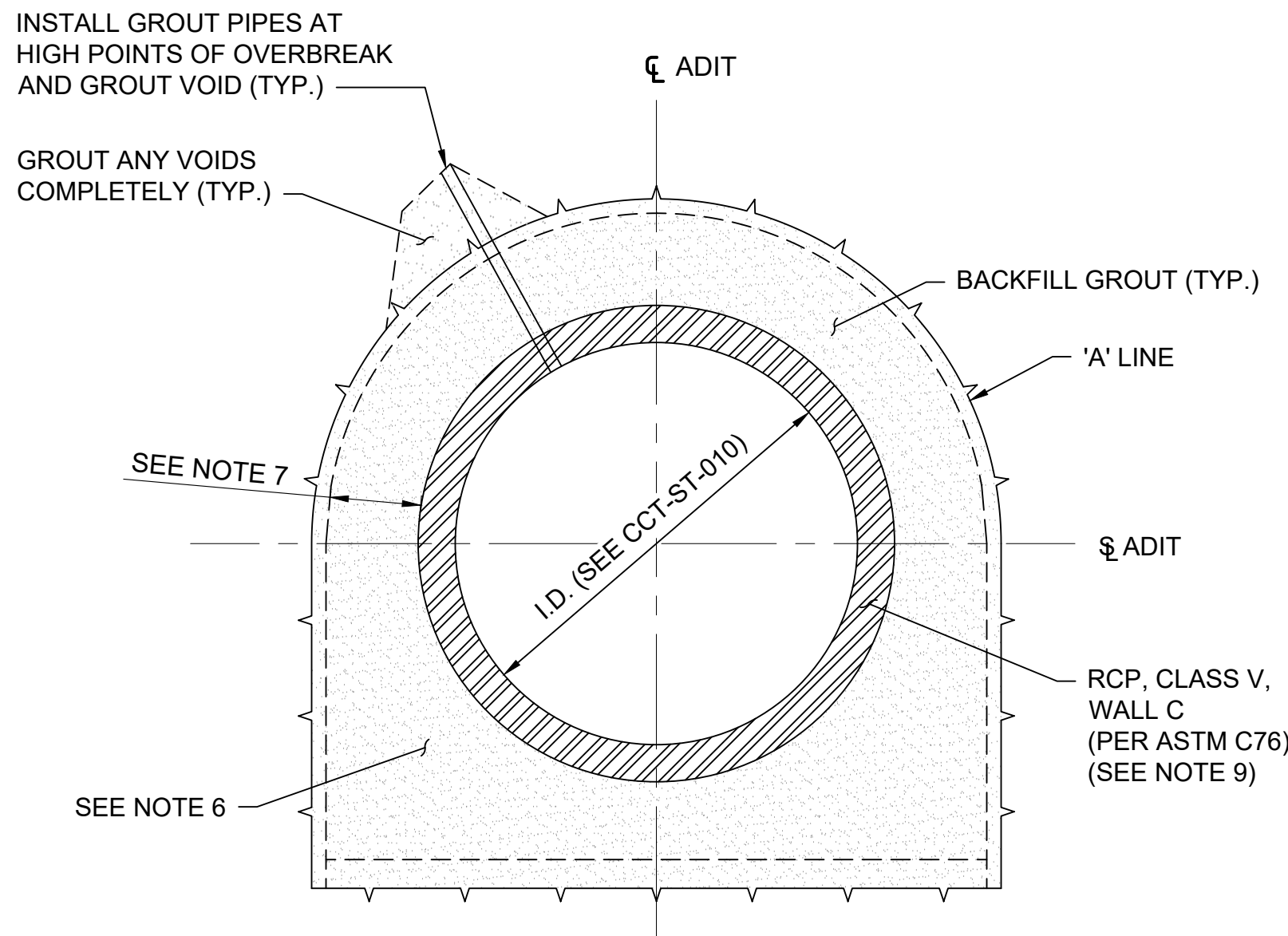
APPENDIX B – CONTRACT DRAWINGS

- **Revised CCT-ST-012 (Sheet 93 of 770) (1page)**

