LOR-90-10.76
MAJOR REHABILITATION DESIGN-BUILD

PID 107714

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PART A. PROJECT NARRATIVE

LOR-90-10.76 Major Rehabilitation Design-Build

PART A – PROJECT NARRATIVE

Project Schedule

As required in Section 6.3 – Intermediate Technical Proposal Content of the Instructions to Offerors (ITO) and Selection Criteria for Request for Proposals (RFP), a general Bar Chart Schedule showing design and construction durations is included in Appendix A. The schedule consists of key design, construction dates, and milestones, with project durations for each activity.

Substantial completion of design activities is planned for December 19, 2025, before the start of construction.

LOR-90-11570R/11385L – I-90 Bridges over Murray Ridge Road

The existing 3-span rolled steel beam bridges over Murray Road (LOR-90-11570R & LOR-90-11385L) will be rehabilitated, including the replacement of the existing deck, bearings, integral diaphragm block (reusing the existing #6 integral bars) and addition of existing beam moment plate retrofits. The new composite decks will maintain the existing toe-to-toe barrier width of 40.50'±, and the overall bridge width will decrease from 44'-0" ± to 43'-10" with the replacement of the existing barriers with 42" SBR-1-20 single slope barriers. The deck thickness on each bridge will be increased to meet current BDM requirements of 8 ½" on LOR-90-11570R and 9" on LOR-90-11385L. It is anticipated that the existing bridge cross-slopes will match the roadway cross-slopes. LOR-90-1138L will maintain the existing cross-slopes, while LOR-90-1157R will be modified from a superelevated section to include a 4' shoulder with a 1% cross slope. Per BDM 309.3.6.1, rounding is not required at this location since the change in cross slope at the break point is less than 7% (5.7%). The bridge profiles will be raised to match the new roadway surface elevation; during the final design, we will coordinate with the roadway design team to finalize the bridge profile adjustments required and how it affect bridge elements like haunch thickness and bearing heights. The new composite deck is designed per BDM 309.3 requirements and includes a future wearing surface allowance of 60 psf. Scuppers are not anticipated in the final condition for either bridge.

The EB bridge will be built using phased construction; Phase 4A constructs the outside of the LOR-90-11570R (EB) bridge, and Phase 4B the inside of the LOR-90-11570R (EB) bridge. Phase 4A construction includes a 3'-9 ¼" cantilevered deck that is not subject to live load and can be supported by the existing beam to provide 3'-0" of deck behind the PCB, eliminating anchorage in the new deck for the construction of Phase 4B. Phase 2A constructs the LOR-90-11385L (WB) bridge full width while WB traffic is detoured. Closure pours are not required per BDM 403.5.3. During final design, coordination with the MOT team will be important to the final bridge phase construction sections and detail development. See the MOT write-up and plans for information regarding lane widths and temporary traffic patterns.

The existing moment plates over the piers will be retrofitted per BDM 404.1.2.4.a. The plate sizes for the flanges were taken from retired Standard Drawing BS-1-93. After the retrofits have been installed, the beams will surface prepped and painted with a 3-coat OZEU paint system. The existing bearings are low-profile steel plates (1" at abutments, 2 5/8" at piers), and the new elastomeric bearings with steel load plates were designed to be as shallow as possible to limit the amount of profile increase. At both bridges, the fixity at each pier will be released with new elastomeric expansion bearings, and the seismic load path will be taken to the integral abutments. The existing inline wingwalls were analyzed for seismic loading, assuming half of the seismic force is transferred to each abutment and resisted by one wingwall at a time and proved that the 2-6" wide wingwalls can resist 100% of the seismic force. Additionally, the existing pier caps were analyzed for new loading requirements to determine if additional shear resistance is required and, due to the large spacing of shear reinforcement in the caps (2-legs of #5 bars up to 18" c/c), fiber wrapping is required between the columns of all piers. Since the fixity of the piers is being released, the columns have the capacity for all loading conditions and will be fiber-wrapped for corrosion protection only, per the SoS. Before fiber wrapping the pier caps and columns, they will be sounded, and any unsound areas will be patched.

Finally, new 25' full width- approach slabs will be provided with Type C installation sleeper slabs.

Maintenance of Traffic

The MOT scheme for this project was split into two segments: the SR 2-IR 90 interchange, including all construction to the west (the Ohio Turnpike Connector and SR 2) and the remaining mainline, IR 90, east of the SR 2 interchange. Depending on the contractor's schedule, these segments can be built independently or concurrently. Keeping these two segments independent of one another, the project can be completed within five major construction phases:

- Phases 1 and 3 include the mainline IR 90 corridor.
- Phases 2 and 4 include the SR 2 interchange area.
- Phase 5 will focus on noise wall construction along mainline IR 90 Eastbound.

The MOT scheme and schedule allow for the return of all lanes on all roadways to the original or final configuration during the Winter Shut-Down period as required by the scope. The anticipated general timing for each phase is the following:

- Phases 1 and 2 are scheduled to be completed in the construction year 2026.
- Phases 3 and 4 are scheduled to be completed in construction year 2027.
- Noise walls, or Phase 5, can be completed any time after EB I-90 is constructed.

Within 90 days of Contract Execution and/or prior to initiation of the first MOT phase, the WB IR 90 signs on the truss between the bridge over Lake Avenue and the bridge over the railroad will be removed during nighttime hours, using a lane closure during allowable hours as per the PLCS. The signs will be replaced with temporary ground mounted signs during construction. The permanent signs will be erected during the I-90 WB construction phasing.

Within 90 days of Contract Execution and/or prior to initiation of the first MOT phase, on IR 90 EB, the overhead box truss sign installation (truss and signs) at the exit to SR 57 (Exist 145) shall be removed. The SR-57 Lorain/Elyria, Exit 145 sign will be temporarily ground mounted to the right side of I-90 in close proximity to the existing sign location. The truss support will be removed the same day the signs are removed. For the permanent condition, the truss will be replaced further to the west during this same pre-phase of construction. This work will be completed utilizing short term lane closures as allowed by ODOT's Permitted Lane Closure System Schedule.

Phase 1 consists of three sub-phases (1A, 1B, and 1C), focusing on constructing EB IR 90 utilizing a part-width operation.

Phase 1A will shift traffic to the outside of the existing shoulder of EB IR 90 using temporary pavement in the shoulder and where necessary to construct the inside of EB IR 90, installing new full-depth pavement. WB IR 90 will remain in the existing striping configuration and no impact to this direction of traffic is anticipated during Phase 1A. All entrance and exit ramps shall remain open through Phase 1A. As detailed on the enclosed bar chart schedule (Appendix A), Phase 1A will be completed in the first half of 2026.

Phase 1B will shift traffic to the newly constructed pavement on the inside of EB IR 90 and construct the outside of EB IR 90, using a rubblize and roll construction method to construct a roadway pavement of sufficient depth. Phase 1B will also begin construction on the entrance and exit ramps along EB IR 90 at the interchanges with SR 57 and SR 254, utilizing part-width construction on each ramp. A ramp closure will be needed prior to any construction along the ramp to construct the tie-in at the end of the ramp to the edge of pavement of the state route. Once again, WB IR 90 is not anticipated to be impacted. Phase 1B will be completed in the second half of 2026.

Phase 1C and 1D will keep the EB and WB IR 90 mainline traffic in the same configuration as Phase 1B. However, the Eastbound exit point and acceleration lane locations at the SR 57 and SR 254 interchanges will be shifted, and traffic will be flipped to the newly constructed pavement at these interchanges to complete any remaining construction on the mainline or along the ramps. These phases will be completed between August and October of 2026.

Phase 2 consists of two sub-phases (2A and 2B), focusing on constructing the WB IR 90 Turnpike Connector and EB SR 2 west of the SR 2 interchange. Throughout the duration of Phase 2, the WB IR 90 exit to the turnpike will be closed for 90 days to rehab the deck of the WB bridge over Murray Ridge Road and to rubblize and roll the existing pavement along the WB IR 90 Turnpike Connector from the toll gates to the interchange split. This closure will also avoid the contraflow movement on WB SR 2 to allow EB SR 2 to be constructed.

During Phase 2 of construction the preferred minimum shoulder/buffer width listed in Section 640-2 of the TEM cannot be reasonably accommodated at some spot locations. In accordance with the Scope of Services the DBT will request approval for reducing the width. The MOT Phase, locations, and width to be provided are listed below. The DBT understands that the approval of the reduces shoulder/buffer widths is at the discretion of the Department. These locations and widths provided were also added to the MOT roll plots for the appropriate phases.

- Phase 2A (WB SR-2 over Martin Run) – A 1-foot inside and 1-foot outside shoulder width deviation will be requested.
- Phase 2B (WB SR-2 over Martin Run) – A 1-foot inside and 1-foot outside shoulder width deviations will be requested.
- Phase 2A (WB SR-2 over Murray Ridge Road) – A 1-foot inside shoulder width deviation will be requested.
- Phase 2B (WB SR-2 over Murray Ridge Road) – A 1-foot inside shoulder width deviation will be requested.

Phase 2A will construct a single-lane crossover for EB SR 2 traffic between the Middle Ridge Rd overpass and the LOR-2-10.46 bridge, employing a contraflow configuration (two lanes WB and one lane EB) along the existing WB SR 2 lanes. One EB lane will remain along the existing EB SR 2 that will shift to the outside of the existing EB shoulder to construct the inside pavement of EB SR 2, replacing the existing pavement with full-depth pavement. Another single-lane crossover will be built just west of the IR 90 bridge over Lake Avenue to return the contraflow EB lane back to the EB IR 90 lanes. The final striping configuration for the EB direction of traffic can be placed from where the crossover ties back in all the way to the end of the eastern project limits. The three-lane configuration will allow the EB Turnpike Connector to change from a merge condition to an added lane when continuing to EB IR 90.

Phase 2B will be similar to Phase 2A, with the only major adjustment to the single lane of EB SR 2 traffic. This traffic will now shift to the inside of the newly constructed pavement and the remaining construction will be completed along EB SR 2 under a rubblize and roll construction method. The added lane for the EB Turnpike Connector continuing to EB IR 90 will be shifted slightly to construct as much as possible at the gore. Overall, Phases 2A and 2B are scheduled to be completed between May and August of 2026.

Phase 3 consists of three sub-phases (3A, 3B, and 3C), with a focus on the construction of WB IR 90 using a part-width operation.

Phase 3A will shift traffic to the outside of the existing shoulder of WB IR 90 utilizing temporary pavement in the shoulder and where necessary to construct the inside of WB IR 90, installing new full-depth pavement. EB IR 90 will follow the final striping configuration and no impact to this direction of traffic is anticipated during Phase 3A. All entrance and exit ramps shall remain open through Phase 3A. As detailed on the enclosed bar chart schedule, Phase 3A will be completed in the first half of 2027.

Phase 3B will shift traffic to the newly constructed pavement on the inside of WB IR 90 and construct the outside of WB IR 90, using a rubblize and roll construction method to construct a roadway pavement of sufficient depth. Phase 3B will also begin construction on the entrance and exit ramps along WB IR 90 at the interchanges with SR 57 and SR 254, utilizing part-width construction on each ramp. A ramp closure will be needed prior to any construction along the ramp to construct the tie-in at the end of the ramp to the edge of pavement of the state route. Once again, EB IR 90 is not anticipated to be impacted. Phase 3B will be completed in the second half of 2027.

Phases 3C and 3D will keep the WB and EB IR 90 mainline traffic in the same configuration as Phase 3B. However, the Westbound exit point and acceleration lane locations at the SR 57, SR 254, and SR 611 interchanges will be shifted, and traffic will be flipped to the portion of newly constructed pavement at these interchanges to complete any remaining construction on the mainline or along the ramps. Phases 3C and 3D will be completed between July and October 2027.

Phase 4 consists of two sub-phases (4A and 4B), with a focus on part-width construction of the EB IR 90 Turnpike Connector and WB SR 2 west of the SR 2 interchange.

During Phase 4 of construction the preferred minimum shoulder/buffer width listed in Section 640-2 of the TEM cannot be reasonably accommodated at some spot locations. In accordance with the Scope of Services the DBT will request

approval for reducing the width. The MOT Phase, locations, and width to be provided are listed below. The DBT understands that the approval of the reduces shoulder/buffer widths is at the discretion of the Department. These locations and widths provided were also added to the MOT roll plots for the appropriate phases.

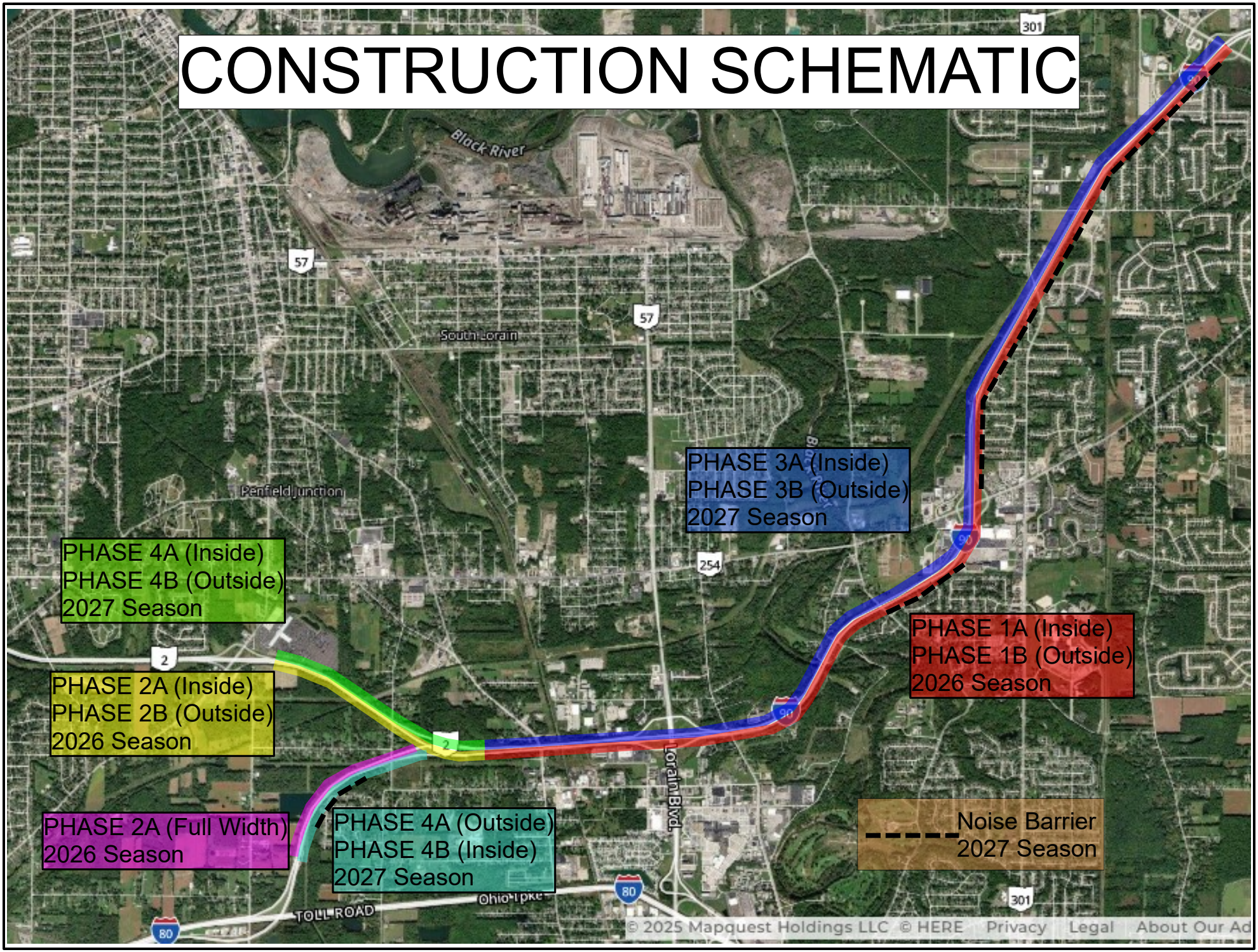
- Phase 4A (EB SR-2 over Martin Run) – A 1-foot inside and 1-foot outside shoulder width deviation will be requested.
- Phase 4B (EB SR-2 over Martin Run) – A 1-foot inside and 1-foot outside shoulder width deviations will be requested.
- Phase 4A (EB SR-2 over Murray Ridge Road) – A 1-foot inside shoulder width deviation will be requested.
- Phase 4B (EB SR-2 over Murray Ridge Road) – A 1-foot inside shoulder width deviation will be requested.
- Phases 4A and 4B (EB SR-2 under the I-90 WB bridge) – 1.5-foot inside shoulders will be requested.

Phase 4A will construct a single-lane crossover for WB SR 2 traffic in a similar location as the eastern crossover from Phase 2A, this time showing a contraflow configuration (one lane WB and two lanes EB) along the newly constructed and existing EB SR 2 lanes. One WB lane will remain along the existing WB SR 2 that will shift to the outside of the existing WB shoulder to construct the inside pavement of WB SR 2, replacing the existing pavement with full-depth pavement. Another single-lane crossover will be built in a location similar to the western crossover from Phase 2A to return the contraflow WB lane to the WB IR 90 lanes. East of the construction on WB IR 90, the final striping configuration for the WB direction of traffic can be placed from the IR 90 bridge over Lake Avenue all the way to the end of the eastern project limits. However, since there will only be two traffic lanes leading into the work zone, the inside lane shall be closed preceding the work zone. The EB Turnpike Connector traffic will be reduced to one lane and shifted to the inside shoulder from the toll gates through the merge point with SR 2 to complete construction of the outside full-depth pavement and the outside of the bridge over Murray Ridge Rd. Prior to implementing changes to traffic patterns that affect turnpike traffic, the DBT will coordinate with OTIC. Phase 4A is anticipated to be completed between April and May of 2027. During this phase Murray Ridge Road will be closed with traffic detoured.

Phase 4B will be similar to Phase 4A, with the only major adjustments to the single lane of WB SR 2 traffic and the single lane of EB Turnpike Connector traffic. The WB SR 2 traffic will now shift to the inside of the newly constructed pavement, and the remaining construction will be completed along WB SR 2 using a rubblize and roll construction method. The EB Turnpike Connector traffic will remain as a single lane but will now shift to the newly constructed outside shoulder pavement from the toll gates to the merge point with SR 2 to construct the remaining inside pavement using a rubblize and roll method. The remaining inside of the bridge over Murray Ridge Rd will be completed during this phase as well. Phase 4B will be completed between May and July of 2027.

Phase 5 will focus on the construction of all noise walls required for this corridor. All the noise walls will be in the EB direction, and assuming all construction will take place outside of the clear zone, the outside lane of both the IR 90 Turnpike Connector and the IR 90 Mainline will be closed using drums. The EB acceleration and deceleration lanes and ramps shall be accessible throughout the duration of Phase 5. Phase 5 is scheduled for construction in the first half of 2027.

A schematic of the major phases is included.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South Lorain
Penfield Junction
PHASE 3A (Inside)
PHASE 3B (Outside)
2027 Season
PHASE 4A (Inside)
PHASE 4B (Outside)
2027 Season
PHASE 1A (Inside)
PHASE 1B (Outside)
2026 Season
PHASE 2A (Inside)
PHASE 2B (Outside)
2026 Season
PHASE 2A (Full Width)
2026 Season
PHASE 4A (Outside)
PHASE 4B (Inside)
2027 Season
Noise Barrier
2027 Season
Lorain Blvd
TOLL ROAD
Ohio Turnpike
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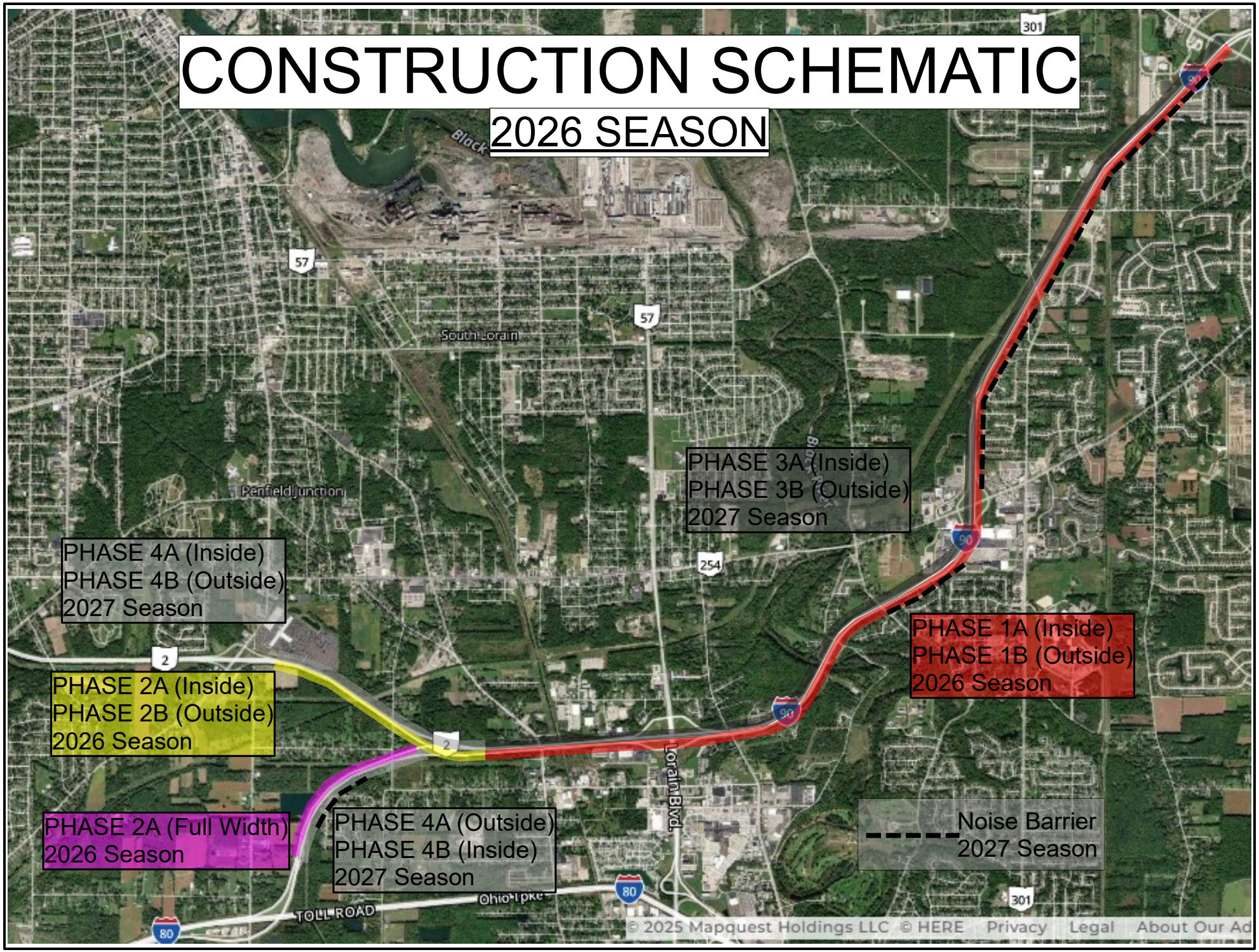
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PHASE 1B (Outside)
2026 Season
PHASE 2A (Inside)
PHASE 2B (Outside)
2026 Season
PHASE 2A (Full Width)
2026 Season
PHASE 4A (Outside)
PHASE 4B (Inside)
2027 Season
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2027 Season
South Lorain
Penfield Junction
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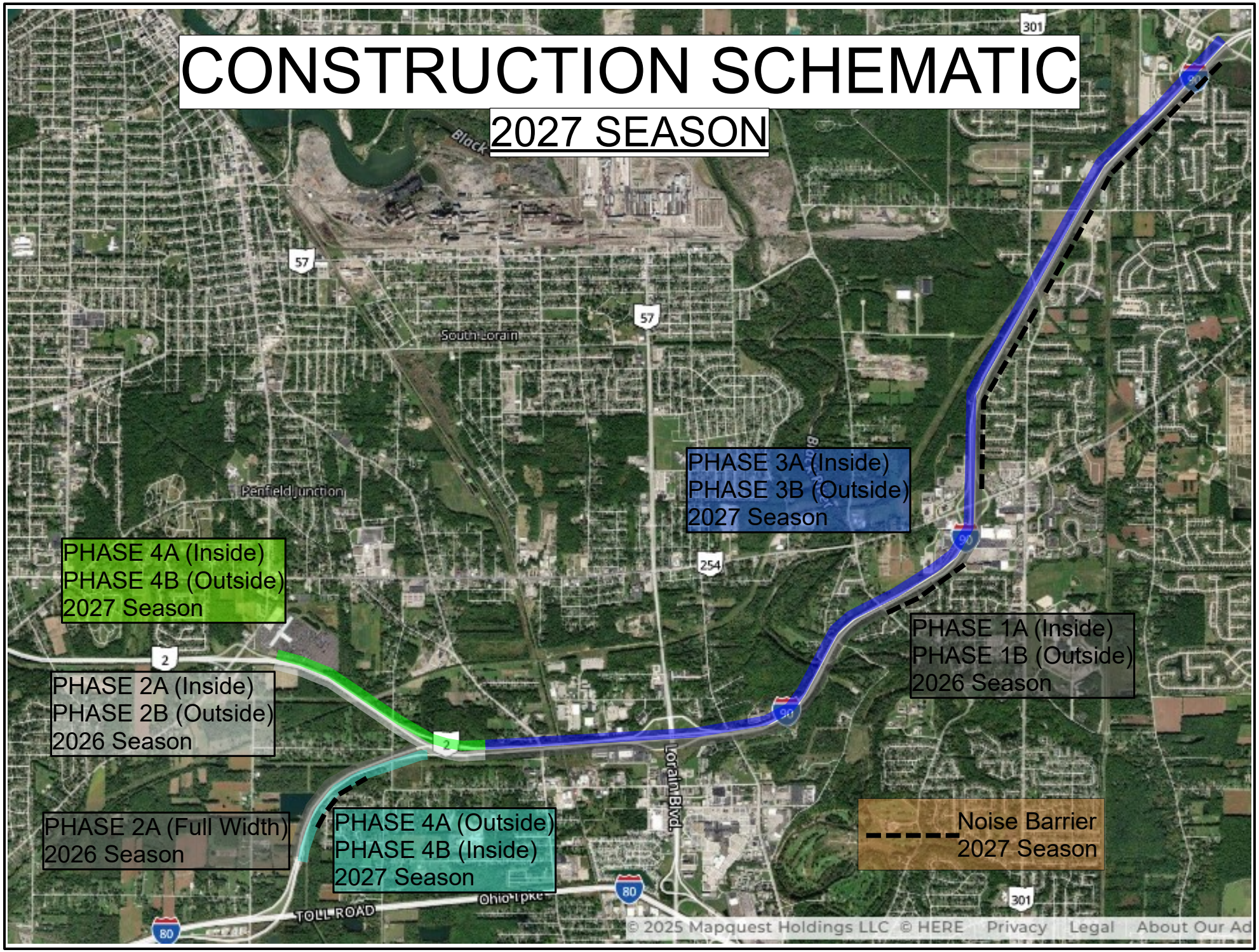
CONSTRUCTION SCHEMATIC
2027 SEASON
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2027 Season
PHASE 4A (Inside)
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PHASE 1B (Outside)
2026 Season
PHASE 2A (Inside)
PHASE 2B (Outside)
2026 Season
PHASE 2A (Full Width)
2026 Season
PHASE 4A (Outside)
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Drainage and Post-Construction BMPs

The drainage design for LOR-90-10.76 consists mostly of median channel and storm pipe design, water quality, and quantity BMP design. There are two existing culverts that will require an additional pipe to be jack-and-bored adjacent to the existing storm pipe to provide adequate capacity. Lastly, there are also some localized areas of outside ditch re-grading to convey surface flow. The storm sewer and ditch design was completed per ODOT's Location and Design Manual, Volume 2, using the StormCAD computation engine within the Bentley OpenRoads Connect program, while the culverts were analyzed using FHWA's HY-8 program.