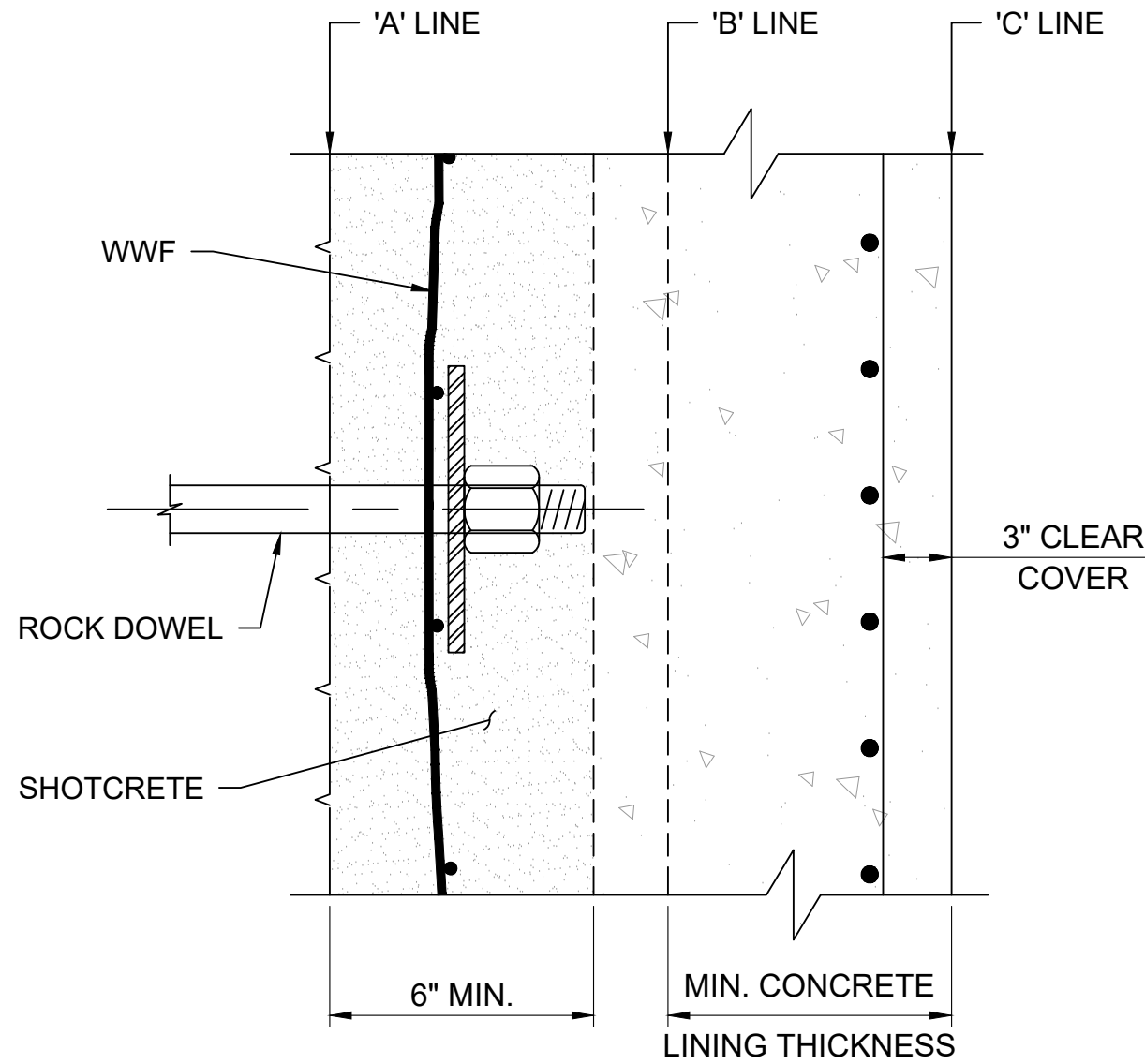
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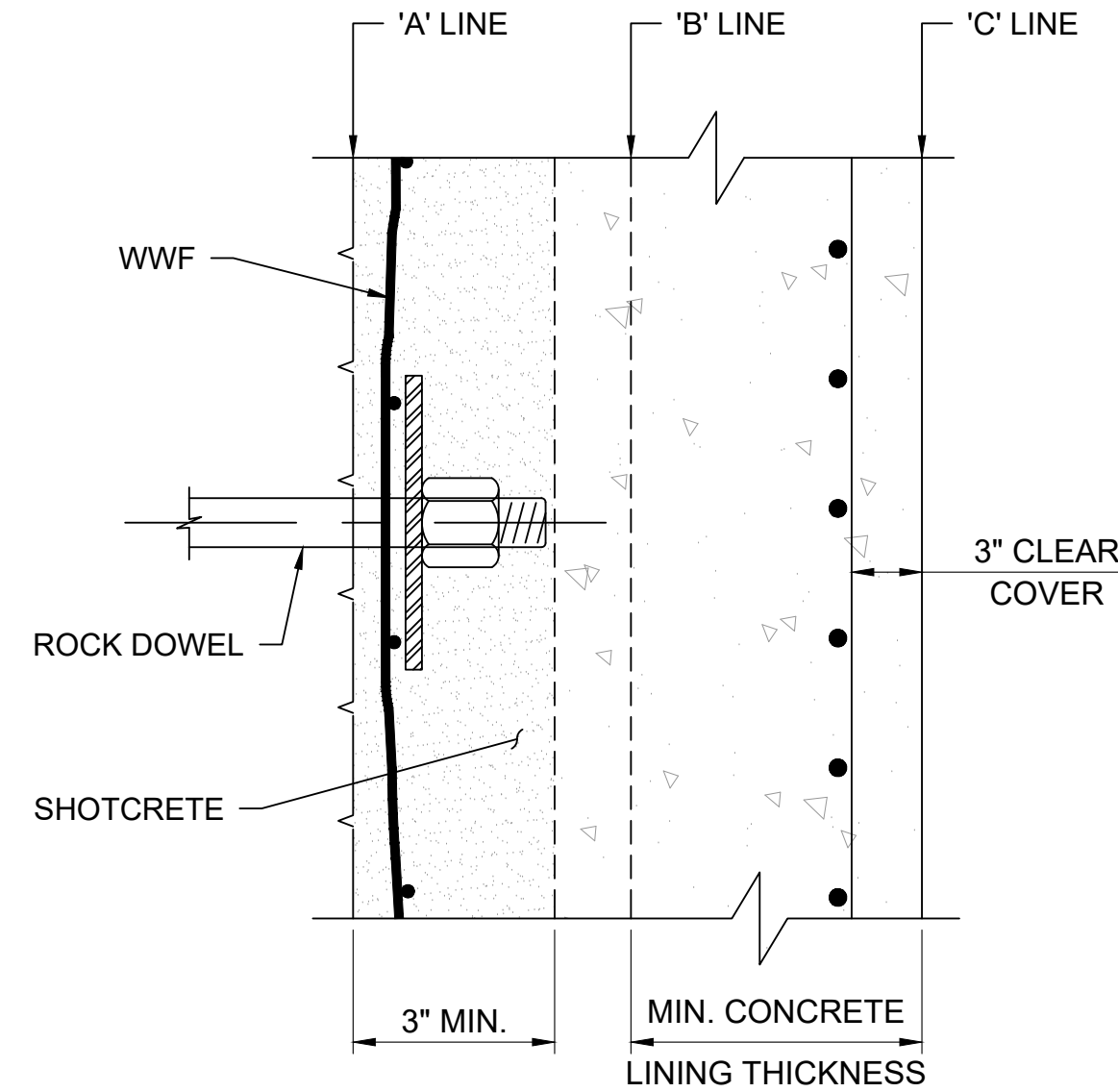
CCT STARTER TUNNEL CAST-IN-PLACE REINFORCED CONCRETE LINING
SCALE: 3/8" = 1'-0"