With the rubblization of the existing I-90 EB and WB roadway sections being completed during separate phases of MOT, the proposed storm piping will be jacked or bored under the proposed pavement sections to outlet the median drainage to the outside ditches on either the north or south side of the freeway. Note that the proposed inlets and piping have been offset approximately 10' from the existing storm systems to allow drainage to be maintained for the project's duration.

In cut and low-fill areas where the median drains cannot be positively discharged to the outside ditches, the existing design chained inlets together approximately every 300' and located a longitudinal sewer within the center of the median until a positive outlet could be achieved. The proposed design will attempt to limit the chaining of inlets, if possible, by grading the outside ditches to allow for positive drainage to the ultimate outlet of the system. This will also be beneficial for discharging the proposed underdrains at the required maximum spacing. As the RFP dictates, safety grading will be used for the outside ditches where applicable.

As previously mentioned, two culverts were analyzed and found to be undersized. Specifically, the 36" RCP culvert (CFN 1864081) at Sta. 683+68 (SOS Sta. 641+00) and the 34-inch x 53-inch RCEP culvert (CFN 1873014) at Sta. 800+33 (SOS Sta. 785+00) were determined to be hydraulically inadequate. A proposed 18" RCP will be jacked and bored adjacent to the existing 36" RCP, while a 60" RCP will be jacked or bored next to the 34" by 53" elliptical pipe to provide the required capacity.

The LOR-90-10.76 project is considered a redevelopment project with 0.00 acres of new impervious area within the new right-of-way. With a project disturbance of 240 acres and less than one acre of impervious area added in the new right-of-way, typically only water quality impacts must be treated—20.00% or 48 acres. However, per Section 12.1 of the RFP, an additional 10 acres of water quality and quantity treatment area must be provided to mitigate impacts on other ODOT projects. In general, for the LOR-90-10.76 project, having such a wide existing right-of-way with wide grass shoulder and graded areas to the outside of the existing and proposed roadway footprint, vegetated filter strips will be used exclusively to meet the 48-acre requirement. For clarity, these regions have not been noted on the roll plots, but quantities for the 4" of topsoil along with Item 670 slope erosion protection have been added to the bid for this work. For the 10-acre water quantity/quality treatment requirements, the interior of the SR 57 Ramps provided a suitable location for 3 bioretention cells, while the outside ditch along SR 254 Ramp L was ideal for another one. The locations and amount of area treated are summarized below in Table 1:

Table 1 Summary of Bioretention Cell Treatment

Ref. No.	Station From	Station To	Drainage Area (Acre)	Bioretention Cell Area (SF)	Treatment Area (Acre)
WQ-1	689+64, 334' LT	691+17, 432' LT	4.60	10,885	4.60
WQ-2	697+62, 212' LT	698+67, 482' LT	2.60	5,493	2.60
WQ-3	699+09, 492' RT	701+47, 474' RT	2.00	4,501	2.00
WQ-4	819+63, 152' RT	822+83, 334' RT	1.65	3,700	1.65
TOTALS			10.85	24,579	10.85

In addition, since the project disturbs more than one acre, a Notice of Intent (NOI) permit will need to be filed with the OEPA, and a stormwater pollution prevention plan will need to be completed during the final design.

ALTERNATIVE TECHNICAL CONCEPTS (ATC)

The Kenmore Design Build Team plans to incorporate ATC No. 1—Rubblize and Roll at locations as shown in the proposed typical sections. The Department said that ATC was "Accepted as Revised" in their ATC Meeting Minutes Response letter dated December 23, 2024. The revisions required have been incorporated into our technical proposal as follows:

- Limits shall not be indiscriminate; limits shall start and stop at physical features.
    - The DBT plans to rubblize the existing concrete pavement along I-90 and the SR-2 and I-90 directional ramps throughout the project limits. At locations where the existing mainline and overhead bridges are located, the profile will be transitioned at a 400:1 taper rate to meet existing surfaces and/or maintain existing vertical clearances.
- The asphalt pavement buildup shall be the same for the travel lanes and shoulders; the asphalt layers must match across the entire width of the proposed section.
    - Pavement buildups meeting the above requirements are shown in the typical sections.
- The revised pavement section shall provide an equivalent or greater structure number to the original proposed buildup.
    - As included in the submitted ATC our proposed Structure Number of 5.90 exceeds the original proposed buildup's number of 5.84.
- The bottom of the aggregate base layer for the widening and full-depth shoulders must match the bottom of the rubblized layer to facilitate subgrade drainage; the 304 layers on the proposed typical section for the full-depth pavement may be required to vary to match the existing concrete thickness.
    - As shown in the typical sections, the depth of the aggregate base will vary to match the rubblized concrete thickness.
- An additional underdrain shall be added at the interface between the rubblized concrete and the proposed inside third lane widening.
    - As shown in the typical sections, the additional underdrain has been added.
- Needed variations to address pavement surface leveling shall occur in Item 302 material.
    - Surface level elevation differences will be corrected using the 302 material.
- Potentially unstable soils have been identified in the report within the rubblized area not meeting the N60. These areas may be rubblized, but if the concrete cannot be rubblized due to unstable subgrade, the concrete in these areas shall be removed, and the subgrade will be over-excavated and replaced.
    - Any areas that cannot be rubblized due to unstable subgrade will be over excavated and replaced in accordance with the Scope of Services.

DBT RESPONSES TO THE DEPARTMENT'S PTI EVALUATION COMMENTS

Part A - Project Narrative: acceptability of the Project Narrative in its description of design and construction of the Project generally corresponding to the Technical Approach – Plans, and acceptability of the description on how, if any, ATC conditions are being met

1. General Bar Chart Schedule

Noted Deficiencies

a. Page 59: The Department noted the schedule shows drainage design from 3/3/25 through 2/13/26, with drainage construction starting 5/2/26. Per Scope Section 5.1.5, "DBT shall not perform any work within the jurisdictional boundaries of any waterway, including wetlands, until the Department obtains the necessary waterway permit(s). Work includes the placement of any temporary or permanent fills." "The DBT shall assume a minimum of twelve (12) months in their schedule from the time DBT provides the plans and summary data to the Department until the permit is obtained." Schedule should reflect when the requisite data will be provided to the Department and a minimum of 12 months provided for environmental coordination before any work is performed within jurisdictional waterways.

DBT Response/Action:

The following activities were incorporated into the revised schedule:

- A3770 Waterway Plan Development
- A3780 Waterway Permitting
- A3790 Install Access & Install Waterway Affected Drainage (Phase 1B)
- A3800 Install Access & Install Waterway Affected Drainage (Phase 3B)

Comments

b. Page 61: Phase 2A, LOR—90-11385L – Work shown from May 6, 2026 to August 13, 2026. Ensure that all the work be done and roadway open to traffic within the 90 day maximum closure duration for WB I-90.

DBT Response/Action:

Added activity showing the 90-day closure tied to the start and completion of Phase 2A (SR-2 Section), Phase 2A (IR-90 OTC Roadway Section), Phase 2A (IR-90 OTC Bridge Section), and Phase 2B (SR-2 Section).

- A3810 90 Day Allowable Closure

c. Typical: Confirm closure durations are considered and being met within the schedule.

DBT Response/Action:

90 Day allowable closure shown from May 1, 2026 to July 29, 2026

- Phase 2A (SR-2 Section) 5/1/2026 to 5/27/2026 – Complies to 90 Day Closure Parameter
- Phase 2A (IR-90 OTC Roadway Section) 5/1/2026 to 6/8/2026 - Complies to 90 Day Closure Parameter
- Phase 2A (IR-90 OTC Bridge Section) 5/1/2026 to 7/27/2026 – Complies to 90 Day Closure Parameter
- Phase 2B (SR-2 Section) 5/28/2026 to 06/19/2026 – Complies to 90 Day Closure Parameter

2. Approach to modifying LOR-IR-90-11.530R and LOR-IR-90-11.530L bridges

Noted Deficiencies

a. Page 4: "It is anticipated that the existing bridge cross-slopes will match the existing and the bridge profiles will be raised to match the new roadway surface elevation; during the final design, we will coordinate with the roadway design team to finalize the bridge profile adjustments required and how it affect bridge elements like haunch thickness and bearing heights…"

This is not in compliance with scope Section 14.2.A requirements: "Provide new reinforced concrete deck matching existing face to face of parapet width (40'-6"+/-). Deck design to conform to Bridge Design Manual (BDM) Section 309.3. Deck cross slopes (pavement and shoulders) shall match adjoining roadway section with rounding in accordance with BDM Section 309.3.6.1."

DBT Response/Action:

The narrative and bridge drawings were revised to show cross slopes matching the adjoining roadway sections. Per BDM 309.3.6.1 rounding is not required on the LOR-90-1157R bridge.

Comments

b. Page 4: Narrative states that westbound bridge will be built "while traffic is detoured along the TP Connector in this direction" – confirm that this means WB traffic will be detoured and not maintained/detoured in the EB lanes.

DBT Response/Action:

The narrative was revised to clarify that the WB bridge will be constructed while the WB traffic is detoured.

3. Approach to Maintenance of Traffic

No deficiencies.

Comments

a. Page 5: Narrative discusses sign truss removal requirements within 90 days of contract execution but has some inconsistencies with what is required per the Scope. Narrative doesn't mention removing the truss the same day the signs are removed. Narrative also states the truss will be replaced further west but the scope says to temporarily ground mount in close proximity. The narrative also discusses detouring the I-90E exit to SR 57 but only one 14-day ramp closure is permitted per Section 8. The Offeror should confirm its intended approach meets the Project's requirements.

DBT Response/Action:

Added activities to the schedule to show the overhead truss sign/support and overhead signs being removed and temporarily ground mounted.

Added new WBS section under Pre-Phase with the following activities:

- A3860 90 Days After Contract Extension (Must be complete by 5/31/2025 if awarded on 3/3/2025)
- A3820 Remove Overhead Truss Sign & Support for I-90EB at Exit 145 – Started & Finished on 5/24/2025 – Complies to 90 day of Contract Parameter
- A3830 Install Temporary Ground Mounted Exit 145 Sign – Started & Finished on 5/24/2025 - Complies to 90 day of Contract Parameter
- A3840 Remove 2 Overhead Guide Signs for I-90 WB at MM145.1 – Started & Finished on 5/25/2025 - Complies to 90 day of Contract Parameter
- A3850 Install Temporary Ground Mounted Guide Signs for I-90 WB – Started & Finished on 5/25/2025 – Complies to 90 day of Contract Parameter

The narrative was revised to clarify the signs will be removed the same day as the truss and that they will be installed temporarily in the proximity of the existing sings. The narrative was also revised to clarify that no long-term lane closures of the ramps will be implemented for this work.

4. Approach to determining and managing risks for likely post construction BMPs, overall drainage design, and drainage construction.

   No deficiencies. No comments.

5. Anticipated Accepted ATCs

   No deficiencies. No comments.

PART B. TECHNICAL APPROACH PLANS

LOR-90-10.76 Major Rehabilitation Design-Build

TECHNICAL APPROACH - PLANS ARE INCLUDED WITH THE APPENDICES AT THE END OF THIS INTERMEDIATE TECHNICAL PROPOSAL DOCUMENT.

DBT RESPONSES TO THE DEPARTMENT'S PTI EVALUATION COMMENTS

Part B - Technical Approach – Plans: acceptability of the Technical Approach-Plans to the Bidding Documents

1. Roll Plot Plan Sheets

   Noted Deficiencies

   a. Lane widths were not labeled.

   DBT Response/Action:

   Lane width labels added to the plots. Typical lane and shoulder widths are also shown in the typical section drawings.

   b. Limits of rubblize and roll, pavement replacement, and pavement resurfacing were not clearly labeled.

   DBT Response/Action:

   Color coded shapes were added to the plan and profile plots showing the anticipated rubblize and roll, full depth and resurfacing sections.

   c. Scope Section 11 (Roadway) states "The DBT shall provide 12' paved eastbound and westbound inside shoulders along the three-lane section of I-90 from SR-2 to SR-611. All other shoulder and lane widths shall be in accordance with L&D Figures 301-3, 301-4 and 303-1, except at the ITS camera installation near the I-90 bridges over Murray Ridge Road where the 4' westbound inside paved shoulder shall be increased to 12' for a length of 250' and the area graded per the requirements of TEM Section 1303-3." This does not look to be provided.

   DBT Response/Action:

   The wider shoulder at the noted location was added to the roll plot.

2. Roll Plot Profile Sheets

   Noted Deficiencies

   a. Several conceptual roadway profile sections provided within the Intermediate Proposal have locations where it appears that L&D requirements are not being met. Examples: spacing between grade breaks is not met, broken back curves are utilized, and maximum allowable grade break criteria appears to be exceeded.

      The profiles show that 400:1 vertical transition between the rubblize and roll sections and pavement replacement sections, however many of these transition areas transcend across grade breaks and vertical curve limits and some are fully contained within vertical curves. While labeled as transition areas in the submitted profiles, the transitions were not incorporated into the actual profile grade data. Vertical transition areas occurring within the limits of vertical curves are problematic as this is a condition not defined in the L&D. The effect of this transition is dependent upon a number of factors including (but not limited to) where it occurs in the curve, the roadway grades in the curve, and whether the curve is a crest or sag. For consideration, we recommend that vertical transition areas occur outside the limit of vertical curves.

The Offeror is not required to submit a revised profile with the technical proposal correcting these deficiencies; however, notes shall be added to the profile sheets acknowledging problematic depicted profiles, and the narrative revised to reflect steps to be taken to ensure the final profile shall be in conformance with ODOT design standards. Corrections may require expansion of the pavement replacement limits indicated in the plans or other steps necessary to ensure conformance with ODOT design standards.

Ultimately the DBT's design will need to demonstrate to the Department that the vertical alignment is in conformance with all requirements of ODOT Standards (Location & Design).

The Department's approval of your ATC #01 does not negate the need to meet ODOT Standards.

DBT Response/Action:

Section 11 of the SOS requires the DBT to reconstruct the roadway while "generally retaining the existing constructed horizontal and vertical alignments". The original profiles have been vitiated by numerous projects and reconstruction work performed over the years. The proposed profile grade lines depicted in our drawings are derived from a compilation of historical profile data, adjusted for datum and surface variations, and incorporating PVI station rounding. These accumulated project modifications result in the composite profile shown. This approach enabled the DBT to accurately estimate the original top of concrete elevation along the corridor, a critical factor in determining quantities for Rubblize and Roll treatment (ATC No. 1).

Our final design will include a proposed profile optimized for Rubblize and Roll application, while adhering to ODOT Location & Design standards. A supplemental 302 course will be incorporated to ensure smooth curves and transitions when necessary. The illustrated 400:1 transitions represent the approximate limits of required grade adjustments to tie into existing bridge and approach surfaces. Full-depth pavement replacement will be implemented within these transition areas.

Early in the design process the DBT will obtain field survey data information at all existing at grade and overhead bridges. The survey data will be incorporated onto the proposed profile to facilitate the appropriate tie-in to existing at grade bridge decks and to maintain existing clearance at overhead bridges. The DBT's proposed profile will meet all vertical design requirements of Section 200 of the Department's Location and Design Manual, Volume 1. In the final design, the limits of rubblizing and roll and/or full depth replacement segments will be adjusted as needed to ensure design standards, including maximum grade break, spacing between grade breaks, minimum and maximum grades, sight distance requirements, curve lengths, etc. are met.

Comments

b. Some specific examples of comments summarized in item "a" are as follows:

- Page 66: L&D 204.3 "broken back curves should generally be avoided…" but were used It is also unclear what affect the 400:1 transition would have on the profile shown.
- Page 66: L&D max grade break of 0.30% for 65 mph. Grades provided do not meet L&D.
- Page 69: Triple broken back curves with transition areas are being used along with vertical transitions for one direction and a long single vertical curve with vertical transitions near the crest. Broken back curves should not be used and it is unclear whether a smooth profile will be provided when the vertical transitions are incorporated.

DBT Response/Action:

Comments noted. As stated in our response to comment 2. a. the proposed profile that will be developed and submitted with the Detailed Design plans will meet the requirements of the L&D manual.

3. Typical Sections

No deficiencies. No comments.

4. Bridge plans for LOR-IR-90-11.530R and LOR-IR-90-11.530L Structures

Noted Deficiencies

a. Page 79: The cross slopes for the bridge high side shoulders are not in conformance with scope Section 14.2.A requirements to "Provide new reinforced concrete deck matching existing face to face of parapet width (40'-6"+/-). Deck design to conform to Bridge Design Manual (BDM) Section 309.3. Deck cross slopes (pavement and shoulders) shall match adjoining roadway section with rounding in accordance with BDM Section 309.3.6.1." This will affect and control the elevation of the bridge deck.

DBT Response/Action:

The bridge plans were revised to show the deck cross slopes matching the adjoining roadway sections, in accordance with the Scope of Services.

Comments

b. Page 78: It appears the phase lines for construction could be revised to provide the preferred 2' offsets to the barrier. Revisions should be considered as approval of the reduction to 1' is the Department's discretion.

DBT Response/Action:

The phase lines were revised to provide the preferred 2' offsets.

c. Page 79: It appears the phase lines for construction could be revised to provide the preferred 2' offsets to the barrier. A detour of Murray Ridge Rd (240 day closure allowed per Section 8.2.2, Table 8-3 of scope) would reduce the required offset for non-anchored PCB to below 6'. Revisions should be considered as approval of the reduction to 1' is the Department's discretion.

DBT Response/Action:

The phase lines were revised to provide the preferred 2' offsets.

The schedule was revised to show Murray Ridge Rd closed during the structure work for IR-90 EB over Murray Ridge Rd during Phases 4A and 4B

- A3870 Close Murray Ridge Rd (240 Days Allowable) – 4/7/2027 to 7/16/2027 – Complies to 240-day Parameter

d. Page 78: Shows a temporary phased overhang of 4'9" exceeding what would be allowed in a permanent condition. If this area behind the barrier (depicted as 6 ft access roadway behind the barrier) is to be used for construction access, construction loading would be considered a live load. Exceeding in a temporary condition is allowable, however, the deck needs designed to handle increased temporary overhang if the area behind the PCB will be subject to any construction loading conditions.

DBT Response/Action:

The overhang dimension was reduced at this location. Murrey Ridge Road under the bridge will be closed during construction. Construction vehicles will not be allowed on the resulting overhang.

e. The profile has some unclear intent as identified in Part B Technical Plans, Item 2 – Profile Sheets). Some specific examples are:

- Page 76: There are 400:1 transitions on each end of the bridge. Grades are unclear.
- Page 77: It is unclear how the 1.73% applies relative to the 400:1 transition within the middle of a proposed vertical curve.
- Page 77: It appears that the 1.77% Grade shown is left of the 60' VC is incorrect.

DBT Response/Action:

The bridge profile was updated.

f. While it is not incorrect to include, the intent of the of the standard drawings inclusion within the structures section is unclear.

DBT Response/Action:

The standard drawing sheets were removed from the Technical Proposal plans.

5. Conceptual Maintenance of Traffic Plans and Typical Sections

Noted Deficiencies

a. Pages 106, 109, 124, 129, 132, 135: 1' or 1.5' shoulders shown.

Table 8-1 in the Scope lists minimum shoulder/buffer width of 2' with the following strictive language: "The minimum shoulder/buffer width may be reduced to one foot when necessary in spot locations per Section 640-2 of the TEM. Spot locations include bridge decks, on approach slabs, between bridge piers and roadway sections where temporary sliver fills could be avoided by said allowance. Final approval of locations shall be at the discretion of the Department. Standard taper rates shall apply in the shoulder transition from 2 foot to 1 foot and vice- versa."

While potentially allowable per Scope Section 8.2, the plans need to identify all spot areas where the minimum shoulder/buffer width is reduced to less than 2' as these are critical locations. Final approval of locations shall be at the discretion of the Department during project development subject to the justification provided by the DBT. Include explanation for all locations were 2' shoulder cannot be provided.

DBT Response/Action:

Locations with shoulder widths less than the preferred 2' were added to the roll plots.

b. The schedule depicts Phase 1A to be completed July 2026. The schedule depicts Phase 2A beginning May 2026. The Phase 2A/2B EB crossover (approx. station 645+00) is depicted to utilize pavement constructed in Phase 1A. It appears the schedule and the work completed per the shown phasing may not align. Per the ITO 6.3.A.1, the schedule should depict a reasonable phasing plan.

DBT Response/Action:

Added activities to construct Sta 647+00 to Sta 655+00 of Phase 1A immediately after switching into Phase 1A configuration. This section is to be completed through intermediate course prior to implementing Phase 2A configuration.

6. A3880 Perform Pavement Removal & Excavation for Phase 1A STA 647+00 to 655+00
7. A3890 Perform Cement Stabilization & Cure Time for Phase 1A STA 647+00 to 655+00
8. A3900 Install Underdrain & #304 Aggregate Base for Phase 1A STA 647+00 to 655+00
9. A3910 Perform Asphalt Base and Intermediate for Phase 1A STA 647+00 to 655+00

The roll plots were updated to better align the striping from Phase 2 with the work zone laid out in Phase 1A. Additionally, work limits were updated to better coordinate between phases.

c. Pages 133, 136: Section D doesn't match bridge plans (lane widths, shoulders, etc). Per the ITO 6.3.B.4, ensure the modified bridge will coordinate with the approach roadway elements.

DBT Response/Action:

The typical sections were revised to be consistent between the bridge and roadway drawings.

d. The schedule depicts phase 3B to be completed Nov 2027. The schedule depicts 4A to start April 2027. The Phase 4A/4B WB crossover (at approximate sta. 645+50) is depicted to utilize temporary pavement constructed in phase 3B. It appears the schedule and the work completed per the shown phasing may not align. Per the ITO 6.3.A.1, the schedule should depict a reasonable phasing plan.

DBT Response/Action:

Added activities to construct Sta 630+30 to Sta 654+80 of Phase 3A immediately after switching into Phase 3A configuration. This section is to be completed through intermediate course prior to implementing Phase 4A configuration.

10. A3920 Perform Pavement Removal & Excavation for Phase 3A STA 630+30 to 654+80
11. A3930 Perform Cement Stabilization & Cure Time for Phase 3A STA 630+30 to 654+80
12. A3940 Install Underdrain & #304 Aggregate Base for Phase 3A STA 630+30 to 654+80
13. A3950 Perform Asphalt Base and Intermediate for Phase 3A STA 630+30 to 654+80

The roll plots were updated to better align the striping from Phase 4 with the work zone laid out in Phase 3A. Additionally, work limits were updated to better coordinate between phases.

Comments

e. Pages 98, 104: There should be no work in WB lanes during Phase 1A or 1B, but sections I and J show a WB work zone and/or 11' lane widths.

DBT Response/Action:

The typical section were revised.

f. Ramp access is being maintained by phasing mainline work (example being EB exit to SR-57 on sheet 105). From plans it is unclear if the intent is to perform mainline rubblize and roll operations for the small, phased areas at the ramps. Ensure that elevation transitions across existing and rubblize and roll sections can be accommodated for ramp traffic.

DBT Response/Action:

These small construction areas required due to phasing around the ramps, will not be rubblized, they will receive full depth pavement treatment. A note was added to the MOT roll plots.

g. Pages 104, 106, 129, 130, 131: The Department has concerns with the construction access point in merge areas as depicted. While compliant in showing the access points, usage of the depicted locations may be problematic for universal access (i.e. both enter & exits points).

DBT Response/Action:

Construction access points were revised to indicate ingress and/or egress locations. Some of the locations were shifted to improve access and minimize conflicts. MOT roll plans were updated to reflect these changes.

h. Page 122: on I-90 WB prior to SR-2, the 3rd lane should remain open until the gore and then drop to two.

DBT Response/Action:

This was revised in the roll plots.

i. Page 133: Tapers exiting the turnpike gates appear abrupt. Coordination with OTIC will be needed with potential increase in taper length.

DBT Response/Action:

The exit tapers were revised and notes added to the drawings to address this comment.