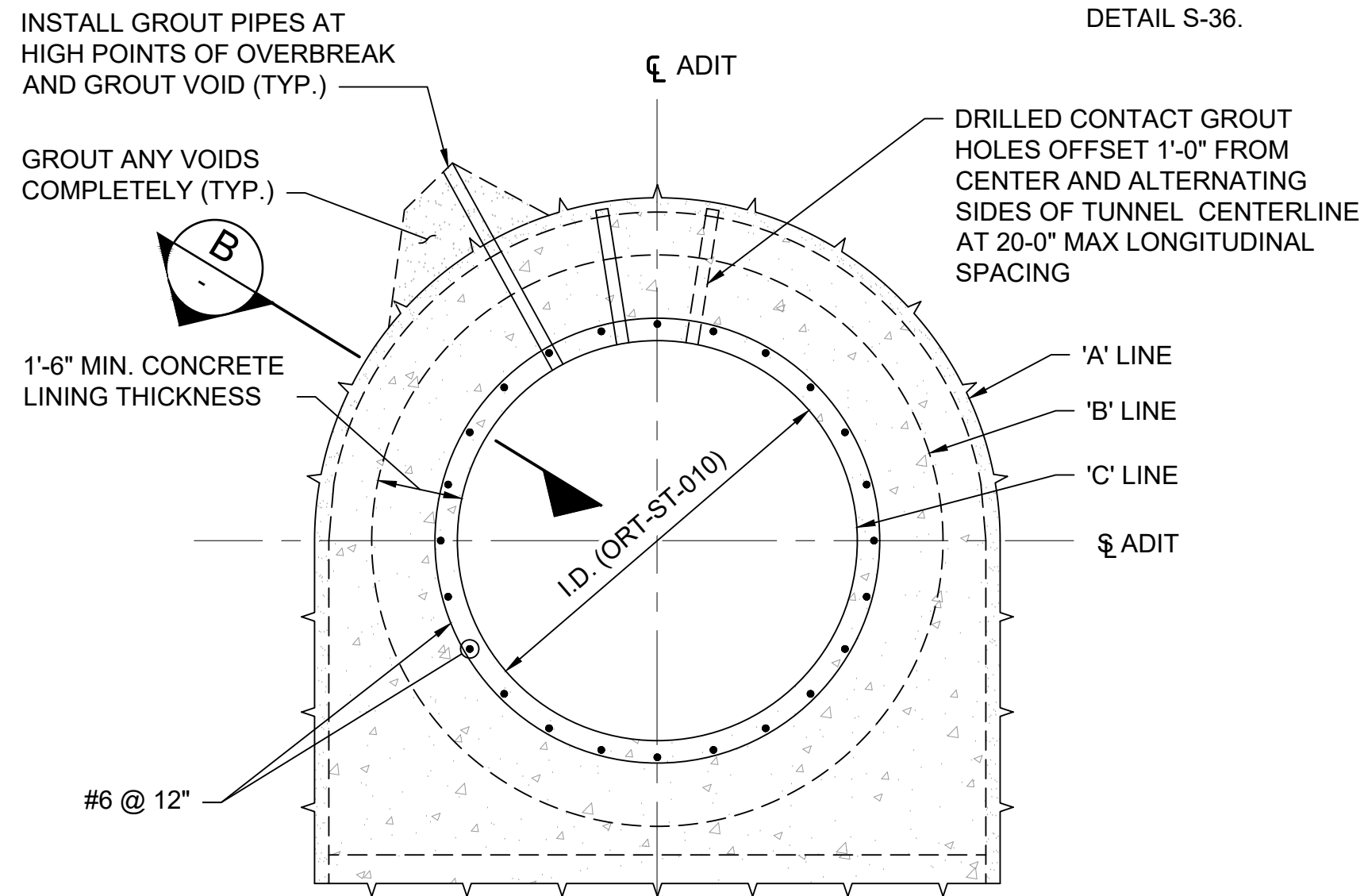
O06A ADIT PIPE FINAL LINING
SCALE: 3/8" = 1'-0"



SECTION A
SCALE: NTS



SECTION B
SCALE: NTS



O06A ADIT CAST-IN-PLACE REINFORCED CONCRETE LINING ALTERNATIVE
SCALE: 3/8" = 1'-0"

NOTES

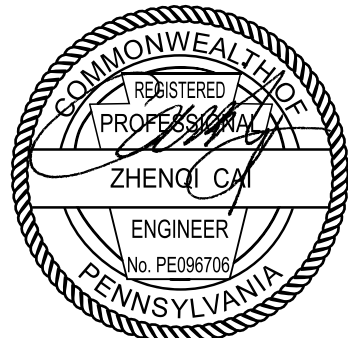
- REFER TO SHEET CCT-ST-010 FOR DIMENSIONS OF EXCAVATED TUNNELS.
- TUNNEL ROCK SUPPORT NOT SHOWN FOR CLARITY. REFER TO SHEET CCT-ST-011 FOR DETAILS.
- GROUNDWATER INFLOW SHALL BE DIVERTED AWAY FROM THE CONCRETE LINING DURING PLACEMENT USING PANNING, INVERT DRAINS, AND OTHER MEANS.
- THE CONTRACTOR MAY SELECT MACRO-SYNTHETIC FIBERS OR STEEL REINFORCEMENT IN THE TUNNEL CONCRETE LINING. STEEL REINFORCEMENT IS REQUIRED IN THE TUNNEL COLLARS AT THE SHAFT-TUNNEL CONNECTION AND ADIT-TUNNEL CONNECTION FOR BOTH OPTIONS AND SHALL STILL BE INSTALLED AS SHOWN ELSEWHERE IN THE DRAWINGS.
- STAGGER ALL SPLICES BY ONE SPLICE LENGTH ON ALTERNATE BARS.
- PIPE MUST BE SECURELY BLOCKED AND GROUTED IN PLACE IN SUCH WAY THAT PIPE AND PIPE JOINTS DO NOT DEFORM, MOVE, OR BECOME DAMAGED DURING GROUTING. THE BLOCKING SCHEME SHALL BE ENGINEERED BY THE CONTRACTOR SO THAT EFFECTS OF BUOYANCY ARE CONTROLLED AND UPLIFT PRESSURE ON THE PIPE AGAINST THE BLOCKS DOES NOT EXCEED THE STRUCTURAL CAPACITY OF THE PIPE. ALL GROUTING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS AND AS SPECIFIED ELSEWHERE.
- CONTRACTOR MAY INSTALL THE PIPE ECCENTRICALLY WITH RESPECT TO THE SPRINGLINE OF THE EXCAVATED TUNNEL. HOWEVER, THE PIPE SHALL BE INSTALLED SUCH THAT THERE IS NOT LESS THAN 2-INCHES OF GROUT BETWEEN THE PIPE AND THE TUNNEL INITIAL SUPPORT. PLACEMENT OF THE PIPE MUST MEET THE REQUIRED LINE AND GRADE WITHIN SPECIFIED TOLERANCES.
- DRILL CONTACT GROUT HOLES IN CROWN A MINIMUM OF 2 INCHES INTO SURROUNDING GROUND. EXTEND HOLE DEPTH AS NEEDED TO INTERCEPT VOIDS WHERE OVERBREAK OCCURS.
- RCP IS NOT ALLOWED BETWEEN STA 0+60.86 AND STA 0+90.28 ALONG THE CCT-006A-AD ALIGNMENT. CONTRACTOR SHALL INSTALL CAST-IN-PLACE REINFORCED CONCRETE LINING AS SHOWN HEREIN AND PROVIDE STRUCTURAL CONNECTION WITH THE RCP TO EACH SIDE BASED ON STANDARD PIPE TO CONCRETE WALL CONNECTION DETAILS AS SHOWN ON SHEET ORT-MD-007, DETAIL S-36.

Designed by:	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
ANC	1	11/21/25	REVISION FOR ADDENDUM 7	ZC
Drawn by:				
RGR				
Checked by:				
DJP				

M

**MOTT
MACDONALD**

Two Allegheny Center
Nova Tower 2, Suite 1301
Pittsburgh, PA 15212
(412) 497 - 2900



ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
PITTSBURGH, PA 15233
(412) 766 - 4810

www.alcosan.org

ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)
OHIO RIVER TUNNEL (ORT)

CCT-ST-012
NON-TBM TUNNEL - CONCRETE LINING
TUNNEL DETAILS SHEET 3 OF 3

Contract:	1797
File:	CCT-ST-012.dwg
Date:	11/21/2025
Sheet:	093 OF 770