PART C. KEY PERSONNEL RESUMES

LOR-90-10.76 Major Rehabilitation Design-Build

[redacted]

[redacted]

DBT PROJECT MANAGER

[redacted]

PROJECT EXPERIENCE

[redacted]

[redacted]

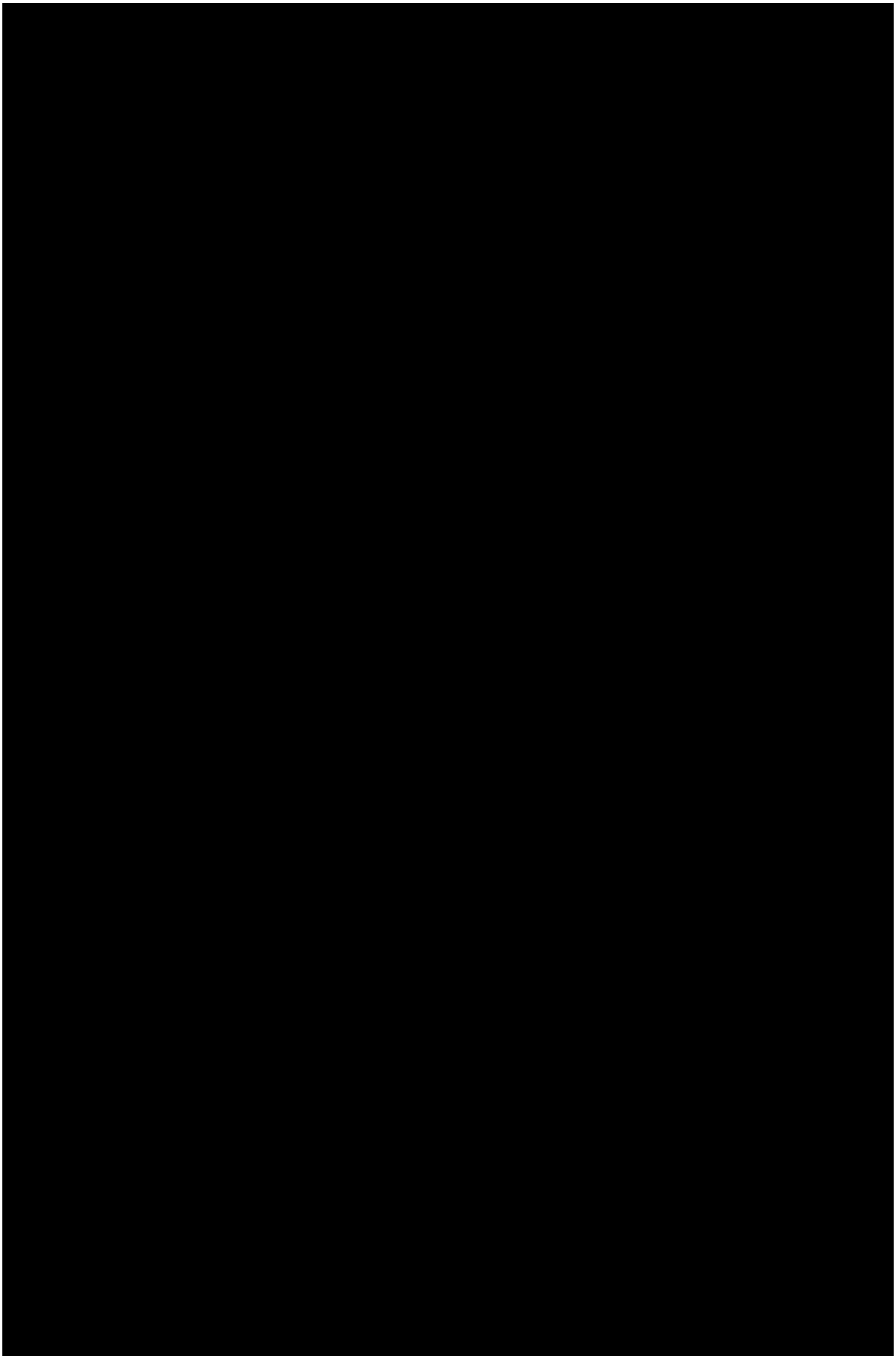
PROJECT MANAGER

[redacted]

[redacted]

LEAD DESIGN ENGINEER

[redacted]



PART D. DRAFT DBE OPEN-ENDED PERFORMANCE PLAN

LOR-90-10.76 Major Rehabilitation Design-Build

OEPP Part 1: DBE Utilization Commitment

KENMORE CONSTRUCTION CO., INC.
700 HOME AVENUE
AKRON, OHIO 44310
TEL. 330-762-9373
FAX. 330-762-2135

ESTABLISHED 1956

Ohio Department of Transportation
District #3
906 Clark Avenue
Ashland, OH 44805

Reference: OHIO DEPT. OF TRANSPORTATION
LOR-90-10.76, PID 107714; PROJECT (24)3003
OEPP and DBE Commitment Certification

Kenmore Construction Co. hereby commits to making all Good Faith Efforts, including those effort outlined in this DBE Open-Ended Performance Plan (OEPP), to meet the Projects identified DBE Goals.

Kenmore Construction Co. hereby commits to negotiating and contracting in Good Faith with each DBE to allow economically disadvantaged individuals a fair opportunity to compete for Work on the Project.

This OEPP is being provided in Good Faith and demonstrates the intent of Kenmore Construction Co. and the DBT project management team to cooperate fully in meeting our requirements of the applicable DBE regulations and the requirements within the DBE OPEN-ENDED PERFORMANCE PLAN (OEPP) specifications for the Project.

Respectfully submitted,

KENMORE CONSTRUCTION CO., INC.

[redacted]

Sewers, Conduit, Paving, Excavation, Tunneling, Boring, & Demolition

OEPP Part 2: DBE Utilization Manager

[redacted] will serve as the DBE Utilization Manager on this project. Please see his resume in Attachment A. [redacted] is currently employed by Kenmore Construction Co., Inc. and is empowered to represent the Contractor in DBE contractual issues. In addition to his work on project specific DBE requirements [redacted] has also managed all CUF and EEO responsibilities during his six years with Kenmore Construction under the supervision of [redacted]

OEPP Part 3: DBE Goal Attainment Reporting

Tim will be assisted in the DBE Goal Attainment & Reporting efforts by all of the Kenmore Construction team. Key personnel for this will include:

- [redacted] – [redacted] – Work Package Identification, Outreach, and Goal Monitoring
- [redacted] – [redacted] – Payment and Payroll Monitoring, EEO Support
- [redacted] – [redacted] – On Site DBE Coordination, Work Package Identification, and CUF Support
- [redacted] – Designer Outreach and Coordination
- [redacted] – [redacted] - Work Package Identification
- [redacted] – EEO, CUF, and Overall Supervision

This team will draw from Kenmore Construction's successful experiences achieving DBE goals on numerous other projects, our team will use a proven combination of proprietary Excel databases & spreadsheets along with Trimble Vista Viewpoint to ensure accurate data is available throughout the duration of the project.

The information acquired through these processes will then be reported to ODOT using the below OEPP Monthly Report.

In addition to this spreadsheet an additional narrative will be included to summarize DBE outreach efforts during the reporting period which will include identification of subcontracting work packages identified, number of DBE quotes received, and any reduction/substitution changes that occurred, violation of EEO policies, CUF Violations, and any revisions to OEPP.

OEPP Part 4: Good Faith Efforts (GFEs)

Kenmore Construction will actively and aggressively pursue DBE participation throughout the duration of the project while logging all written/email and verbal solicitations and communication within a Master Log Spreadsheet. This log has long served Kenmore in successfully meeting project goals and will include all Certified DBE subcontractors and suppliers on the Ohio Unified DBE Directory. This log will also track all successful and unsuccessful outreach attempts and confirmation when a quote is received.

Additionally, a separate section of the log will track all received quotes including vendor, date received, dollar value and outcome. When on a non-DBE firm is chosen over a DBE firm a narrative of why the decision was made will be included.

Aside from outreach from office personnel, the project management team and On-Site DBE Coordinator, will monitor upcoming work types and material needs to ensure the office can notify applicable DBE Firms with sufficient time to supply a quotation. Site personnel will also inform the Kenmore office personnel of any work ODOT non-performs so it can be verified if there will be any impact on Kenmore's OEPP. Should there be any impact on a DBE Firm under contract the office will both notify the firm of the impending changes and being the DBE Reduction paperwork for Central Office.

OEPP Part 5: Non-Discrimination, Affirmative Action, and EEO

Please see Attachment B and Attachment C for Kenmore's and Parsons' formal policies as requested as well as Attachment D for Kenmore's Formal Internal Investigation procedures.

Should any complaints or violations be received during the course of the project [redacted] will be responsible for reporting these instances directly to the Department Office of Business and Economic Opportunity and Office of Civil Rights Compliance.

OEPP Part 6: DBE Prompt Payment

As per PN 031 – Prompt Payment – ODOT – Let Construction Projects, Kenmore Construction will notify ODOT that it has complied with the Prompt Payment requirements utilizing the Signet system. Kenmore Construction will enter and make DBE subcontractor payments within 10 calendar days of payment from ODOT.

In order to ensure payments are processed in a timely manner [redacted] and [redacted] will provide [redacted] with updated lists of Work Items containing DBE participation to be monitored on a bi-weekly basis to ensure all DBE's are paid within ten days of receipt of payment from ODOT. Kenmore will also require all DBE's to submit invoices by the 20th of every month which will be cross-referenced against the ODOT pay apps. Once payment has been received from ODOT for the applicable items, funds will be dispersed within 10 business days. [redacted] will log all payments within the CRL and disperse a list of all payments to Kenmore personnel for review.

In order to track supplemental DBE trucking payments, Kenmore Construction will monitor all DBE trucking dollars using the ODOT DBE Trucking Affidavit as outlined in PN 007.

Prompt payment log description and chart have been removed from this section.

OEPP Part 7: DBE Contracting Notification

Per ODOT requirements Kenmore Construction will submit an Affirmation and C-92 for all DBE Firms as well as keep Monthly Reports up to date with all Firms under contract so the Department has an accurate list of all DBE subcontractors who will be performing work on site.

Project Management will keep ODOT informed during progress meetings of all upcoming work types and forecasted arrival of DBE Firms on site, while [redacted], [redacted] will ensure ODOT is notified via email that a DBE Firm will be on site no less the 24-Hours prior to their arrival.

[redacted] will alert ODOT prior to the start of any design work that will be completed by a DBE Firm. He will include the start of the work as well as the physical location of the office where the work is to be performed.

OEPP Part 8: Commercial Useful Function

Kenmore Construction will fully vet all DBE Firms for their ability to comply with the Commercially Useful Function requirements set by ODOT prior to issuing a Subcontract or Purchase Order.

Once under contract, site personnel will regularly audit the DBE subcontractor's on site both visually and through on-site interviews with the workforce. Kenmore Construction also plans to utilize a modified version of the "LPA – CUF Compliance Evaluation Form" (See Attachment E) to conduct formal audits at random. In addition to these random audits Kenmore will request the DBE Firms provide copies of their Purchase Orders for material used or supplied on the project.

OEPP Part 9: DBE Work Package Notification

Kenmore Construction has started high level scope analysis to begin identifying potential work packages. Throughout the design portion of this project the final plans, quantities, and specifications will be used to identify defined scopes for subcontractors and suppliers that align with DBE capabilities. These scopes will be reviewed, and where appropriate be divided into smaller sized work packages that could be quoted by smaller minority firms. These scopes will be distributed to DBE subcontractors and suppliers that have been previously contracted by Kenmore (Known) and against the Ohio Unified DBE Directory (Potential) by analyzing NAICS Codes for appropriate Work Types. Draft work packages will be sent within ten (10) working days upon the approval from ODOT for stage 1 plans to known and potential DBE Subcontractors and Suppliers. Kenmore will follow up via email within five (5) working days of sending for feedback and bidding interest. After the Construction Plans have been completed and AFC plan sets are distributed, final work packages will be compiled and sent within five (5) working days to all Known and Potential interested DBE firms.

Email has proven to be the most effective method for outreach and plan distribution, for this reason email will be the primary form of communication utilized along with phone calls, Teams Meetings, and in-person meetings as deemed necessary throughout the process. During these scope reviews the scope size as well as timeframe will be reviewed to determine if adjustments need to be made to encourage DBE participation. Kenmore intends to utilize the first year of the project during design to come to contract agreements with DBE subcontractors and suppliers to ensure the goal is met.

This information will be easily accessible through a OneDrive link that will include all plan and specifications associated with the scope of work. If a Firm has been identified via the DBE Directory as a company who offers

the required service or material, and no email response is received within one week of solicitation, Kenmore personnel will attempt to contact through their listed phone number.

Quotes will be evaluated from DBE suppliers fairly throughout the contracting process. While price will be an area of consideration, other evaluation factors will include performance of Commercially Useful Function, previous experience with Kenmore, other past projects completed across the state, equipment reviews, and schedule/availability. As previously stated Kenmore will break up work packages into smaller units as necessary to make the project more approachable.

In addition to outreach by the office, Kenmore will advertise via their own website and the Builder's Exchange website and will utilize The [redacted] to advertise in [redacted]. The [redacted] ill also advertise on behalf of Kenmore via social media and local print media.

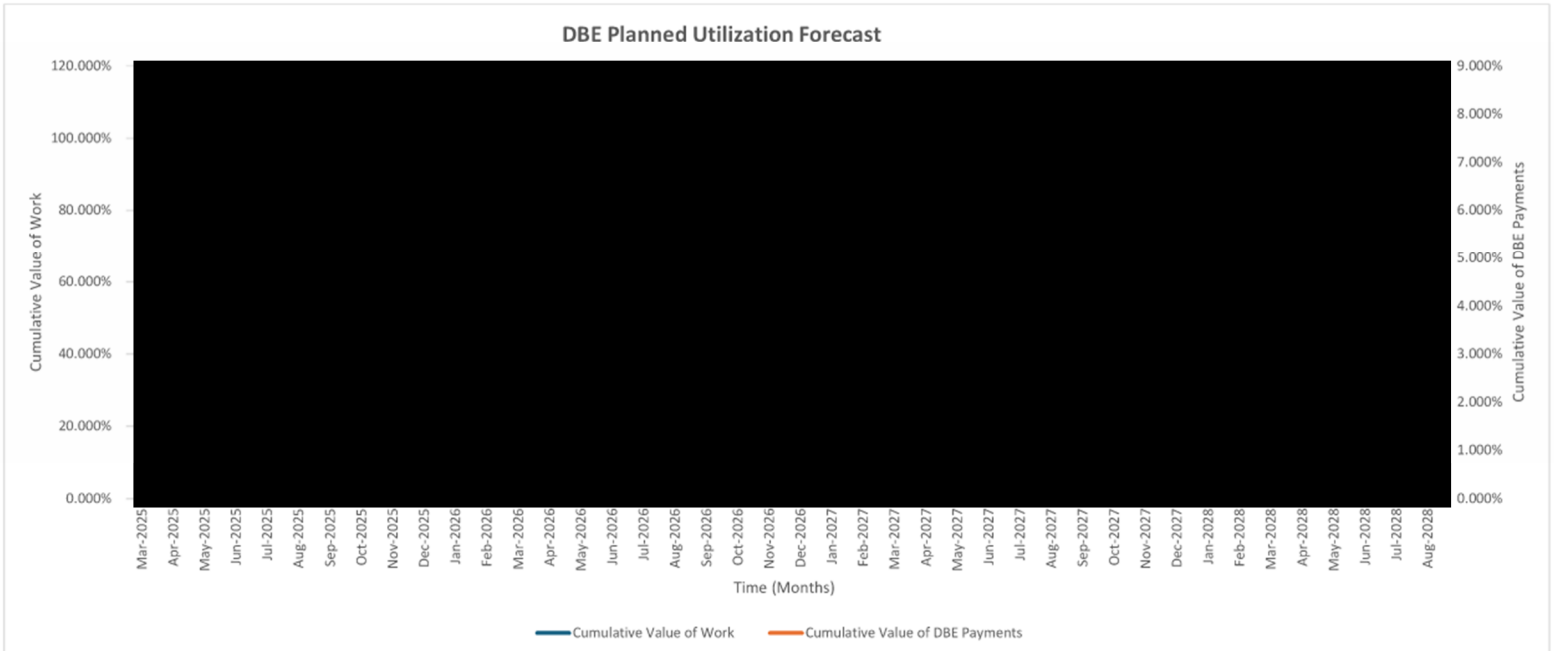
Kenmore will also continue their long standing practice of attending, ODOT sanctioned and local municipal DBE events, seminars and webinars to connect with as many qualified DBE firms as possible throughout the course of the project.

Once contact has been made with an interested DBE Firm an invitation for a virtual or in person meeting will be extended to further discuss scope and schedule requirements as necessary.

OEPP Part 10: DBE Planned Utilization Forecast

ODOT 243003 IR 90 Design Build

Total Construction Value of the Work:	N/A
DBE Goal:	8.00%
DBE Anticipated Payments Based on DBE Goal:	[redacted]
Project Start:	March 2025
Project End:	August 2028



Time (Months)	Design Work	DBE Trucking	Noisewall Work	Underground Material Supply	Electric Material Supply	Asphalt Supply & Trucking	Structure Overlay Work	Concrete Pavement Slipping	Guardrail & Railing Work	Right of Way Fence Work	Structure Sealing Work	Monthly **DBE** Payments	Cumulative **DBE** Payements	Monthly **Kenmore** Payments	Cumulative **Kenmore** Payments
Mar-2025															
Apr-2025															
May-2025															
Jun-2025															
Jul-2025															
Aug-2025															
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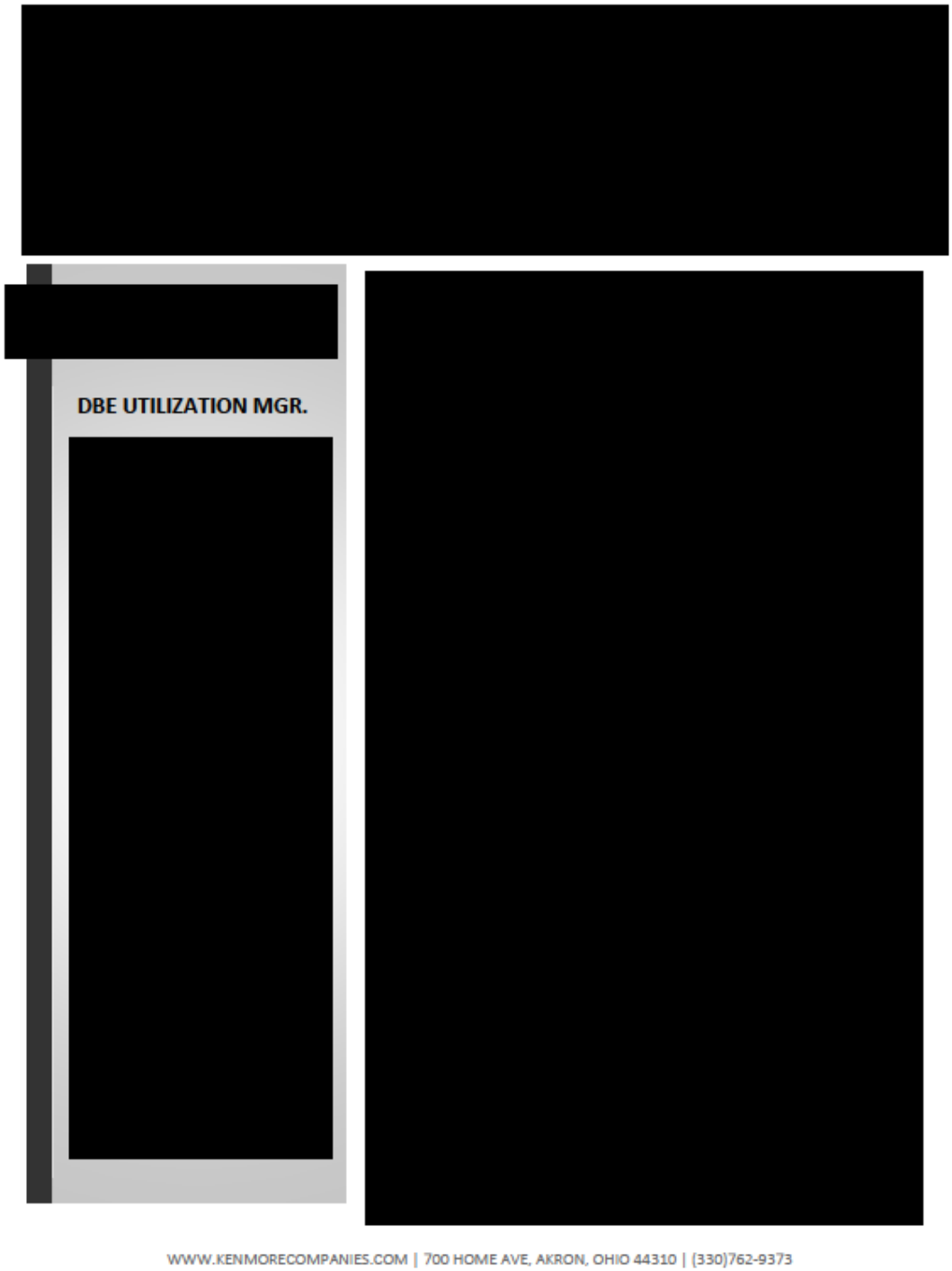
TOTALS															

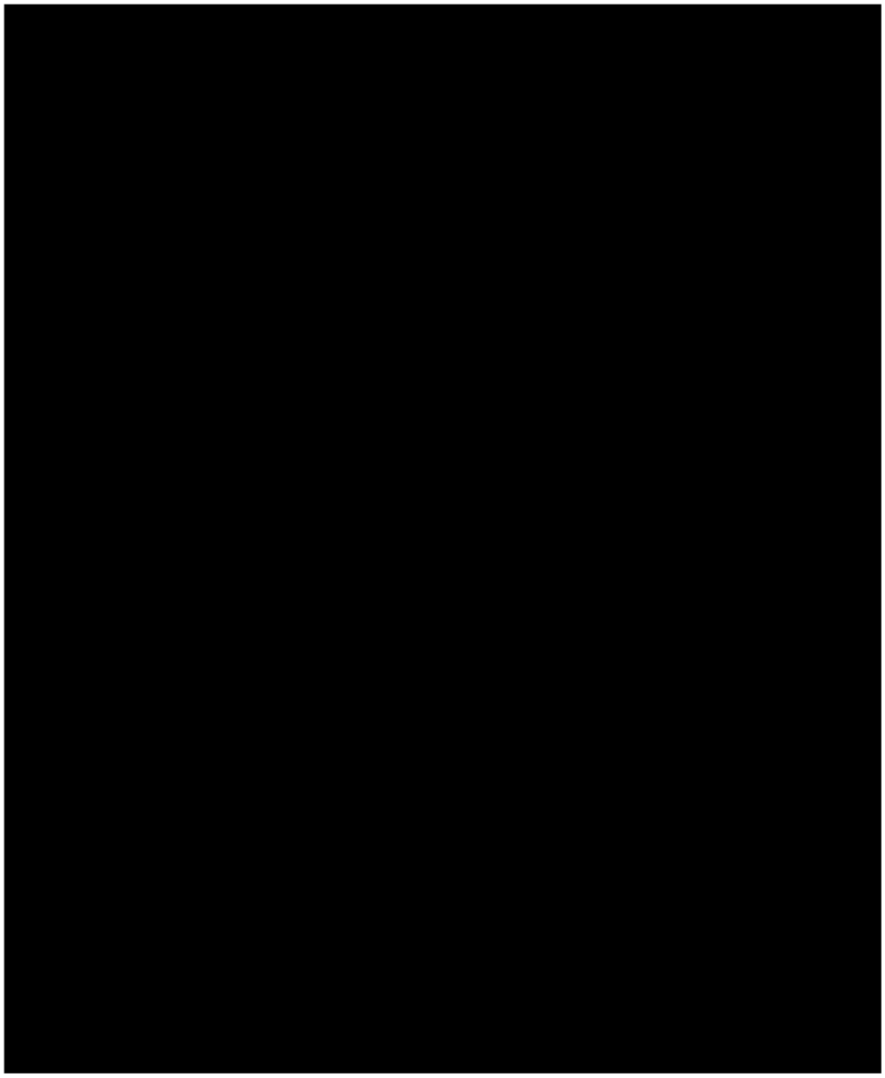
Attachment A

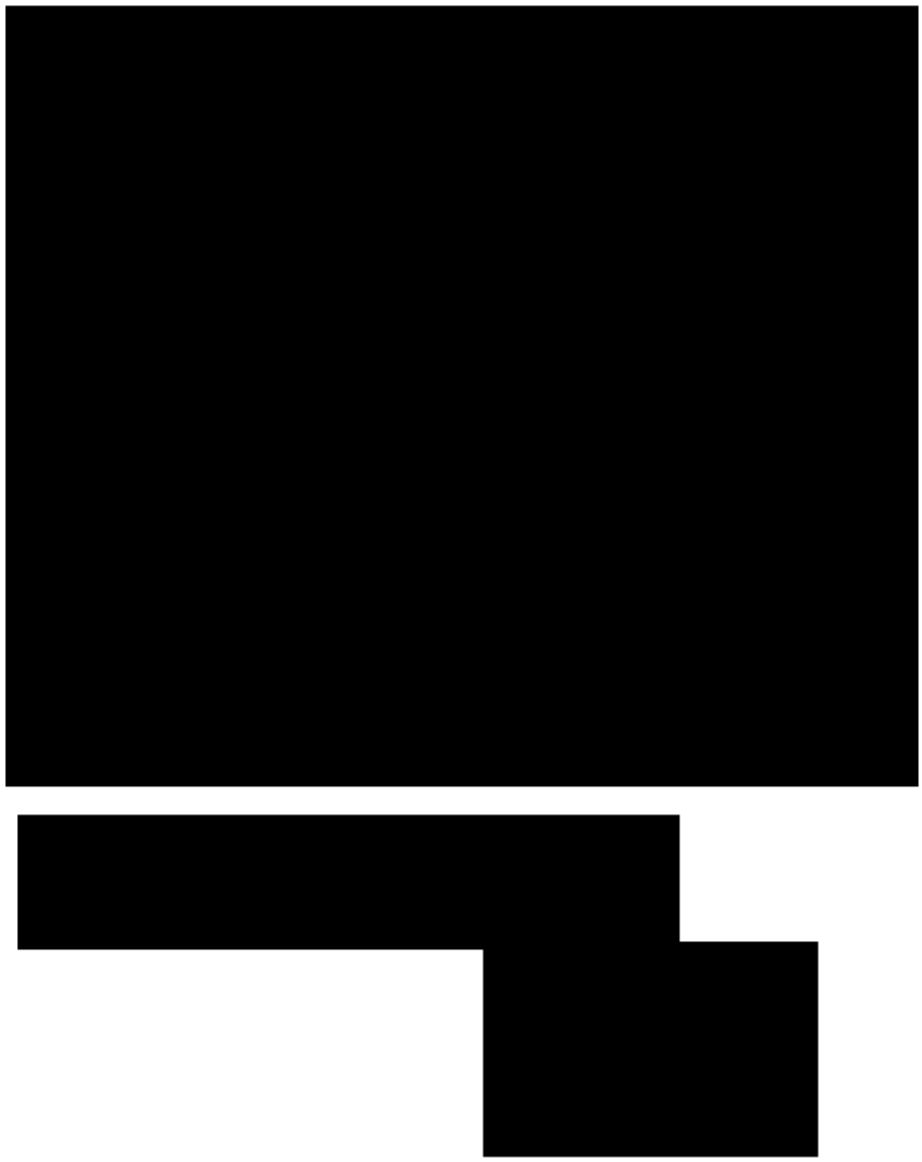


Attachment B

KENMORE CONSTRUCTION CO., INC.
700 HOME AVENUE
AKRON, OHIO 44310

A. SEXUAL HARASSMENT POLICY:

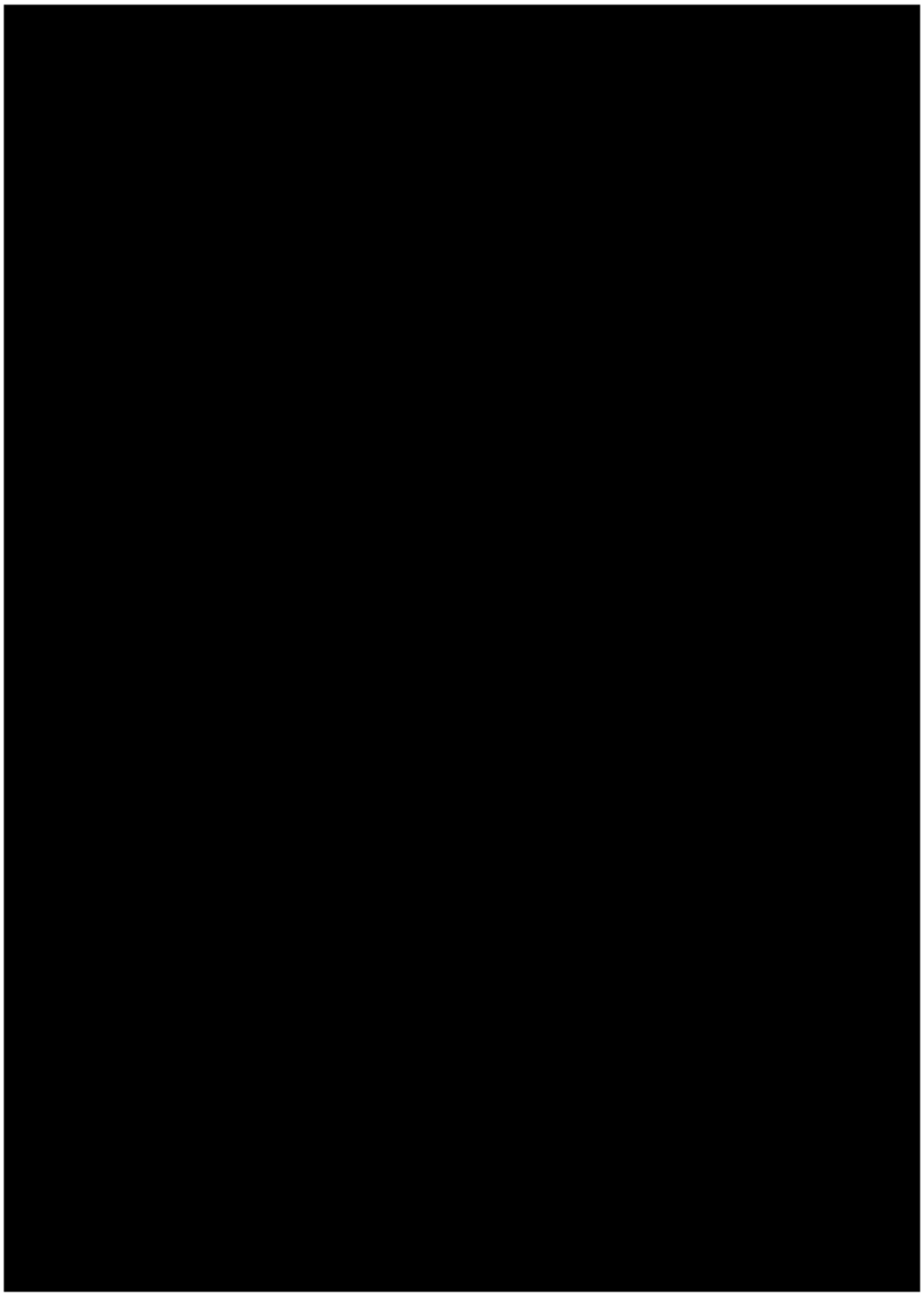




AFFIRMATIVE ACTION PROGRAM
ADOPTED AS POLICY BY
KENMORE CONSTRUCTION CO., INC.
[redacted]

I. POLICY

[redacted]



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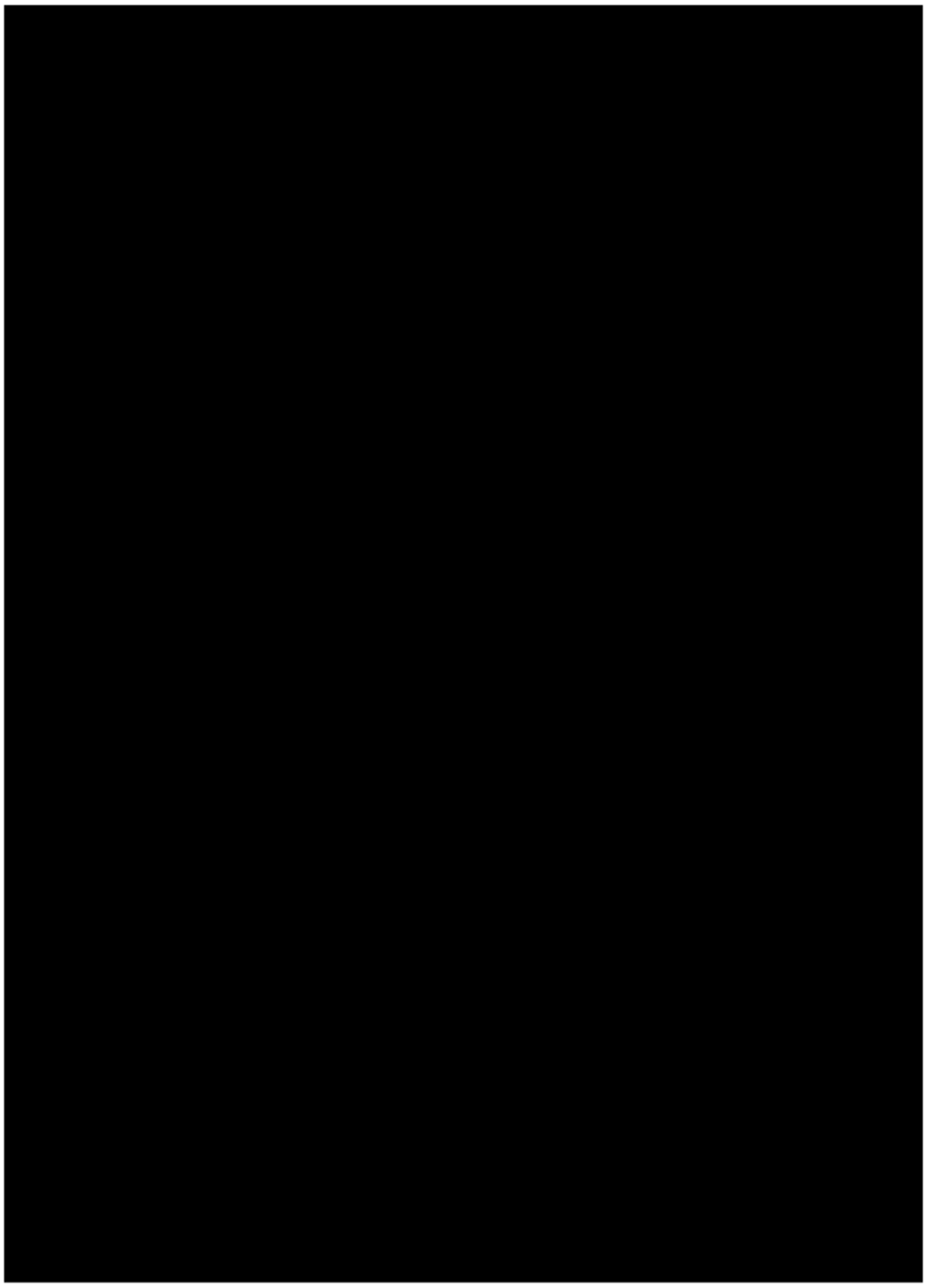

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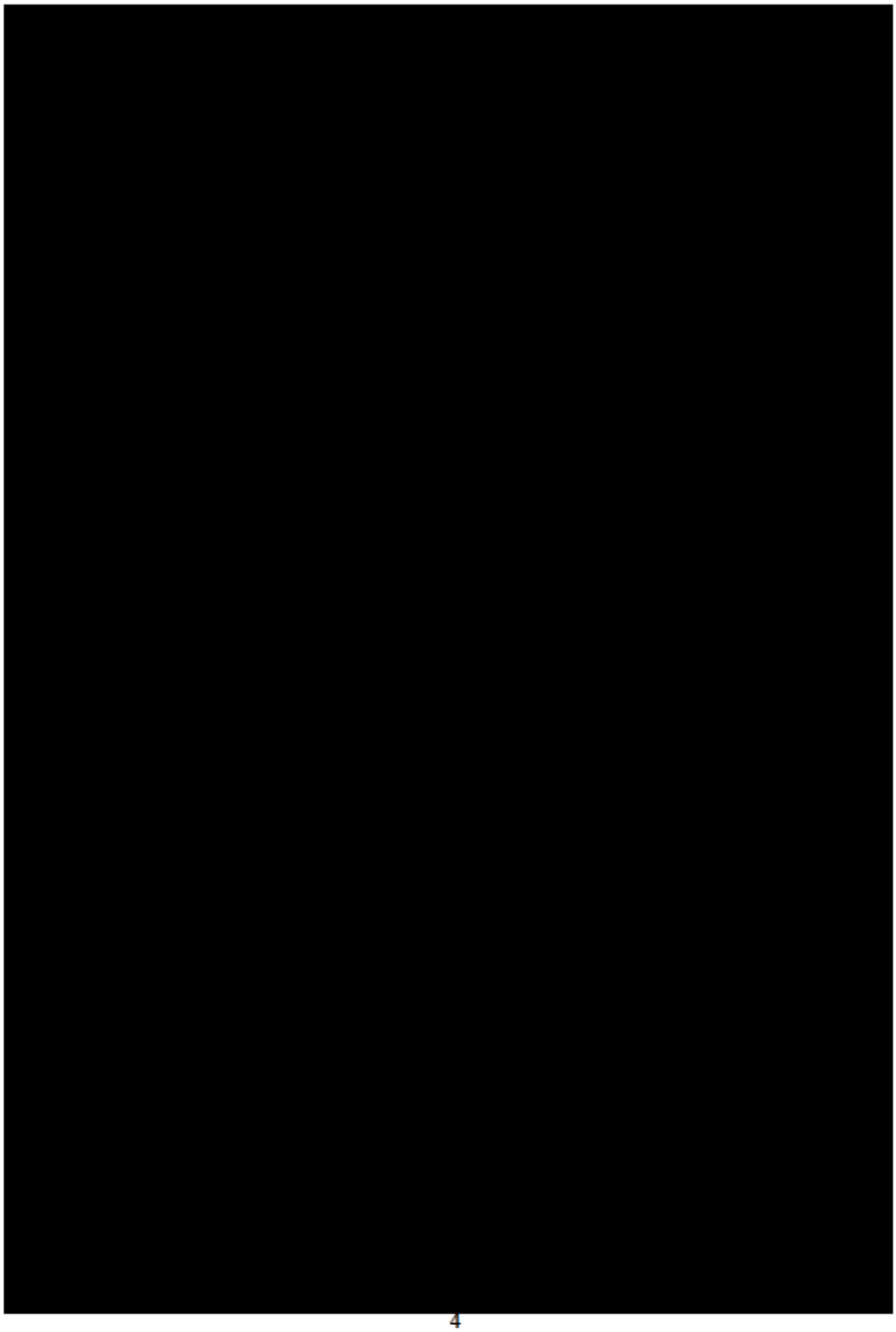

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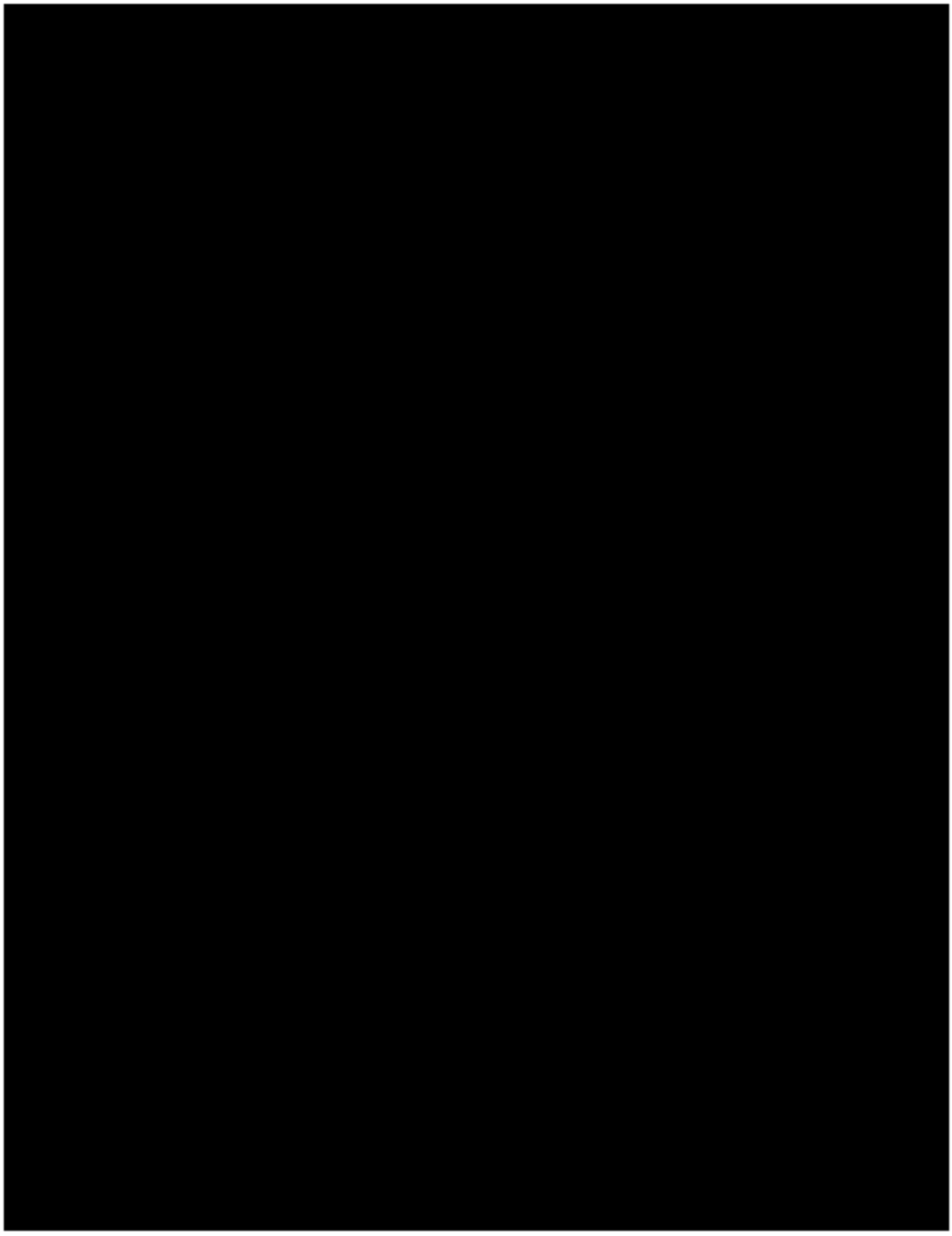

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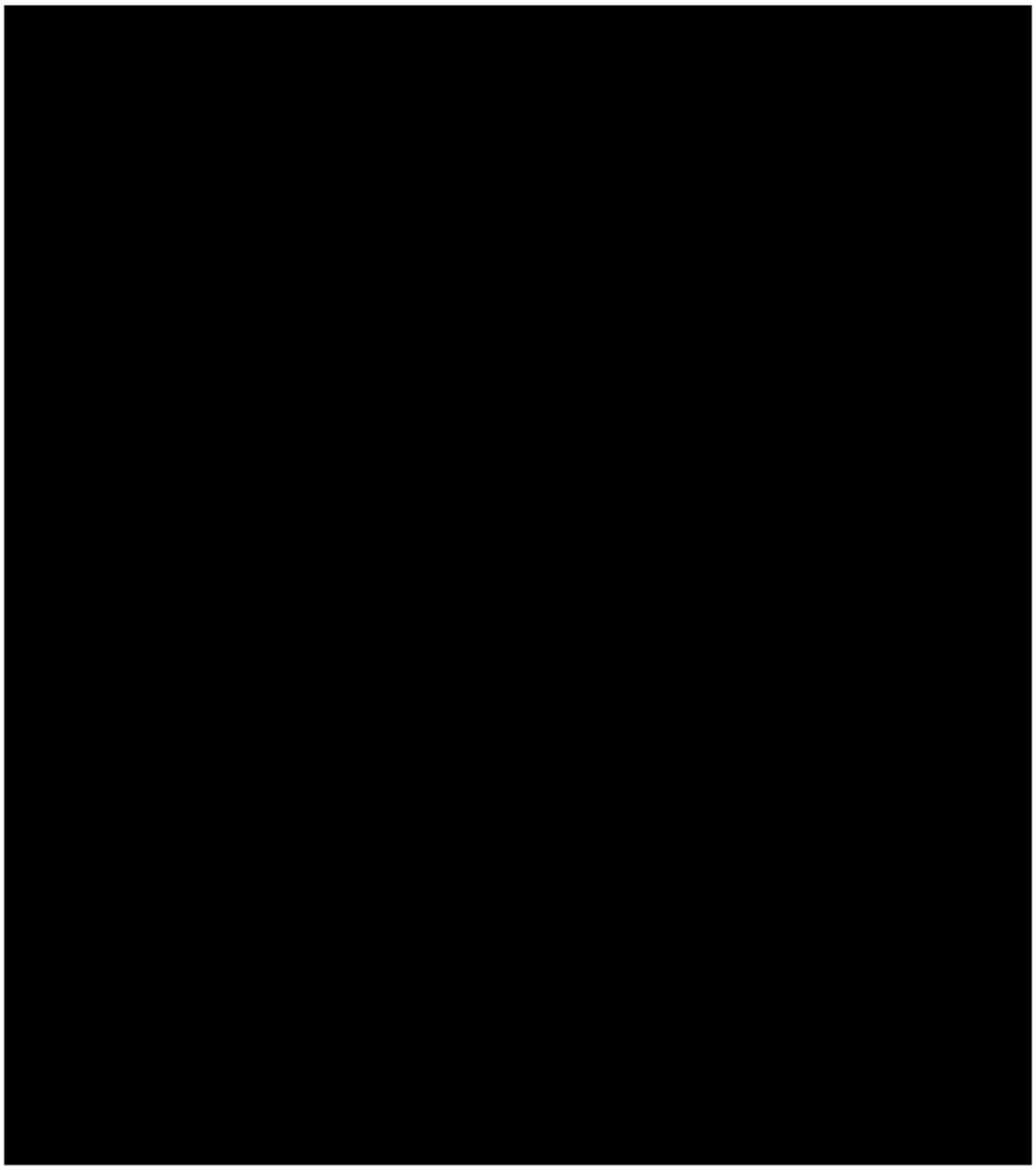
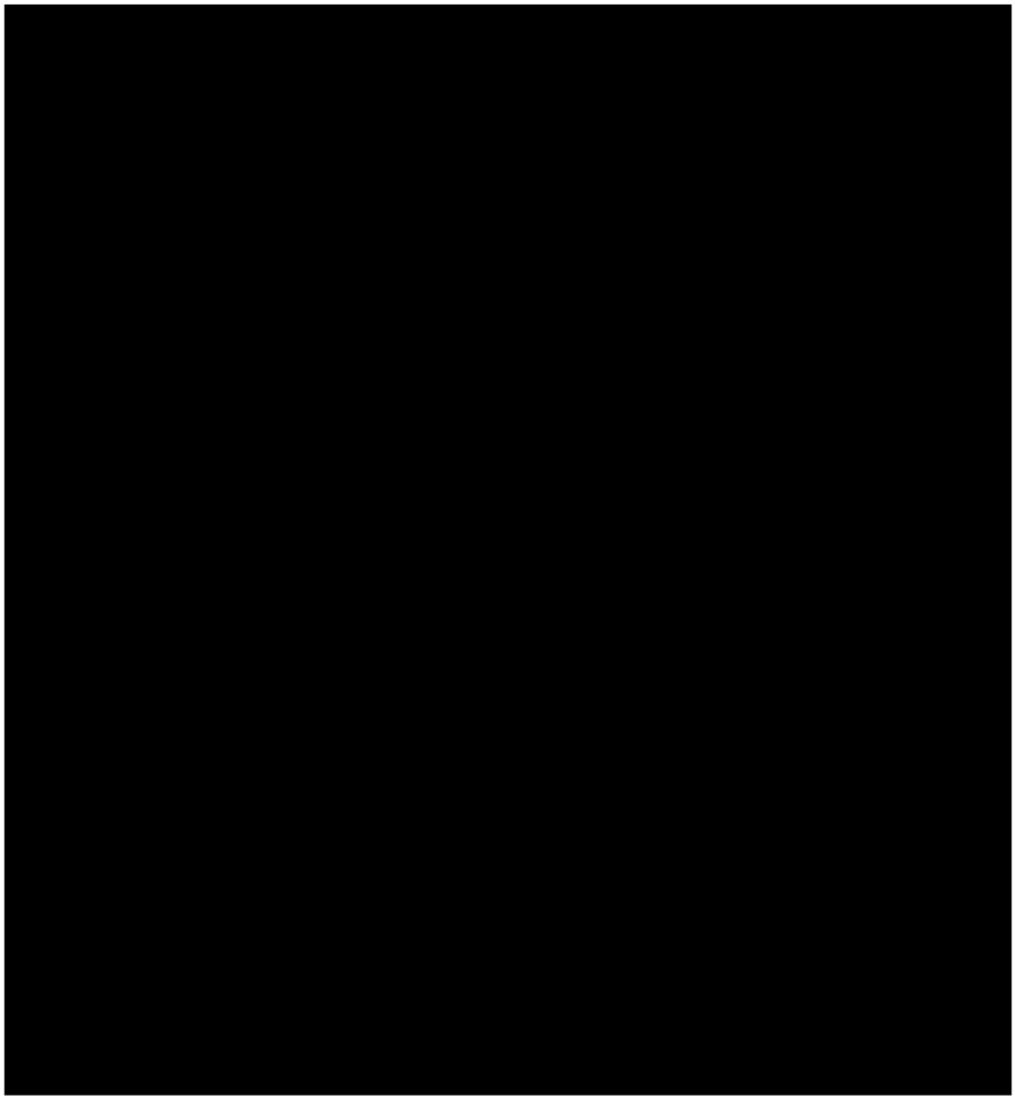


6

EQUAL EMPLOYMENT OPPORTUNITY
POLICY STATEMENT

NAME OF COMPANY: KENMORE CONSTRUCTION CO., INC.
700 HOME AVENUE
AKRON, OHIO 44310



Attachment C

PARSONS Corporate Policy Human Resources	Harassment and Discrimination Policy - North America [redacted]	Page 1 of 6

Policy

[redacted]

[redacted]

[redacted]

[redacted]

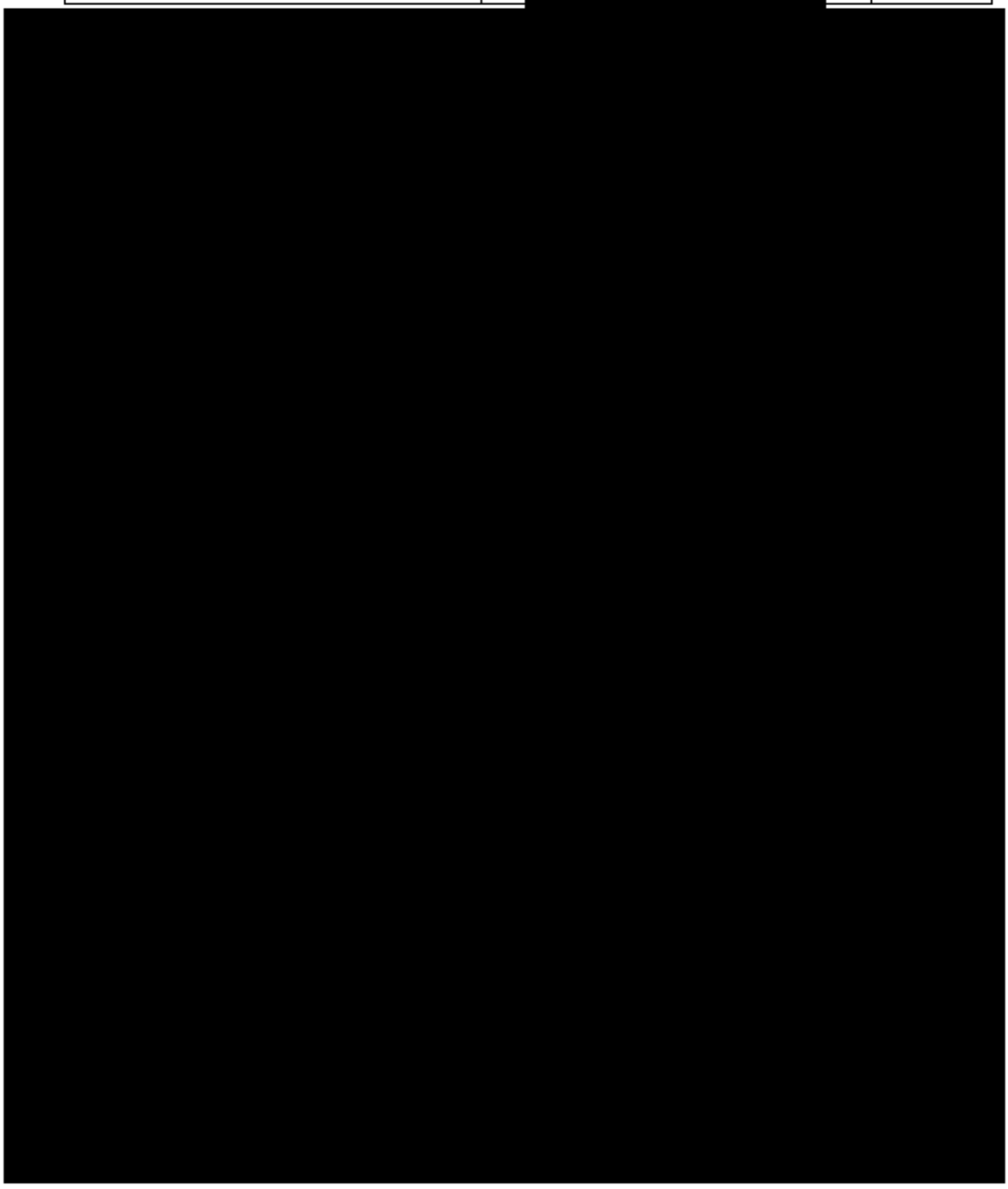
[redacted]

[redacted]

[redacted]

PARSONS Corporate Policy Human Resources	Diversity, Equity and Inclusion Policy Rev. 6 [redacted]	Page 1 of 4

[redacted]



[redacted]

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[redacted]

PARSONS Corporate Standard Human Resources - US	Equal Opportunity Affirmative Action [redacted]	Page 1 of 3

[redacted]

PARSONS Corporate Standard Human Resources - US	Equal Opportunity Affirmative Action	Page 2 of 3

[redacted]

PARSONS Corporate Standard Human Resources - US	Equal Opportunity Affirmative Action [redacted]	Page 3 of 3

[redacted]

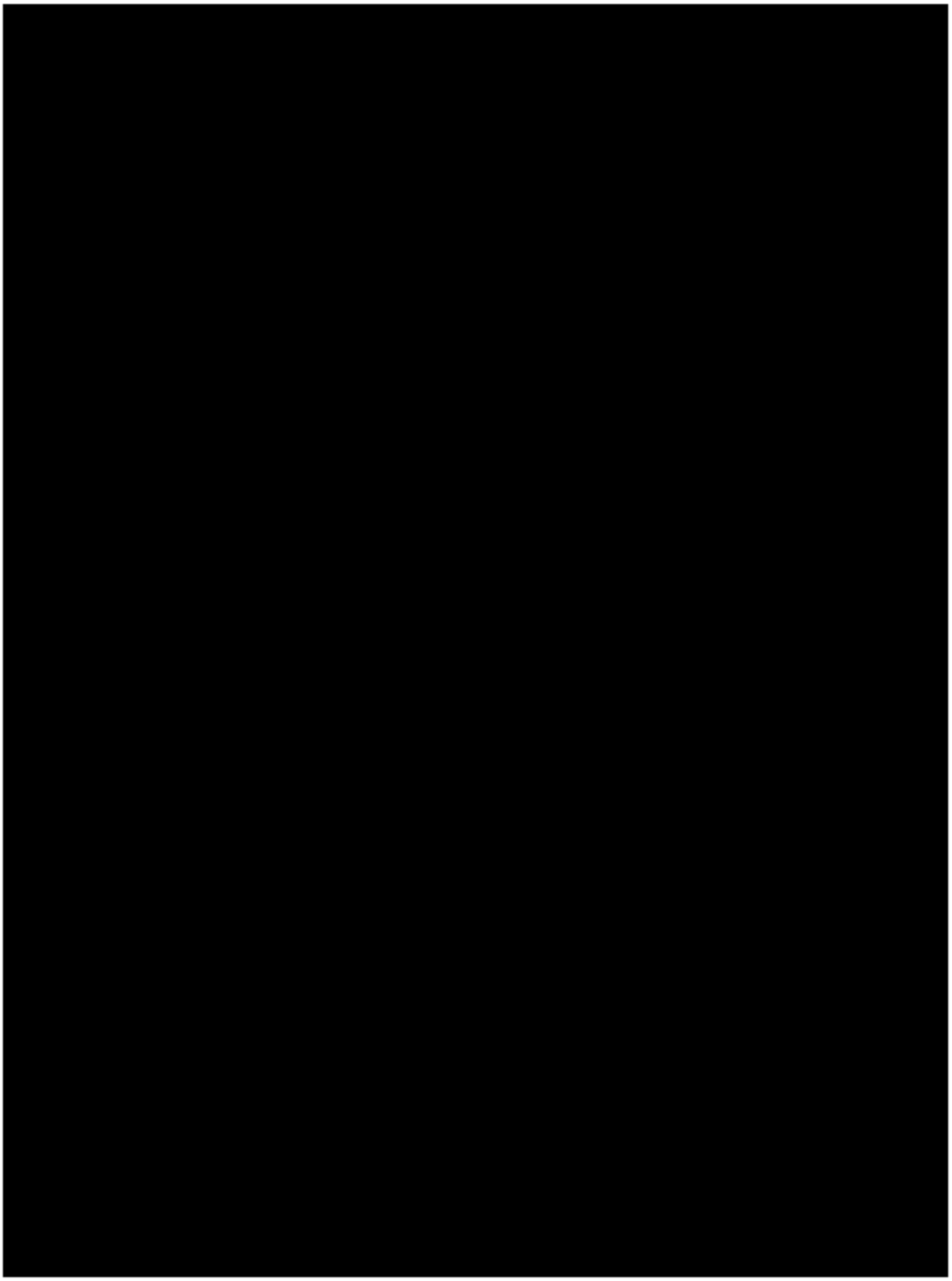
Attachment D

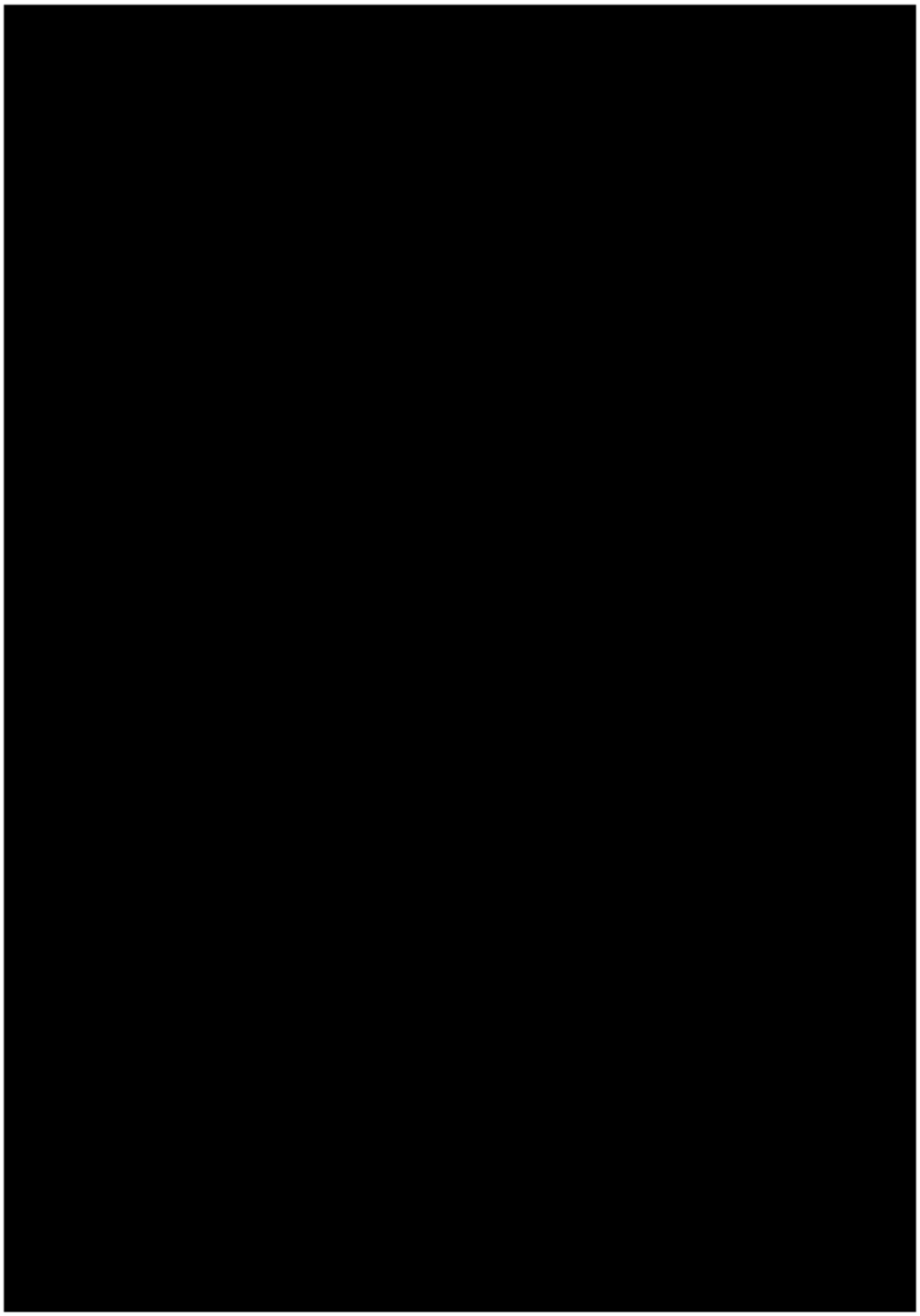
KENMORE CONSTRUCTION CO., INC.

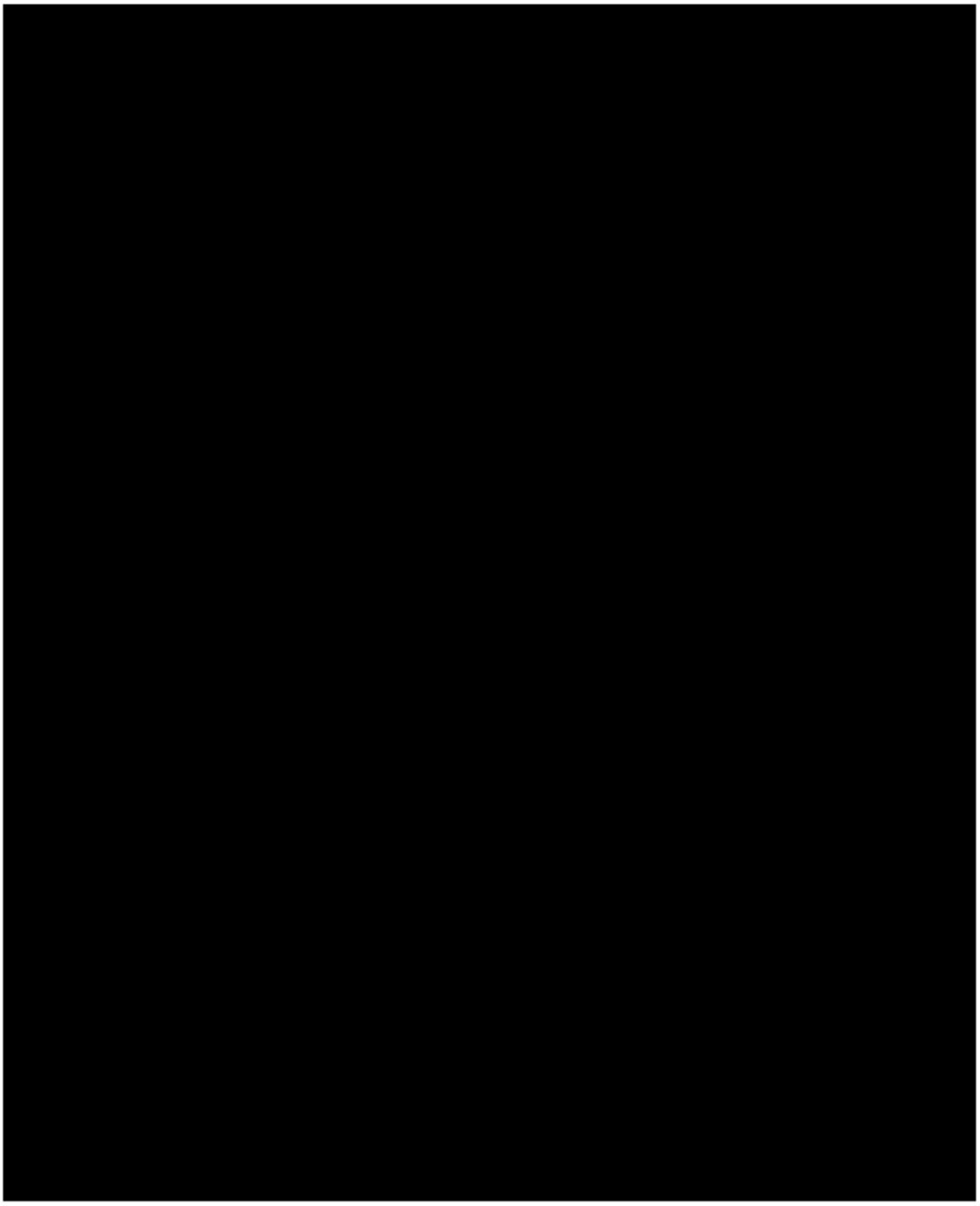
700 HOME AVENUE
AKRON, OHIO 44310

GUIDELINES FOR INVESTIGATING COMPLAINTS OF DISCRIMINATION/HARASSMENT

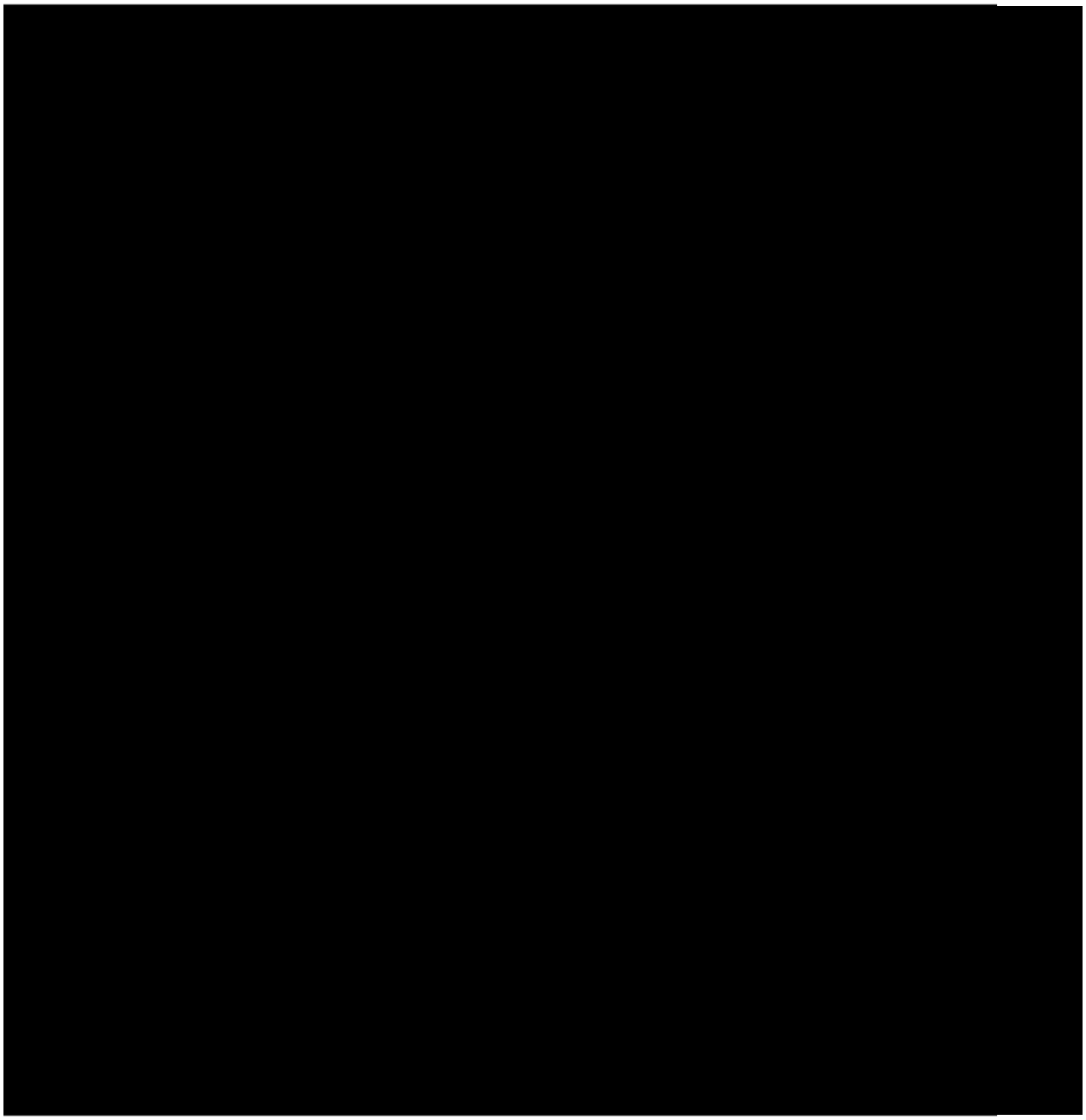
[redacted]

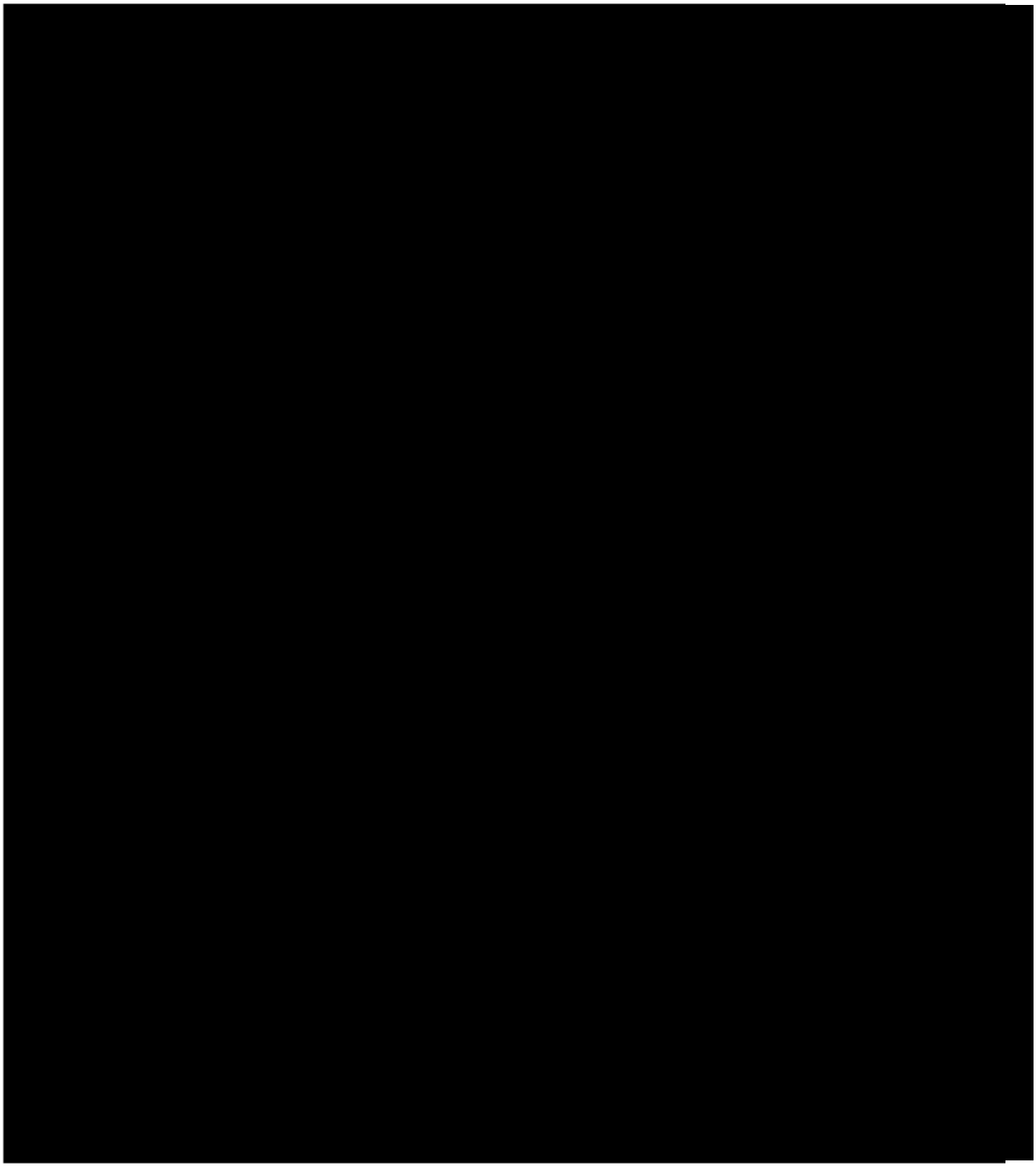






Attachment E





DBT RESPONSES TO THE DEPARTMENT'S PTI EVALUATION COMMENTS

Part D - DRAFT DBE Open-Ended Performance Plan: acceptability of the Draft DBE Open- Ended Performance Plan (including the acceptability of the DBE Utilization Manager).

All comments provided for Part D shall be addressed in in the Technical Proposal Submittal

1. OEPP Part 1: DBE Utilization Commitment No

   deficiencies. No comments.

2. OEPP Part 2: DBE Utilization Manager

   Noted Deficiencies

   a. Resume does not adequately demonstrate sufficient experience CUF and EEO requirements.

   DBT Response/Action:

   Added the following under Part 2: "In addition to his work on project specific DBE requirements [redacted] has also managed all CUF and EEO responsibilities during his [redacted] under the supervision of [redacted]

   Comment:

   b. If one person cannot meet all requirements, the Offeror may add supplemental staff to assist in performing CUF and EEO functions. No additional resume is required but revision should capture staff and their general experience.

   DBT Response/Action:

   Added the following under Part 2: "In addition to his work on project specific DBE requirements [redacted] has also managed all CUF and EEO responsibilities during his [redacted] under the supervision of [redacted]"

3. OEPP Part 3: DBE Goal Attainment Reporting

   Noted Deficiencies

   a. No supporting personnel responsible for identifying opportunities for DBE subcontracting was specifically listed as (although Part 4 does mention that the project management team and On-Site DBE Coordinator will do this). Reference necessary personnel.

   DBT Response/Action:

   Added additional personnel and efforts added for Key Personnel

4. OEPP Part 4: Good Faith Efforts (GFEs)

   No deficiencies. No comments.

5. OEPP Part 5: Non-Discrimination, Affirmative Action, and EEO No

   deficiencies. No comments.

6. OEPP Part 6: DBE Prompt Payment

   No Deficiencies Comments

   a. Plan states the use of CRL and not Signet. Signet is required by PN 31 and would fulfill this requirement and direct entry into CRL would not be necessary.

      DBT Response/Action:

      Signet replaced by CRL.

   b. "Kenmore will enter DBE subcontractor payments within 10 calendar days of payment from ODOT"— confirm intent is to make payments (rather than "enter payment") within 10 calendar days of payment from ODOT. Recommendation is to revise language accordingly.

      DBT Response/Action:

      Clarified that DBT will enter "and make" DBE subcontractor payments within 10 calendar days.

   c. The "monthly Prompt Payment log" does not have anything to do with prompt payment.

      DBT Response/Action:

      Monthly Prompt Payment log has been removed from the OEPP for the Technical Proposal.

7. OEPP Part 7: DBE Contracting Notification

   No deficiencies. No comments.

8. OEPP Part 8: Commercial Useful Function

   No deficiencies. No comments.

9. OEPP Part 9: DBE Work Package Notification

   Noted Deficiencies

   a. Does not specify methods to identify potential work packages and the intended packages' identification lead-times. Provide methods to identify potential work packages and the intended lead-times.

DBT Response/Action:

Added " Kenmore Construction has started high level scope analysis to begin identifying potential work packages. Throughout the design portion of this project the final plans, quantities, and specifications will be used to identify defined scopes for subcontractors and suppliers that align with DBE capabilities. These scopes will be reviewed, and where appropriate be divided into smaller sized work packages that could be quoted by smaller minority firms. These scopes will be distributed to DBE subcontractors and suppliers that have been previously contracted by Kenmore (Known) and against the Ohio Unified DBE Directory (Potential) by analyzing NAICS Codes for appropriate Work Types. Draft work packages will be sent within ten (10) working days upon the approval from ODOT for stage 1 plans to known and potential DBE Subcontractors and Suppliers. Kenmore will follow up via email within five (5) working days of sending for feedback and bidding interest. After the Construction Plans have been completed and AFC plan sets are distributed, final work packages will be compiled and sent within five (5) working days to all Known and Potential interested DBE firms. "

b. Clarification on communication methods needed. Provide further clarification.

DBT Response/Action:

Added "for this reason email will be the primary form of communication utilized along with phone calls, Teams Meetings, and in-person meetings as deemed necessary throughout the process. During these scope reviews the scope size as well as timeframe will be reviewed to determine if adjustments need to be made to encourage DBE participation. Kenmore intends to utilize the first year of the project during design to come to contract agreements with DBE subcontractors and suppliers to ensure the goal is met."

c. The plan does not distinguish between known and potential DBEs (seems to assume all DBEs are potential, none are known). Provide further clarifications.

DBT Response/Action:

Provided the difference between previously contracted DBE Subcontractors by Kenmore (Known) and DBE Subcontractors on the Ohio Unified DBE Directory (Potential).

d. No description of the criteria used in the selection of DBE subcontractors. Provide further clarifications.

DBT Response/Action:

Added "Quotes will be evaluated from DBE suppliers fairly throughout the contracting process. While price will be an area of consideration, other evaluation factors will include performance of Commercially Useful Function, previous experience with Kenmore, other past projects completed across the state, equipment reviews, and schedule/availability. As previously stated, Kenmore will break up work packages into smaller units as necessary to make the project more approachable."

10. OEPP Part 10: DBE Planned Utilization Forecast

Noted Deficiencies

a. Anticipated overall value of Work: Did not submit – should be itemized information demonstrating Month/Year | Value | Cumulative Value. Revise and include.

DBT Response/Action:

Information Provided in Technical Proposal

b. Anticipated DBE subcontracting payments: Did not submit – should be itemized information demonstrating Month/Year | DBE Value | DBE Cumulative Value. Revise and include.

DBT Response/Action:

Information Provided in Technical Proposal

c. A combined graph showing the cumulative value of the Work: Acceptable

DBT Response/Action:

Information Provided in Technical Proposal

d. Anticipated work types and estimated work type value to be performed by DBE: Did not submit – should be itemized information demonstrating Month/Year | DBE Worktype. Revise and include.

DBT Response/Action:

Information Provided in Technical Proposal

e. DBE subcontract value yet to be determined: Did not submit – should be itemized remaining value to be contracted by Month/Year | DBE Remaining Value. Revise and include.

DBT Response/Action:

Information Provided in Technical Proposal

Note: For e., should be equivalent to b.

PART E. FORM A-1 PROPOSAL LETTER

LOR-90-10.76 Major Rehabilitation Design-Build

APPENDIX A: FORM A-1 PROPOSAL LETTER

FORM A-1 PROPOSAL LETTER

Name of Shortlisted Offeror: Kenmore Construction Co., Inc.

Date: February 14, 2025

Ohio Department of Transportation
Office of Alternative Project Delivery, First Floor
1980 W. Broad Street Mail Stop 4090
Columbus, OH 43223

On behalf of the Shortlisted Offeror, the undersigned submit the documents described in paragraph 1 of this Proposal Letter in response to the Request for Proposals for the LOR-90-10.76 | PID 107714 | Project (24)3003 Design-Build Project (the "**RFP**") issued by the Ohio Department of Transportation (the "**Department**").

The Shortlisted Offeror hereby acknowledges delivery by Shortlisted Offeror to the Department of the enclosed Technical Proposal. Together with the Price Proposal, the submittal by the Shortlisted Offeror shall collectively constitute the "Proposal" for the purposes of this letter. Enclosed with this Proposal Letter is the Technical Proposal of the Shortlisted Offeror consisting of all documents and information required by the RFP.

If this Proposal is accepted by the Department, the Shortlisted Offeror is prepared to enter this agreement without varying or amending its terms (except for modifications agreed to by the Department in its sole discretion), and to satisfy all other conditions to the award of the contract, including compliance with all commitments contained in this Proposal.

If this Proposal is accepted by the Department, the following applies:

1. The Shortlisted Offeror hereby certifies that:

   A. its Bid is submitted without reservation, qualification, assumptions, deviations, or conditions;

   B. it has carefully examined and is fully familiar with all the provisions of the Bid Documents, has reviewed all materials provided, the Addenda and the Department's responses to questions, and is satisfied that the Bid Documents provide sufficient detail regarding the obligations to be performed by the Shortlisted Offeror and does not contain internal inconsistencies;

   C. it has conducted such other field investigations and additional design development as is prudent and reasonable in preparing the Bid;

   D. it has notified the Department of any deficiencies or omissions in the Bid Documents or other documents provided by the Department;

E. the Lead Contractor has been prequalified for such work by the Department in accordance with the terms of the Bid Documents;

F. the Lead Designer has been prequalified for such work by the Department in accordance with the terms of the Bid Documents;

G. neither the Shortlisted Offeror nor its employees, members, agents, consultants, or advisors have entered either directly or indirectly into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive selection in connection with its Proposal;

H. the Shortlisted Offeror is committed to meeting the Project goals for DBE.

I. the Shortlisted Offeror further understands that all costs and expenses incurred in preparing the Bid and participating in the RFP Process will be borne solely by the Shortlisted Offeror, except any payment for preparation of responsive preliminary design concept that may be paid in accordance with the RFP.

J. in the event a substantive difference is identified before or after Award between the assumptions made by the Shortlisted Offeror in its preparation of a Bid and any provision in the Contract Documents, the provisions of the relevant Contract Document will prevail.

2. The Shortlisted Offeror represents that all statements made, and information provided in the Technical Proposal are true, correct and reasonably accurate as of the date of submission of this Proposal. The Shortlisted Offeror information provided in the Technical Proposal depicts the Shortlisted Offeror's general intent to design and construct the Project and the Department can reasonably rely on such information in its evaluation of the approach, however the Shortlisted Offeror assumes all responsibility for designing and constructing the Project to comply with the Contract if the Shortlisted Offeror's approach is determined unfeasible.

3. The Shortlisted Offeror further understands that all costs and expenses incurred in preparing the Technical Proposal and participating in the RFP Process will be borne solely by the Shortlisted Offeror, except any payment for preparation of responsive preliminary design concept that may be paid in accordance with the RFP.

4. The Shortlisted Offeror consents to the Department's disclosure of its Technical Proposal, Intermediate Technical Proposal, PTI discussion information, and ATC information pursuant to the Department's public records policy to any persons as required by law after Award. The Shortlisted Offeror acknowledges and agrees to the disclosure terms described in the RFP and expressly waives any right to contest such disclosures.

5. By submitting a Proposal, The Shortlisted Offeror agrees that:

A. The Department will not be responsible for any errors, omissions, inaccuracies, or incomplete statements in the Proposal;

B. The Department's acceptance of the Proposal does not constitute any statement or determination as to its completeness, responsiveness, or compliance with the requirements of the RFP; and

C. in the event a substantive difference is identified before or after Award, between the terms for the Project offered by the Shortlisted Offeror in its Proposal and any provision in the Bidding Documents, the provisions of the relevant Contract Document will prevail, and the Shortlisted Offeror will not be entitled to alter its Price Proposal, as applicable.

6. The Proposal shall be governed by and construed in all respects according to the law of the State of Ohio.

The Shortlisted Offeror's business address:

700	Home Ave	
(No.)	(Street)	(Floor or Suite)

Akron	Ohio		44310	United States
(City)	(State Province)	or	(ZIP or Postal Code)	(Country)

State/Country of Organization (if applicable): Ohio/United States

Name of Company Signatory: [redacted]

Company Signatory [redacted]ture: [redacted]

[redacted]

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ATTACHMENT: PROPOSAL CHECK-IN VALIDATION

The Department will evaluate the following items at receipt of the Technical Proposal and the Sealed Price Proposal for general responsiveness to the RFP. This is being provided for informational purposes to the Shortlisted Offerors.

General	Y / N
Is the Shortlisted Offeror one of the two Shortlisted Offerors? (Must be "Yes" to be responsive")	
Was the Technical Proposal and the Sealed Price Proposal received by the required deadline as stated in the RFP? (Must be "Yes" to be responsive")	
Has the Shortlisted Offeror engaged in any Ex Parte Communications, attempted to unduly influence the selection process, or otherwise behaved in a manner lacking professional integrity? (Must be "No" to be responsive")	
Is the Technical Proposal in a format which reasonably corresponds to the requirements of the ITO? (Must be "Yes" to be responsive")	
Does the Technical Proposal include Form A-1? (Must be "Yes" to be responsive")	
Is there a known Conflict of Interest that would prevent a Shortlisted Offeror member from participating in the project? (Must be "No" to be responsive")	

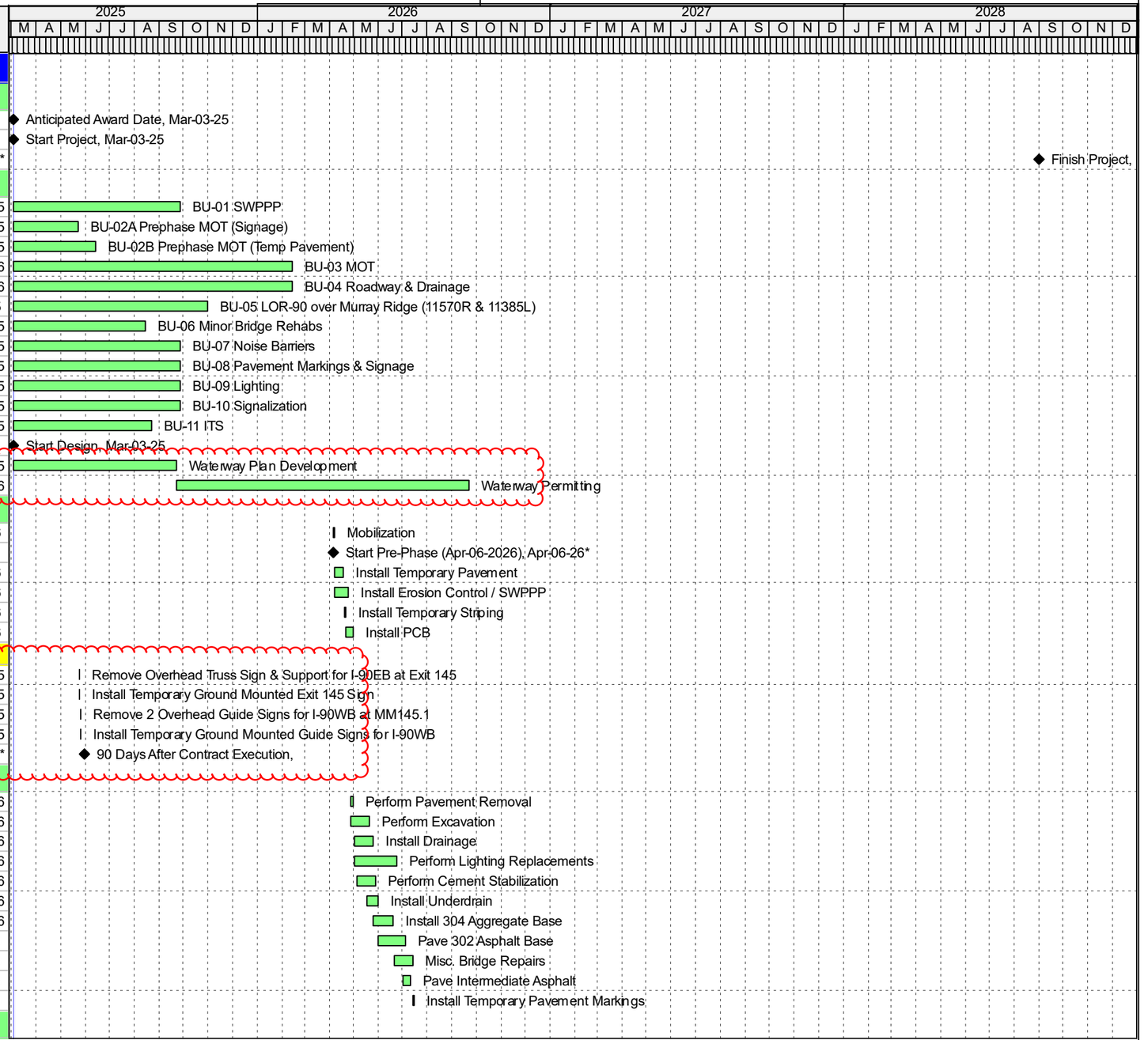
APPENDIX A

BAR CHART SCHEDULE

ODOT LOR-90-10.76 Major Rehabilitation

Project Number: 243003
County: Lorain | PID Number 107714
Route Number: IR-90 | FHWA Number: E200(155)
Completion Date: 8/31/2028 | Contract Signed Date: tbd

Activity ID	Activity Name	OD	Start	Finish
ODOT LOR-90-10.76 Major Rehabilitation				
CONTRACT / MILESTONES				
A1000	Anticipated Award Date	0	Mar-03-25	
A1370	Start Project	0	Mar-03-25	
A2490	Finish Project	0		ug-31-28*
DESIGN DEVELOPMENT				
A1010	BU-01 SWPPP	150	Mar-03-25	Sep-26-25
A1020	BU-02A Prephase MOT (Signage)	60	Mar-03-25	May-23-25
A1030	BU-02B Prephase MOT (Temp Pavement)	75	Mar-03-25	Jun-13-25
A1040	BU-03 MOT	250	Mar-03-25	Feb-13-26
A1050	BU-04 Roadway & Drainage	250	Mar-03-25	Feb-13-26
A1060	BU-05 LOR-90 over Murray Ridge (11570R & 11385L)	175	Mar-03-25	Oct-31-25
A1070	BU-06 Minor Bridge Rehabs	120	Mar-03-25	Aug-15-25
A1080	BU-07 Noise Barriers	150	Mar-03-25	Sep-26-25
A1090	BU-08 Pavement Markings & Signage	150	Mar-03-25	Sep-26-25
A1100	BU-09 Lighting	150	Mar-03-25	Sep-26-25
A1110	BU-10 Signalization	150	Mar-03-25	Sep-26-25
A1120	BU-11 ITS	125	Mar-03-25	Aug-22-25
A2800	Start Design	0	Mar-03-25	
A3770	Waterway Plan Development	175	Mar-03-25	Sep-22-25
A3780	Waterway Permitting	365	Sep-23-25	Sep-22-26
PRE-PHASE				
A1130	Mobilization	2	Apr-06-26	Apr-07-26
A1350	Start Pre-Phase (Apr-06-2026)	0	Apr-06-26*	
A1140	Install Temporary Pavement	10	Apr-08-26	Apr-18-26
A3720	Install Erosion Control / SWPPP	15	Apr-08-26	Apr-24-26
A1150	Install Temporary Striping	2	Apr-20-26	Apr-21-26
A1160	Install PCB	8	Apr-22-26	Apr-30-26
Existing Sign Removal				
A3820	Remove Overhead Truss Sign & Support for I-90EB at Exit 145	1	May-24-25	May-24-25
A3830	Install Temporary Ground Mounted Exit 145 Sign	1	May-24-25	May-24-25
A3840	Remove 2 Overhead Guide Signs for I-90WB at MM145.1	1	May-26-25	May-26-25
A3850	Install Temporary Ground Mounted Guide Signs for I-90WB	1	May-26-25	May-26-25
A3860	90 Days After Contract Execution	0		lay-31-25*
PHASE 1A (IR-90 EB Inside)				
A1170	Perform Pavement Removal	5	Apr-27-26	May-01-26
A1180	Perform Excavation	20	Apr-28-26	May-20-26
A2690	Install Drainage	20	May-02-26	May-25-26
A3750	Perform Lighting Replacements	45	May-02-26	Jun-23-26
A1190	Perform Cement Stabilization	20	May-06-26	May-28-26
A1200	Install Underdrain	13	May-18-26	Jun-01-26
A1210	Install 304 Aggregate Base	22	May-26-26	Jun-19-26
A1220	Pave 302 Asphalt Base	30	Jun-01-26	Jul-04-26
A3230	Misc. Bridge Repairs	20	Jun-20-26	Jul-13-26
A1230	Pave Intermediate Asphalt	9	Jul-01-26	Jul-10-26
A1240	Install Temporary Pavement Markings	2	Jul-14-26	Jul-15-26
PHASE 1B (IR-90 EB Outside)				



Actual Level of Effort
Actual Work
Remaining Work

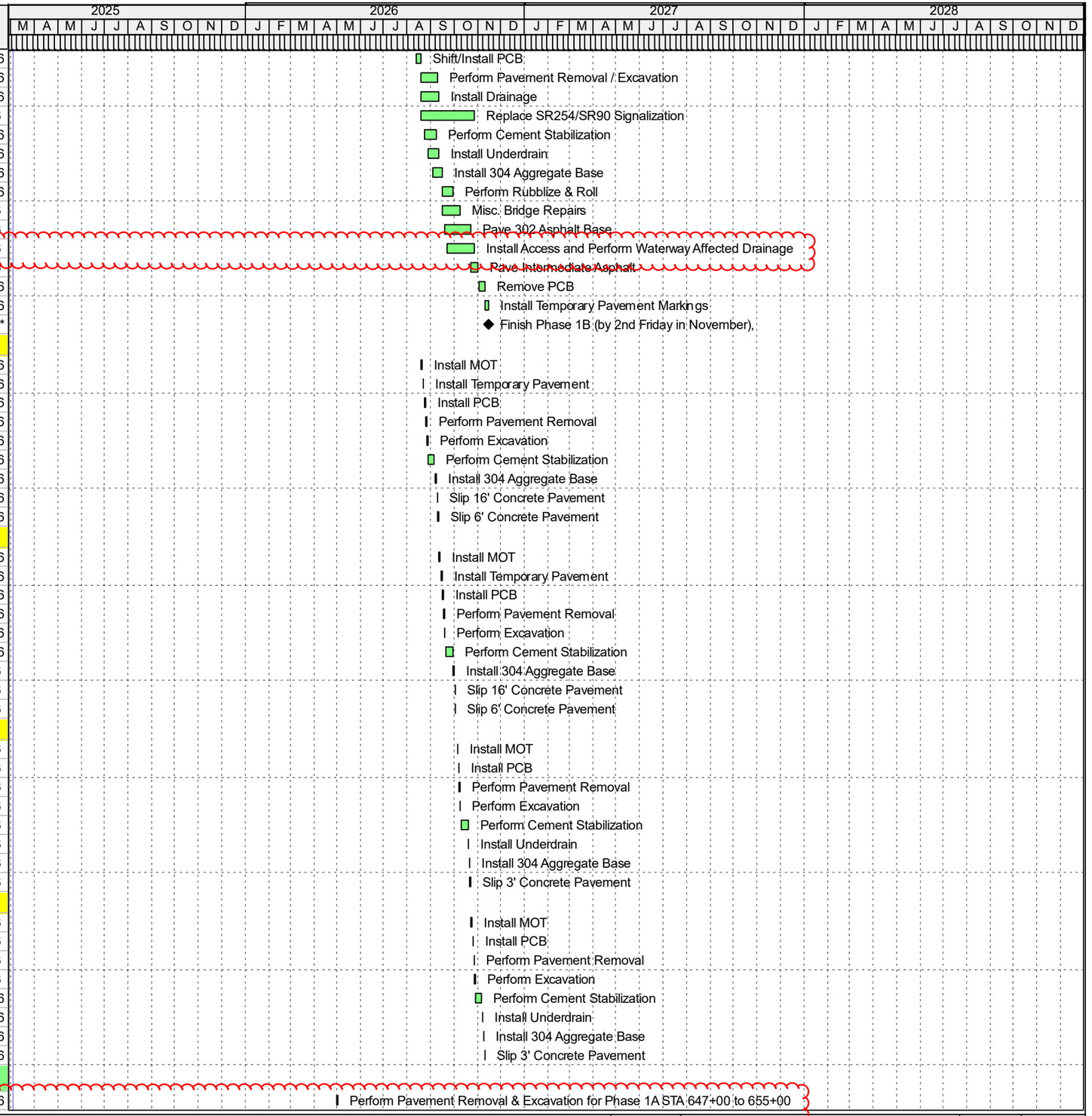
TASK filter: All Activities

Mar-03-25 17:19

Technical Proposal Submission

Date	Revision	Checked	Approved
Feb-14-25	Revisions per ODOT ITP Comments	KDM	JTD

Activity ID	Activity Name	OD	Start	Finish
A1250	Shift/Install PCB	5	Aug-13-26	Aug-18-26
A1260	Perform Pavement Removal / Excavation	19	Aug-19-26	Sep-09-26
A3620	Install Drainage	20	Aug-19-26	Sep-10-26
A3740	Replace SR254/SR90 Signalization	60	Aug-19-26	Oct-27-26
A1270	Perform Cement Stabilization	14	Aug-24-26	Sep-08-26
A1280	Install Underdrain	13	Aug-28-26	Sep-11-26
A1290	Install 304 Aggregate Base	11	Sep-03-26	Sep-15-26
A1300	Perform Rubblize & Roll	12	Sep-16-26	Sep-29-26
A3630	Misc. Bridge Repairs	20	Sep-16-26	Oct-08-26
A1310	Pave 302 Asphalt Base	30	Sep-18-26	Oct-22-26
A3790	Install Access and Perform Waterway Affected Drainage	30	Sep-22-26	Oct-27-26
A1320	Pave Intermediate Asphalt	8	Oct-23-26	Oct-31-26
A1330	Remove PCB	8	Nov-02-26	Nov-10-26
A1340	Install Temporary Pavement Markings	4	Nov-11-26	Nov-14-26
A2980	Finish Phase 1B (by 2nd Friday in November)	0		Nov-14-26*
PHASE 1C SR-254 Ramp K (EB On Ramp)				
A1360	Install MOT	2	Aug-19-26	Aug-20-26
A1380	Install Temporary Pavement	2	Aug-21-26	Aug-22-26
A1390	Install PCB	1	Aug-24-26	Aug-24-26
A1400	Perform Pavement Removal	2	Aug-25-26	Aug-26-26
A1410	Perform Excavation	1	Aug-27-26	Aug-27-26
A1420	Perform Cement Stabilization	8	Aug-28-26	Sep-05-26
A1430	Install 304 Aggregate Base	2	Sep-07-26	Sep-08-26
A1440	Slip 16' Concrete Pavement	1	Sep-09-26	Sep-09-26
A1450	Slip 6' Concrete Pavement	1	Sep-10-26	Sep-10-26
PHASE 1C SR-254 Ramp L (EB Off Ramp)				
A1460	Install MOT	2	Sep-11-26	Sep-12-26
A1470	Install Temporary Pavement	2	Sep-14-26	Sep-15-26
A1480	Install PCB	1	Sep-16-26	Sep-16-26
A1490	Perform Pavement Removal	2	Sep-17-26	Sep-18-26
A1500	Perform Excavation	1	Sep-19-26	Sep-19-26
A1510	Perform Cement Stabilization	8	Sep-21-26	Sep-29-26
A1520	Install 304 Aggregate Base	2	Sep-30-26	Oct-01-26
A1530	Slip 16' Concrete Pavement	1	Oct-02-26	Oct-02-26
A1540	Slip 6' Concrete Pavement	1	Oct-03-26	Oct-03-26
PHASE 1D SR-254 Ramp K (EB On Ramp)				
A1550	Install MOT	2	Oct-05-26	Oct-06-26
A1560	Install PCB	1	Oct-07-26	Oct-07-26
A1570	Perform Pavement Removal	1	Oct-08-26	Oct-08-26
A1580	Perform Excavation	1	Oct-09-26	Oct-09-26
A1590	Perform Cement Stabilization	8	Oct-10-26	Oct-19-26
A1600	Install Underdrain	1	Oct-20-26	Oct-20-26
A1610	Install 304 Aggregate Base	1	Oct-21-26	Oct-21-26
A1620	Slip 3' Concrete Pavement	1	Oct-22-26	Oct-22-26
PHASE 1D SR-254 Ramp L (EB Off Ramp)				
A1630	Install MOT	2	Oct-23-26	Oct-24-26
A1640	Install PCB	1	Oct-26-26	Oct-26-26
A1650	Perform Pavement Removal	1	Oct-27-26	Oct-27-26
A1660	Perform Excavation	1	Oct-28-26	Oct-28-26
A1670	Perform Cement Stabilization	8	Oct-29-26	Nov-06-26
A1680	Install Underdrain	1	Nov-07-26	Nov-07-26
A1690	Install 304 Aggregate Base	1	Nov-09-26	Nov-09-26
A1700	Slip 3' Concrete Pavement	1	Nov-10-26	Nov-10-26
PHASE 2A (SR-2 EB Inside)				
A3880	Perform Pavement Removal & Excavation for Phase 1A STA 647+00 to 655+00	2	May-01-26	May-02-26



Actual Level of Effort
Actual Work
Remaining Work

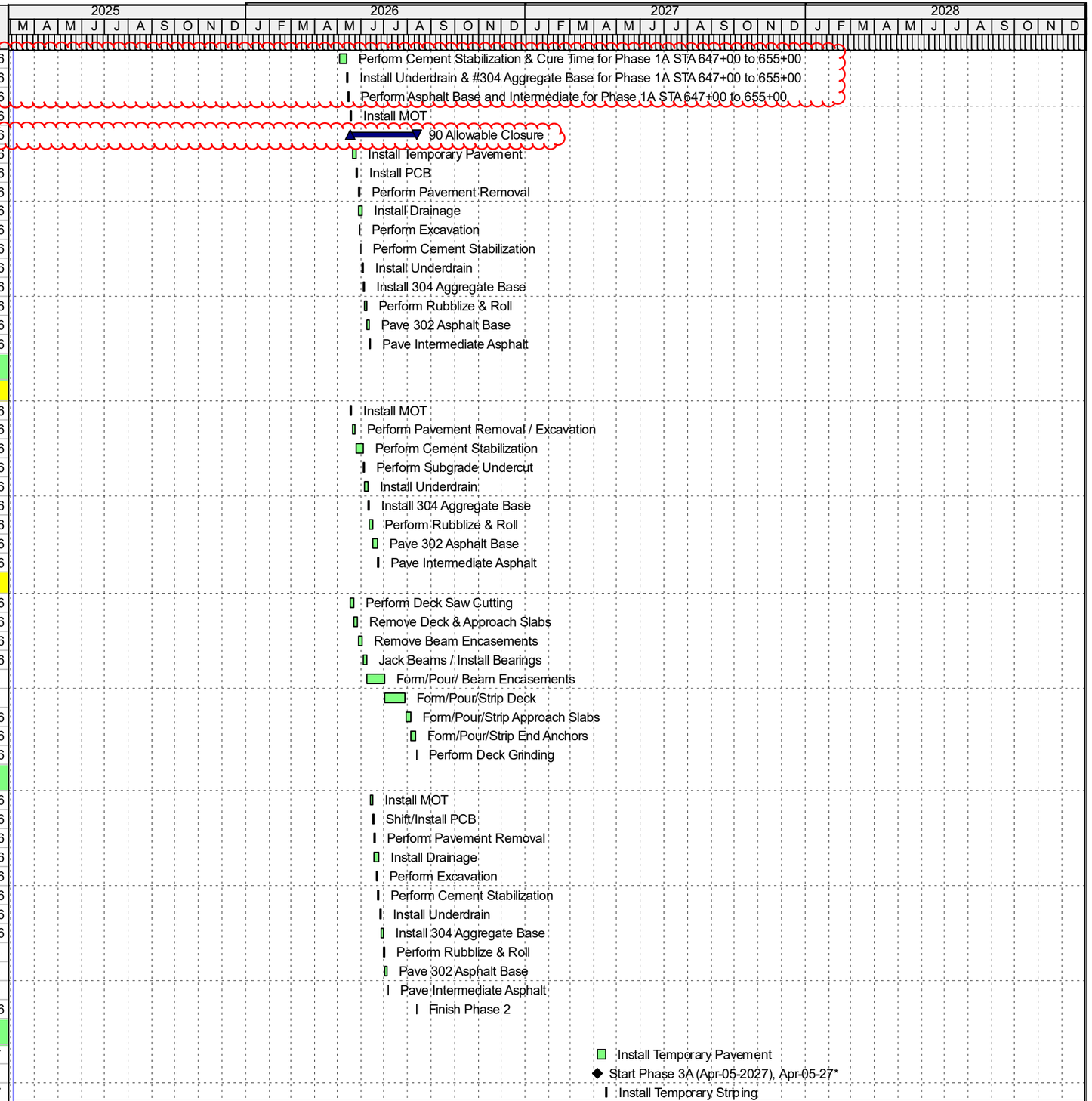
TASK filter: All Activities

Mar-03-25 17:19

Technical Proposal Submission

Date	Revision	Checked	Approved
Feb-14-25	Revisions per ODOT ITP Comments	KDM	JTD

Activity ID	Activity Name	OD	Start	Finish
A3890	Perform Cement Stabilization & Cure Time for Phase 1A STA 647+00 to 655+00	8	May-04-26	May-12-26
A3900	Install Underdrain & #304 Aggregate Base for Phase 1A STA 647+00 to 655+00	2	May-13-26	May-14-26
A3910	Perform Asphalt Base and Intermediate for Phase 1A STA 647+00 to 655+00	2	May-15-26	May-16-26
A2270	Install MOT	2	May-18-26	May-19-26
A3810	90 Allowable Closure	87	May-18-26	Aug-12-26
A2280	Install Temporary Pavement	5	May-20-26	May-25-26
A2290	Install PCB	2	May-26-26	May-27-26
A2300	Perform Pavement Removal	2	May-28-26	May-29-26
A3640	Install Drainage	5	May-28-26	Jun-02-26
A2310	Perform Excavation	1	May-30-26	May-30-26
A2320	Perform Cement Stabilization	1	Jun-01-26	Jun-01-26
A2330	Install Underdrain	2	Jun-02-26	Jun-03-26
A2340	Install 304 Aggregate Base	2	Jun-04-26	Jun-05-26
A2350	Perform Rubblize & Roll	2	Jun-06-26	Jun-08-26
A2360	Pave 302 Asphalt Base	3	Jun-09-26	Jun-11-26
A2370	Pave Intermediate Asphalt	1	Jun-12-26	Jun-12-26
PHASE 2A (IR-90 TO OTC WB Leg)				
Roadway				
A3000	Install MOT	2	May-18-26	May-19-26
A3010	Perform Pavement Removal / Excavation	4	May-20-26	May-23-26
A3020	Perform Cement Stabilization	9	May-25-26	Jun-03-26
A3030	Perform Subgrade Undercut	2	Jun-04-26	Jun-05-26
A3040	Install Underdrain	3	Jun-06-26	Jun-09-26
A3050	Install 304 Aggregate Base	2	Jun-10-26	Jun-11-26
A3060	Perform Rubblize & Roll	3	Jun-12-26	Jun-15-26
A3070	Pave 302 Asphalt Base	6	Jun-16-26	Jun-22-26
A3080	Pave Intermediate Asphalt	2	Jun-23-26	Jun-24-26
LOR-90-11385L (WB IR-90 over Murrary Ridge Rd)				
A2700	Perform Deck Saw Cutting	5	May-18-26	May-22-26
A2710	Remove Deck & Approach Slabs	4	May-23-26	May-27-26
A2720	Remove Beam Encasements	5	May-28-26	Jun-02-26
A2730	Jack Beams / Install Bearings	5	Jun-03-26	Jun-08-26
A2740	Form/Pour/ Beam Encasements	20	Jun-09-26	Jul-01-26
A2750	Form/Pour/Strip Deck	23	Jul-02-26	Jul-28-26
A2760	Form/Pour/Strip Approach Slabs	6	Jul-29-26	Aug-04-26
A2770	Form/Pour/Strip End Anchors	6	Aug-05-26	Aug-11-26
A2780	Perform Deck Grinding	1	Aug-12-26	Aug-12-26
PHASE 2B (SR-2 EB Outside)				
A2380	Install MOT	2	Jun-13-26	Jun-15-26
A2390	Shift/Install PCB	2	Jun-16-26	Jun-17-26
A2400	Perform Pavement Removal	2	Jun-18-26	Jun-19-26
A3650	Install Drainage	5	Jun-18-26	Jun-23-26
A2410	Perform Excavation	2	Jun-20-26	Jun-22-26
A2420	Perform Cement Stabilization	2	Jun-23-26	Jun-24-26
A2430	Install Underdrain	2	Jun-25-26	Jun-26-26
A2440	Install 304 Aggregate Base	2	Jun-27-26	Jun-29-26
A2450	Perform Rubblize & Roll	2	Jun-30-26	Jul-01-26
A2460	Pave 302 Asphalt Base	3	Jul-02-26	Jul-04-26
A2470	Pave Intermediate Asphalt	1	Jul-06-26	Jul-06-26
A3170	Finish Phase 2	0	Aug-13-26	Aug-13-26
PHASE 3A (IR-90 WB Inside)				
A1890	Install Temporary Pavement	10	Apr-05-27	Apr-15-27
A1920	Start Phase 3A (Apr-05-2027)	0	Apr-05-27*	
A1900	Install Temporary Striping	2	Apr-16-27	Apr-17-27



Actual Level of Effort
Actual Work
Remaining Work

TASK filter: All Activities

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Technical Proposal Submission

Date	Revision	Checked	Approved
Feb-14-25	Revisions per ODOT ITP Comments	KDM	JTD

Activity ID	Activity Name	OD	Start	Finish
A1910	Install PCB	8	Apr-19-27	Apr-27-27
A1710	Perform Pavement Removal	5	Apr-28-27	May-03-27
A3730	Install/Replace ITS Components	60	Apr-28-27	Jul-06-27
A3760	Perform Lighting Replacements	45	Apr-28-27	Jun-18-27
A1720	Perform Excavation	20	Apr-29-27	May-21-27
A3660	Install Drainage	20	May-04-27	May-26-27
A1730	Perform Cement Stabilization	20	May-07-27	May-29-27
A1740	Install Underdrain	13	May-19-27	Jun-02-27
A1750	Install 304 Aggregate Base	22	May-27-27	Jun-21-27
A1760	Pave 302 Asphalt Base	30	Jun-02-27	Jul-06-27
A3670	Misc. Structure Work	20	Jun-22-27	Jul-14-27
A1770	Pave Intermediate Asphalt	9	Jul-02-27	Jul-12-27
A1780	Install Temporary Pavement Markings	2	Jul-15-27	Jul-16-27
PHASE 3B (IR-90 WB Outside)				
A1790	Shift/Install PCB	5	Jul-19-27	Jul-23-27
A1800	Perform Pavement Removal / Excavation	19	Jul-24-27	Aug-14-27
A3680	Install Drainage	20	Jul-24-27	Aug-16-27
A1810	Perform Cement Stabilization	14	Jul-31-27	Aug-16-27
A1820	Instll Underdrain	13	Aug-05-27	Aug-19-27
A1830	Install 304 Aggregate Base	11	Aug-17-27	Aug-28-27
A3800	Install Access and Perform Waterway Affected Drainage	30	Aug-17-27	Sep-20-27
A1840	Perform Rubblize & Roll	12	Aug-30-27	Sep-11-27
A3690	Misc. Structure Work	20	Aug-30-27	Sep-21-27
A1850	Pave 302 Asphalt Base	30	Sep-01-27	Oct-05-27
A1860	Pave Intermediate Asphalt	8	Oct-02-27	Oct-11-27
A1870	Remove PCB	8	Oct-12-27	Oct-20-27
A1880	Install Temporary Pavement Markings	3	Oct-21-27	Oct-23-27
A3100	Finish Phase 3B (By 2nd Friday in November)	0		Nov-12-27*
PHASE 3C SR-254 Ramp H (WB On Ramp)				
A1930	Install MOT	2	Jul-24-27	Jul-26-27
A1940	Install Temporary Pavement	2	Jul-27-27	Jul-28-27
A1950	Install PCB	1	Jul-29-27	Jul-29-27
A1960	Perform Pavement Removal	2	Jul-30-27	Jul-31-27
A1970	Perform Excavation	1	Aug-02-27	Aug-02-27
A1980	Perform Cement Stabilization	8	Aug-03-27	Aug-11-27
A1990	Install 304 Aggregate Base	2	Aug-12-27	Aug-13-27
A2000	Slip 16' Concrete Pavement	4	Aug-14-27	Aug-18-27
A2010	Slip 6' Concrete Pavement	1	Aug-19-27	Aug-19-27
PHASE 3C SR-254 Ramp J (WB Off Ramp)				
A2020	Install MOT	2	Aug-20-27	Aug-21-27
A2030	Install Temporary Pavement	2	Aug-23-27	Aug-24-27
A2040	Install PCB	1	Aug-25-27	Aug-25-27
A2050	Perform Pavement Removal	2	Aug-26-27	Aug-27-27
A2060	Perform Excavation	1	Aug-28-27	Aug-28-27
A2070	Perform Cement Stabilization	8	Aug-30-27	Sep-07-27
A2080	Install 304 Aggregate Base	2	Sep-08-27	Sep-09-27
A2090	Slip 16' Concrete Pavement	4	Sep-10-27	Sep-14-27
A2100	Slip 6' Concrete Pavement	1	Sep-15-27	Sep-15-27
PHASE 3D SR-254 Ramp H (WB On Ramp)				
A2110	Install MOT	2	Sep-16-27	Sep-17-27
A2120	Install PCB	1	Sep-18-27	Sep-18-27
A2130	Perform Pavement Removal	1	Sep-20-27	Sep-20-27
A2140	Perform Excavation	1	Sep-21-27	Sep-21-27
A2150	Perform Cement Stabilization	8	Sep-22-27	Sep-30-27
A2160	Install Underdrain	1	Oct-01-27	Oct-01-27

Actual Level of Effort
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Technical Proposal Submission

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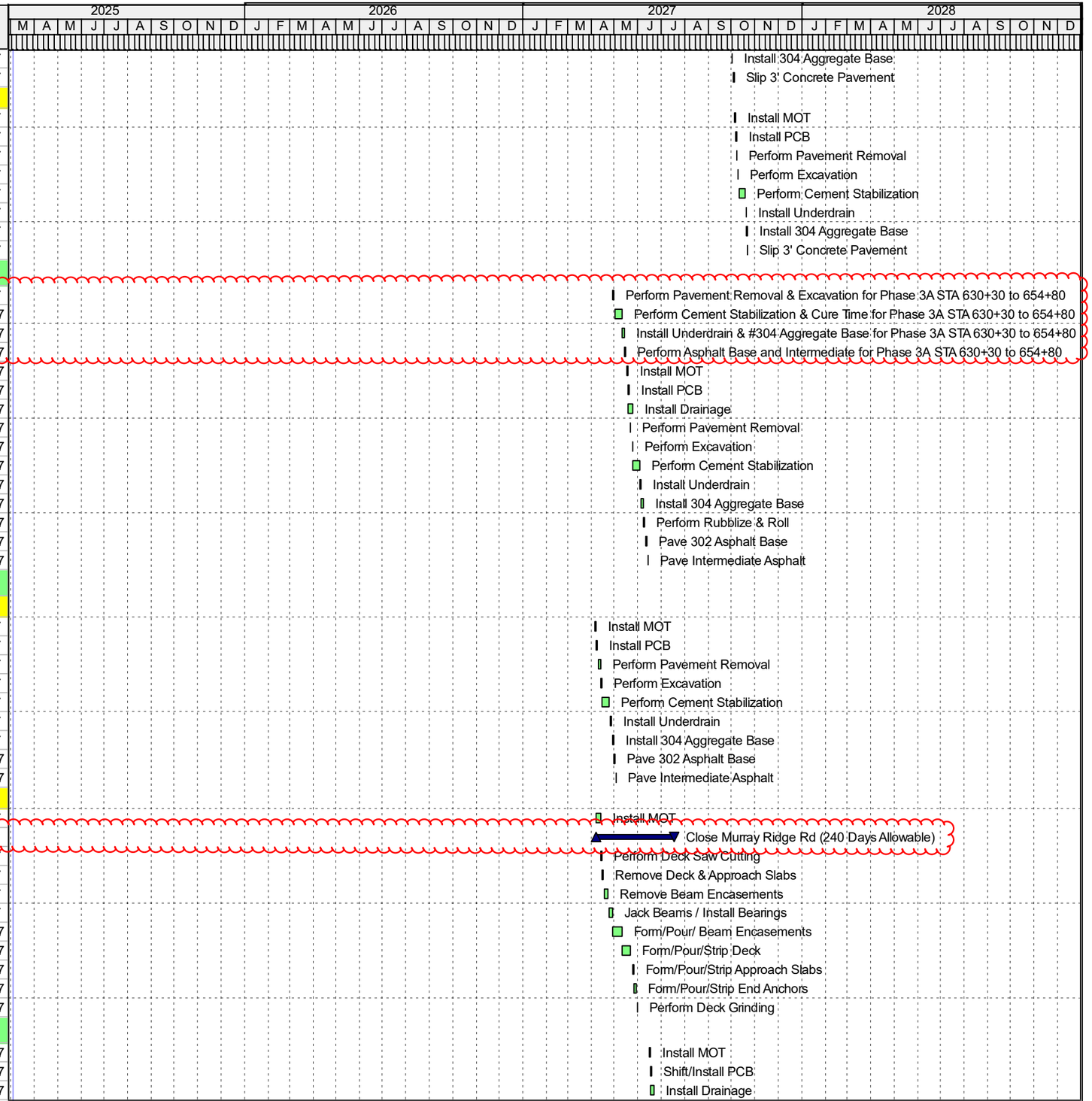
Activity ID	Activity Name	OD	Start	Finish
A2170	Install 304 Aggregate Base	1	Oct-02-27	Oct-02-27
A2180	Slip 3' Concrete Pavement	1	Oct-04-27	Oct-04-27
PHASE 3D SR-254 Ramp J (WB Off Ramp)				
A2190	Install MOT	2	Oct-05-27	Oct-06-27
A2200	Install PCB	1	Oct-07-27	Oct-07-27
A2210	Perform Pavement Removal	1	Oct-08-27	Oct-08-27
A2220	Perform Excavation	1	Oct-09-27	Oct-09-27
A2230	Perform Cement Stabilization	8	Oct-11-27	Oct-19-27
A2240	Install Underdrain	1	Oct-20-27	Oct-20-27
A2250	Install 304 Aggregate Base	1	Oct-21-27	Oct-21-27
A2260	Slip 3' Concrete Pavement	1	Oct-22-27	Oct-22-27
PHASE 4A (SR-2 WB Inside)				
A3920	Perform Pavement Removal & Excavation for Phase 3A STA 630+30 to 654+80	3	Apr-28-27	Apr-30-27
A3930	Perform Cement Stabilization & Cure Time for Phase 3A STA 630+30 to 654+80	8	May-01-27	May-10-27
A3940	Install Underdrain & #304 Aggregate Base for Phase 3A STA 630+30 to 654+80	3	May-11-27	May-13-27
A3950	Perform Asphalt Base and Intermediate for Phase 3A STA 630+30 to 654+80	2	May-14-27	May-15-27
A2480	Install MOT	2	May-17-27	May-18-27
A2500	Install PCB	2	May-19-27	May-20-27
A3700	Install Drainage	5	May-19-27	May-24-27
A2510	Perform Pavement Removal	2	May-21-27	May-22-27
A2520	Perform Excavation	1	May-24-27	May-24-27
A2530	Perform Cement Stabilization	8	May-25-27	Jun-02-27
A2540	Install Underdrain	2	Jun-03-27	Jun-04-27
A2550	Install 304 Aggregate Base	2	Jun-05-27	Jun-07-27
A2560	Perform Rubblize & Roll	2	Jun-08-27	Jun-09-27
A2570	Pave 302 Asphalt Base	3	Jun-10-27	Jun-12-27
A2580	Pave Intermediate Asphalt	1	Jun-14-27	Jun-14-27
PHASE 4A (IR-90 to OTC EB Leg Inside)				
Roadway				
A3090	Install MOT	2	Apr-05-27	Apr-06-27
A3110	Install PCB	2	Apr-07-27	Apr-08-27
A3120	Perform Pavement Removal	3	Apr-09-27	Apr-12-27
A3130	Perform Excavation	2	Apr-13-27	Apr-14-27
A3140	Perform Cement Stabilization	9	Apr-15-27	Apr-24-27
A3150	Install Underdrain	2	Apr-26-27	Apr-27-27
A3160	Install 304 Aggregate Base	2	Apr-28-27	Apr-29-27
A3180	Pave 302 Asphalt Base	2	Apr-30-27	May-01-27
A3190	Pave Intermediate Asphalt	1	May-03-27	May-03-27
LOR-90-11570R (EB IR-90 over Murray Ridge Rd)				
A2790	Install MOT	5	Apr-07-27	Apr-12-27
A3870	Close Murray Ridge Rd (240 Days Allowable)	102	Apr-07-27	Jul-17-27
A2810	Perform Deck Saw Cutting	2	Apr-13-27	Apr-14-27
A2820	Remove Deck & Approach Slabs	2	Apr-15-27	Apr-16-27
A2830	Remove Beam Encasements	5	Apr-17-27	Apr-22-27
A2840	Jack Beams / Install Bearings	5	Apr-23-27	Apr-28-27
A2850	Form/Pour/ Beam Encasements	10	Apr-29-27	May-10-27
A2860	Form/Pour/Strip Deck	11	May-11-27	May-22-27
A2870	Form/Pour/Strip Approach Slabs	3	May-24-27	May-26-27
A2880	Form/Pour/Strip End Anchors	3	May-27-27	May-29-27
A2890	Perform Deck Grinding	1	May-31-27	May-31-27
PHASE 4B (SR-2 WB Outside)				
A2590	Install MOT	2	Jun-15-27	Jun-16-27
A2600	Shift/Install PCB	2	Jun-17-27	Jun-18-27
A3710	Install Drainage	5	Jun-17-27	Jun-22-27



Actual Level of Effort
Actual Work
Remaining Work

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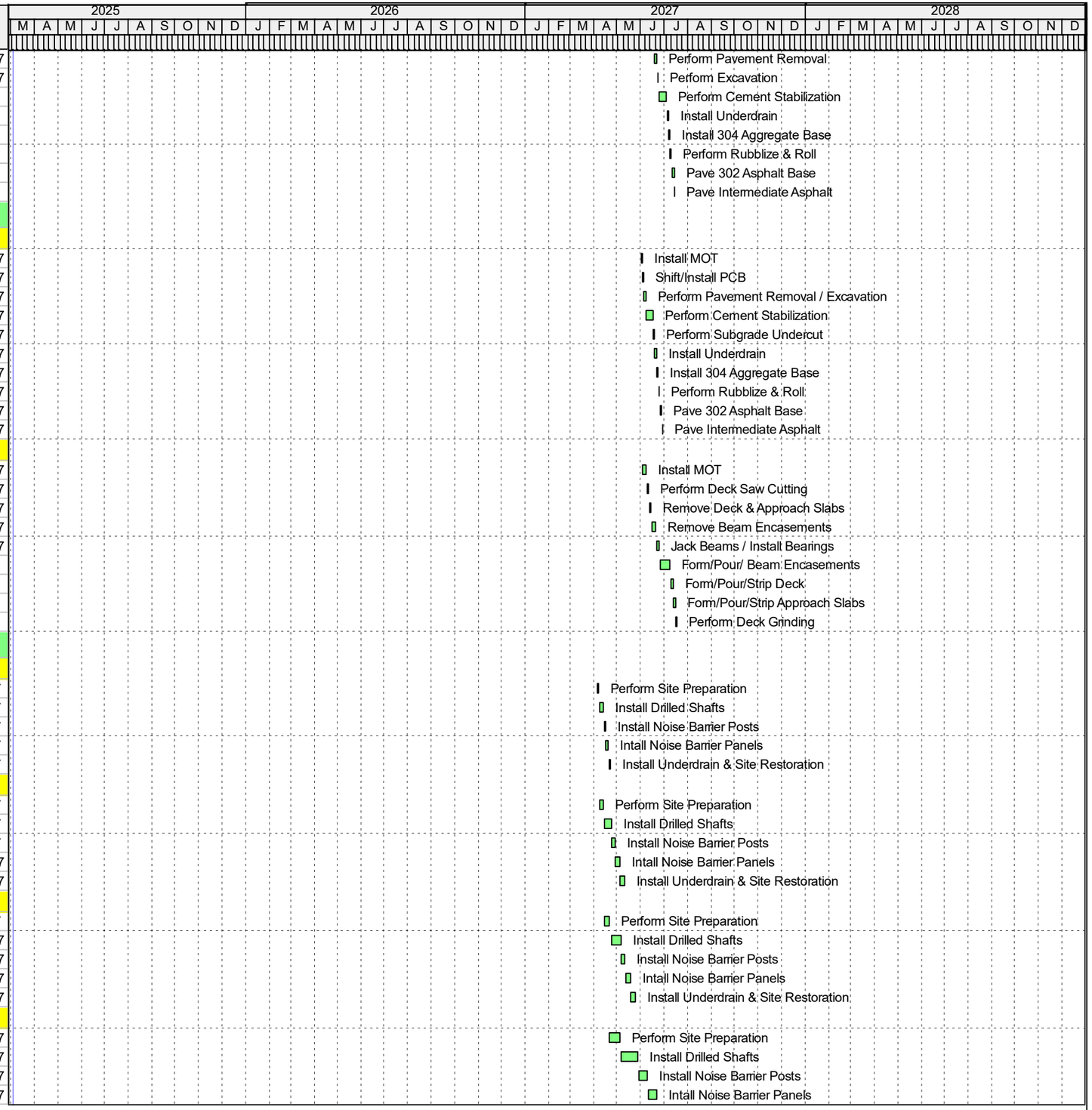
Activity ID	Activity Name	OD	Start	Finish
A2610	Perform Pavement Removal	3	Jun-19-27	Jun-22-27
A2620	Perform Excavation	1	Jun-23-27	Jun-23-27
A2630	Perform Cement Stabilization	9	Jun-24-27	Jul-03-27
A2640	Install Underdrain	2	Jul-05-27	Jul-06-27
A2650	Install 304 Aggregate Base	2	Jul-07-27	Jul-08-27
A2660	Perform Rubblize & Roll	2	Jul-09-27	Jul-10-27
A2670	Pave 302 Asphalt Base	3	Jul-12-27	Jul-14-27
A2680	Pave Intermediate Asphalt	1	Jul-15-27	Jul-15-27
PHASE 4B (IR-90 to OTC EB Leg Outside)				
Roadway				
A3200	Install MOT	2	Jun-01-27	Jun-02-27
A3210	Shift/Install PCB	2	Jun-03-27	Jun-04-27
A3220	Perform Pavement Removal / Excavation	2	Jun-05-27	Jun-07-27
A3240	Perform Cement Stabilization	8	Jun-08-27	Jun-16-27
A3290	Perform Subgrade Undercut	2	Jun-17-27	Jun-18-27
A3250	Install Underdrain	2	Jun-19-27	Jun-21-27
A3260	Install 304 Aggregate Base	2	Jun-22-27	Jun-23-27
A3300	Perform Rubblize & Roll	2	Jun-24-27	Jun-25-27
A3270	Pave 302 Asphalt Base	2	Jun-26-27	Jun-28-27
A3280	Pave Intermediate Asphalt	1	Jun-29-27	Jun-29-27
LOR-90-11570R (EB IR-90 over Murray Ridge Rd)				
A2900	Install MOT	5	Jun-03-27	Jun-08-27
A2910	Perform Deck Saw Cutting	3	Jun-09-27	Jun-11-27
A2920	Remove Deck & Approach Slabs	2	Jun-12-27	Jun-14-27
A2930	Remove Beam Encasements	5	Jun-15-27	Jun-19-27
A2940	Jack Beams / Install Bearings	5	Jun-21-27	Jun-25-27
A2950	Form/Pour/ Beam Encasements	12	Jun-26-27	Jul-09-27
A2960	Form/Pour/Strip Deck	3	Jul-10-27	Jul-13-27
A2970	Form/Pour/Strip Approach Slabs	3	Jul-14-27	Jul-16-27
A2990	Perform Deck Grinding	1	Jul-17-27	Jul-17-27
PHASE 5 (Noise Barriers & Project Finalization)				
Noise Barrier A				
A3310	Perform Site Preparation	3	Apr-05-27	Apr-07-27
A3320	Install Drilled Shafts	5	Apr-08-27	Apr-13-27
A3330	Install Noise Barrier Posts	2	Apr-14-27	Apr-15-27
A3340	Intall Noise Barrier Panels	3	Apr-16-27	Apr-19-27
A3350	Install Underdrain & Site Restoration	3	Apr-20-27	Apr-22-27
Noise Barrier E				
A3360	Perform Site Preparation	5	Apr-08-27	Apr-13-27
A3370	Install Drilled Shafts	9	Apr-14-27	Apr-23-27
A3380	Install Noise Barrier Posts	4	Apr-24-27	Apr-28-27
A3390	Intall Noise Barrier Panels	5	Apr-29-27	May-04-27
A3400	Install Underdrain & Site Restoration	5	May-05-27	May-10-27
Noise Barrier F North				
A3410	Perform Site Preparation	6	Apr-14-27	Apr-20-27
A3420	Install Drilled Shafts	10	Apr-24-27	May-05-27
A3430	Install Noise Barrier Posts	5	May-06-27	May-11-27
A3440	Intall Noise Barrier Panels	6	May-12-27	May-18-27
A3450	Install Underdrain & Site Restoration	6	May-19-27	May-25-27
Noise Barrier F South				
A3460	Perform Site Preparation	12	Apr-21-27	May-04-27
A3470	Install Drilled Shafts	20	May-06-27	May-28-27
A3480	Install Noise Barrier Posts	10	May-29-27	Jun-09-27
A3490	Intall Noise Barrier Panels	10	Jun-10-27	Jun-21-27



Actual Level of Effort
Actual Work
Remaining Work

TASK filter: All Activities

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Technical Proposal Submission

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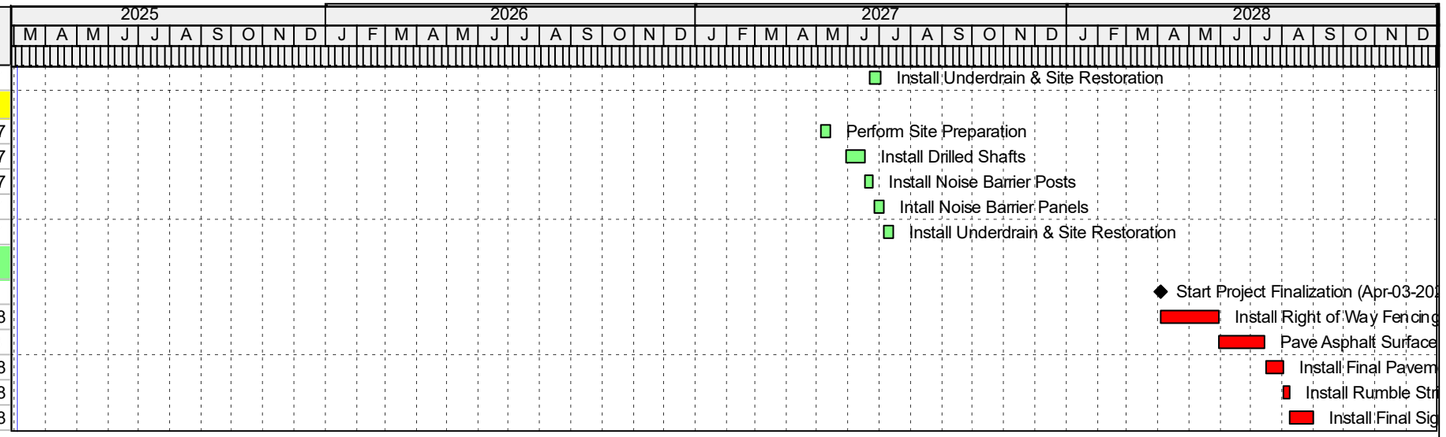
Activity ID	Activity Name	OD	Start	Finish
A3500	Install Underdrain & Site Restoration	10	Jun-22-27	Jul-02-27
Noise Barrier G				
A3510	Perform Site Preparation	9	May-05-27	May-14-27
A3520	Install Drilled Shafts	16	May-29-27	Jun-16-27
A3530	Install Noise Barrier Posts	8	Jun-17-27	Jun-25-27
A3540	Intall Noise Barrier Panels	8	Jun-26-27	Jul-05-27
A3550	Install Underdrain & Site Restoration	8	Jul-06-27	Jul-14-27
Project Finalization				
A3560	Start Project Finalization (Apr-03-2028)	0	Apr-03-28*	
A3590	Install Right of Way Fencing	50	Apr-03-28	May-30-28
A3570	Pave Asphalt Surface Course / Smoothness	40	May-31-28	Jul-15-28
A3580	Install Final Pavement Markings	15	Jul-17-28	Aug-02-28
A3610	Install Rumble Strips	5	Aug-03-28	Aug-08-28
A3600	Install Final Signage	20	Aug-09-28	Aug-31-28



Actual Level of Effort
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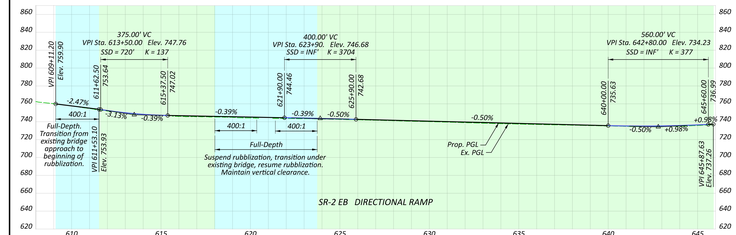
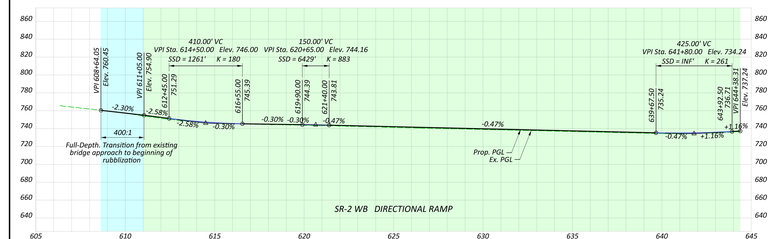
APPENDIX B

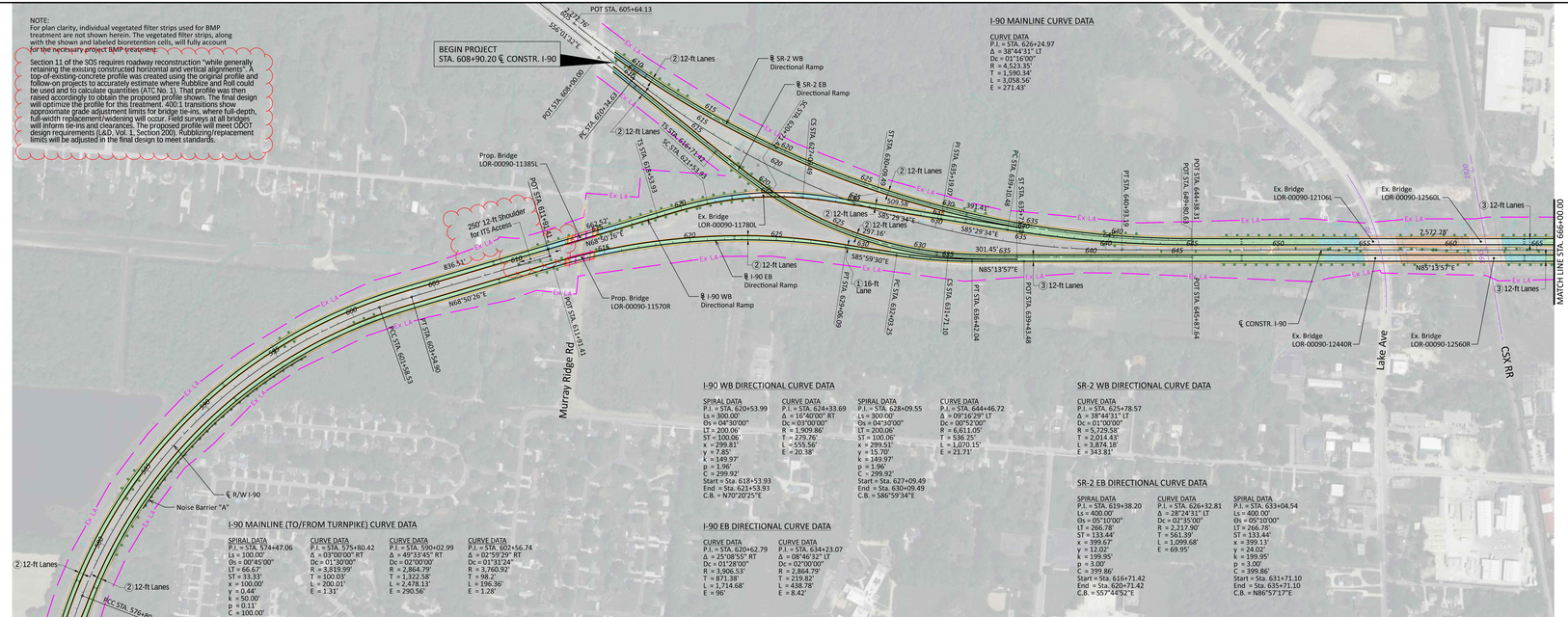
ROADWAY PLAN AND PROFILE ROLL PLOTS

NOTE:
For glan clarity, individual vegetated filter strips used for BMP treatment are not shown herein. The vegetated filter strips, along with the shown and labeled bioretention cells, will fully account for the necessary project BMP treatment.

Section 11 of the SOS requires roadway reconstruction "while generally retaining the existing constructed horizontal and vertical alignments". A top-of-existing-concrete profile was created using the original profile and follow-on projects to accurately estimate where Rubblize and Roll could be used and to calculate quantities (ATC No. 1). That profile was then raised accordingly to obtain the proposed profile shown. The final design will optimize the profile for this treatment. 400:1 transitions show approximate grade adjustment limits for bridge tie-ins, where full-depth, full-width replacement/widening will occur. Field surveys at all bridges will inform tie-ins and clearances. The proposed profile will meet ODOT design requirements (L&D, Vol. 1, Section 200). Rubblizing/repacement limits will be adjusted in the final design to meet standards.







I-90 MAINLINE CURVE DATA

CURVE DATA
P.I. = STA. 626+24.97
Δ = 38°44'31" LT
Dc = 01°16'00"
R = 4,523.35'
T = 1,590.34'
L = 3,058.56'
E = 271.43'

I-90 WB DIRECTIONAL CURVE DATA

SPIRAL DATA
P.I. = STA. 620+53.99
Ls = 300.00'
Θs = 04°30'00"
LT = 200.00'
ST = 100.06'
x = 299.81'
y = 7.85'
k = 149.97'
p = 1.96'
C = 299.92'
Start = Sta 618+53.93
End = Sta. 621+53.93
C.B. = N70°20'25"E

CURVE DATA
P.I. = STA. 624+33.69
Δ = 16°40'00" RT
Dc = 03°00'00"
R = 1,909.86'
T = 279.76'
L = 555.56'
E = 20.38'

SPIRAL DATA
P.I. = STA. 628+09.55
Ls = 300.00'
Θs = 04°30'00"
LT = 200.06'
ST = 100.06'
x = 299.51'
y = 15.70'
k = 149.97'
p = 1.96'
C = 299.92'
Start = Sta. 627+09.49
End = Sta. 630+09.49
C.B. = S86°59'34"E

CURVE DATA
P.I. = STA. 644+46.72
Δ = 09°16'29" LT
Dc = 00°52'00"
R = 6,611.05'
T = 536.25'
L = 1,070.15'
E = 21.71'

SR-2 WB DIRECTIONAL CURVE DATA

CURVE DATA
P.I. = STA. 625+78.57
Δ = 38°44'31" LT
Dc = 01°00'00"
R = 5,729.56'
T = 2,014.43'
L = 3,874.18'
E = 343.81'

I-90 MAINLINE (TO/FROM TURNPIKE) CURVE DATA

SPIRAL DATA
P.I. = STA. 574+47.06
Ls = 100.00'
Θs = 00°45'00"
LT = 66.67'
ST = 33.33'
x = 100.00'
y = 0.44'
k = 50.00'
p = 0.11'
C = 100.00'
Start = Sta. 573+80.39
End = Sta. 574+80.39
C.B. = N12°47'11"E

CURVE DATA
P.I. = STA. 575+80.42
Δ = 03°00'00" RT
Dc = 01°30'00"
R = 3,819.99'
T = 100.03'
L = 200.01'
E = 1.31'

CURVE DATA
P.I. = STA. 590+02.99
Δ = 49°33'45" RT
Dc = 02°00'00"
R = 2,864.79'
T = 1,322.58'
L = 2,478.13'
E = 290.56'

CURVE DATA
P.I. = STA. 602+56.74
Δ = 02°59'29" RT
Dc = 01°31'24"
R = 3,760.92'
T = 98.2'
L = 196.36'
E = 1.28'

I-90 EB DIRECTIONAL CURVE DATA

CURVE DATA
P.I. = STA. 620+62.79
Δ = 25°08'55" RT
Dc = 01°28'00"
R = 3,906.53'
T = 871.38'
L = 1,714.68'
E = 96'

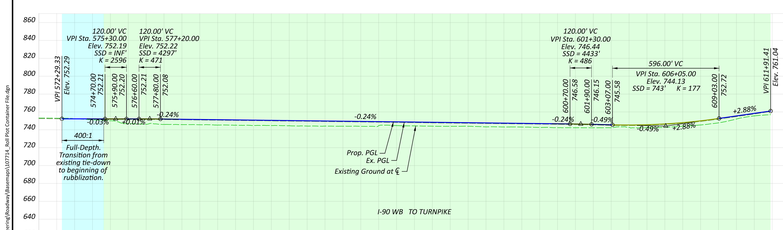
CURVE DATA
P.I. = STA. 634+23.07
Δ = 08°46'32" LT
Dc = 02°00'00"
R = 2,864.79'
T = 219.82'
L = 438.78'
E = 8.42'

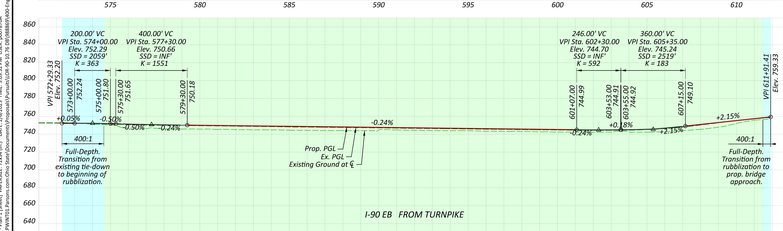
SR-2 EB DIRECTIONAL CURVE DATA

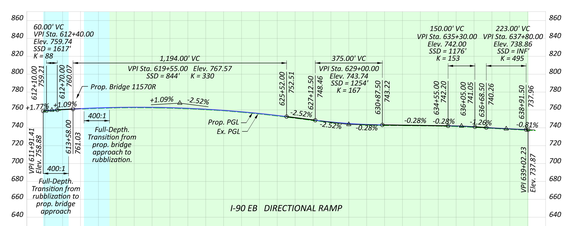
SPIRAL DATA
P.I. = STA. 619+38.20
Ls = 400.00'
Θs = 05°10'00"
LT = 266.78'
ST = 133.44'
x = 399.67'
y = 12.02'
k = 199.95'
p = 3.00'
C = 399.86'
Start = Sta. 616+71.42
End = Sta. 620+71.42
C.B. = S57°44'52"E

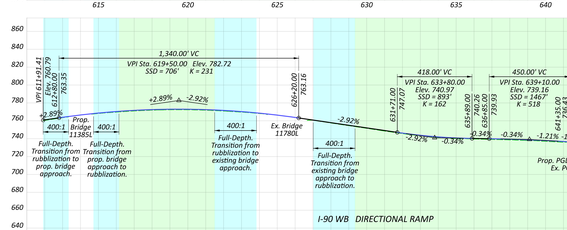
CURVE DATA
P.I. = STA. 626+32.81
Δ = 28°24'31" LT
Dc = 02°35'00"
R = 2,217.90'
T = 561.39'
L = 1,099.68'
E = 69.95'

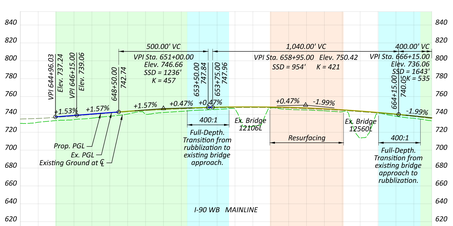
SPIRAL DATA
P.I. = STA. 633+04.54
Ls = 400.00'
Θs = 05°10'00"
LT = 266.78'
ST = 133.44'
x = 399.13'
y = 24.02'
k = 199.95'
p = 3.00'
C = 399.86'
Start = Sta. 631+71.10
End = Sta. 635+71.10
C.B. = N86°57'17"E

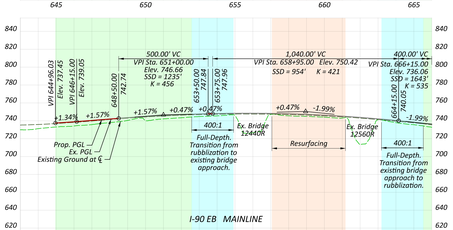












PLAN & PROFILE COLOR-CODE LEGEND

RUBBLIZE & ROLL: *Projected project area where rubblize & roll construction techniques are likely to be utilized. The remaining elements of the proposed typical section will be full-depth pavement replacement and widening per Scope.*

TRANSITIONS: *Projected project area where the road profile will be transitioned between areas of rubblization and bridge approaches or under overhead bridges to maintain or better existing vertical clearance. These areas will be full-depth pavement replacement and widening.*

RESURFACING: *Projected project area where resurfacing or resurfacing and widening will be utilized.*

Roll Plot Plans & Profiles
Begin Project to Sta. 666+00.00

DESIGN AGENCY

DESIGNED: MET
REVIEWED: JFM XX/XX/24
PROJECT#: 107714
SHEET NO. P. 1 | TOTAL 4

NOTE:
For plan clarity, individual vegetated filter strips used for BMP treatment are not shown herein. The vegetated filter strips, along with the shown and labeled bioretention cells, will fully account for the necessary project BMP treatment.

Section 11 of the SOS requires roadway reconstruction "while generally retaining the existing constructed horizontal and vertical alignments". A top-of-existing-concrete profile was created using the original profile and follow-on projects to accurately estimate where Rubblize and Roll could be used and to calculate quantities (ATC No. 1). That profile was then raised accordingly to obtain the proposed profile shown. The final design will optimize the profile for this treatment. 400:1 transitions show approximate grade adjustment limits for bridge tie-ins, where full-depth, full-width replacement/widening will occur. Field surveys at all bridges will inform tie-ins and clearances. The proposed profile will meet ODOT design requirements (L&D, Vol. 1, Section 200). Rubblizing/replacement limits will be adjusted in the final design to meet standards.

RAMP A CURVE DATA

SPIRAL DATA
P.I. = STA. 54+33.48
Ls = 200.00'
Θs = 08°00'00"
LT = 133.47'
ST = 66.79'
x = 199.61'
y = 9.30'
k = 99.94'
p = 2.33'
C = 199.83'
Start = Sta. 53+00.01
End = Sta. 55+00.01
C.B. = N81°25'14"E

CURVE DATA
P.I. = STA. 56+98.66
Δ = 31°00'15" LT
Dc = 08°00'00"
R = 716.20'
T = 198.65'
L = 387.55'
E = 27.04'

SPIRAL DATA
P.I. = STA. 59+54.35
Ls = 200.00'
Θs = 08°00'00"
LT = 133.47'
ST = 66.79'
x = 198.96'
y = 18.58'
k = 99.94'
p = 2.33'
C = 199.83'
Start = Sta. 58+87.56
End = Sta. 60+87.56
C.B. = N39°44'56"E

SPIRAL DATA
P.I. = STA. 61+87.77
Ls = 150.00'
Θs = 11°15'00"
LT = 100.20'
ST = 50.18'
x = 149.42'
y = 9.79'
k = 74.90'
p = 2.45'
C = 149.74'
Start = Sta. 60+87.56
End = Sta. 62+37.56
C.B. = N40°49'53"E

CURVE DATA
P.I. = STA. 63+16.28
Δ = 23°17'17" RT
Dc = 15°00'00"
R = 381.97'
T = 78.71'
L = 155.25'
E = 8.03'

SPIRAL DATA
P.I. = STA. 64+43.00
Ls = 150.00'
Θs = 11°15'00"
LT = 100.20'
ST = 50.18'
x = 148.46'
y = 19.55'
k = 74.90'
p = 2.45'
C = 149.74
Start = Sta. 63+92.82
End = Sta. 65+42.82
C.B. = N79°07'19"E

RAMP F CURVE DATA

CURVE DATA
P.I. = STA. 39+76.80
Δ = 06°47'46" RT
Dc = 01°30'00"
R = 3,819.72'
T = 226.8'
L = 453.07'
E = 6.73'

CURVE DATA
P.I. = STA. 43+42.78
Δ = 18°40'06" RT
Dc = 06°44'26"
R = 850.00'
T = 139.71'
L = 276.95'
E = 11.41'

CURVE DATA
P.I. = STA. 48+98.80
Δ = 27°44'19" LT
Dc = 15°29'07"
R = 370.00'
T = 91.36'
L = 179.13'
E = 11.11'

RAMP C CURVE DATA

SPIRAL DATA
P.I. = STA. 53+09.54
Ls = 200.00'
Θs = 15°54'56"
LT = 133.88'
ST = 67.16'
x = 198.46'
y = 18.42'
k = 9.74'
p = 4.62'
C = 199.31'
Start = Sta. 51+75.66
End = Sta. 53+75.66
C.B. = N88°10'25"E

CURVE DATA
P.I. = STA. 54+28.90
Δ = 16°49'33" RT
Dc = 15°54'56"
R = 360.00'
T = 53.24'
L = 105.72'
E = 3.92'

SPIRAL DATA
P.I. = STA. 55+48.54
Ls = 200.00'
Θs = 15°54'56"
LT = 133.88'
ST = 67.16'
x = 195.90'
y = 36.71'
k = 99.74'
p = 4.62'
C = 199.31'
Start = Sta. 5+81.38
End = Sta. 56+81.38
C.B. = S53°46'23"E

SPIRAL DATA
P.I. = STA. 58+68.87
Ls = 200.00'
Θs = 08°00'00"
LT = 133.47'
ST = 66.79'
x = 199.61'
y = 9.30'
k = 99.94'
p = 2.33'
C = 199.83'
Start = Sta. 57+35.40
End = Sta. 59+35.40
C.B. = S51°08'15"E

CURVE DATA
P.I. = STA. 61+27.30
Δ = 30°00'00" LT
Dc = 08°00'00"
R = 716.20'
T = 191.90'
L = 375.00'
E = 25.26'

CURVE DATA
P.I. = STA. 65+87.42
Δ = 08°17'46" LT
Dc = 01°30'00"
R = 3,819.72'
T = 277.02'
L = 553.07'
E = 10.03'

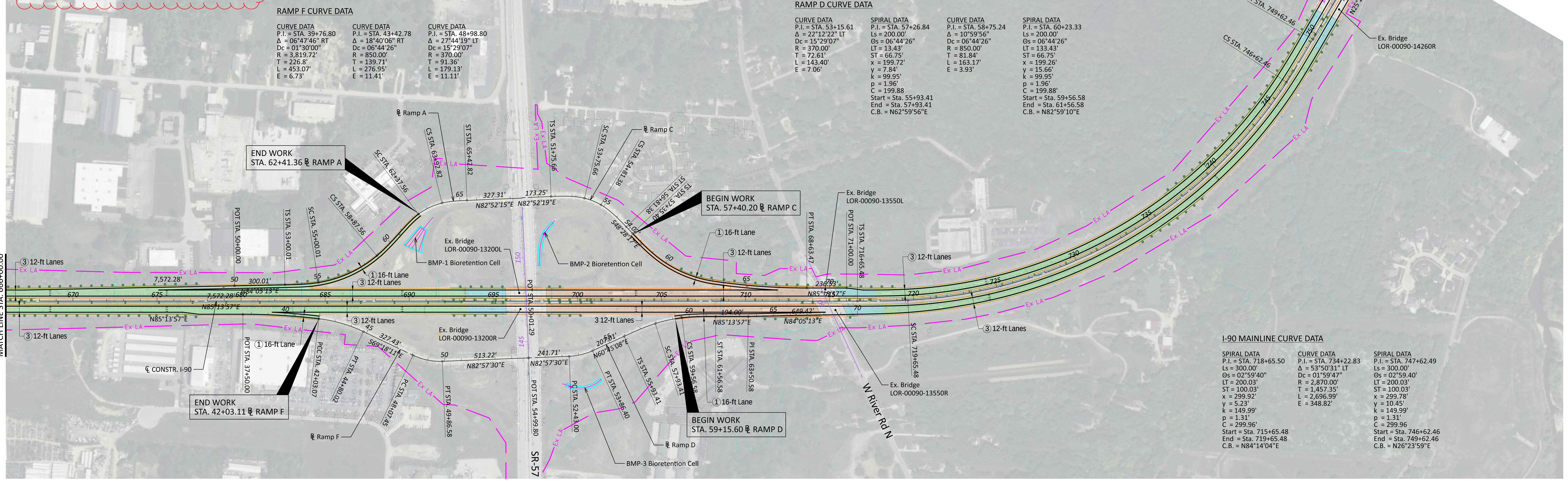
RAMP D CURVE DATA

CURVE DATA
P.I. = STA. 53+15.61
Δ = 22°12'22" LT
Dc = 15°29'07"
R = 370.00'
T = 72.61'
L = 143.40'
E = 7.06'

SPIRAL DATA
P.I. = STA. 57+26.84
Ls = 200.00'
Θs = 06°44'26"
LT = 13.43'
ST = 66.75'
x = 199.72'
y = 7.84'
k = 99.95'
p = 1.96'
C = 199.88
Start = Sta. 55+93.41
End = Sta. 57+93.41
C.B. = N62°59'56"E

CURVE DATA
P.I. = STA. 58+75.24
Δ = 10°59'56"
Dc = 06°44'26"
R = 850.00'
T = 81.84'
L = 163.17'
E = 3.93'

SPIRAL DATA
P.I. = STA. 60+23.33
Ls = 200.00'
Θs = 06°44'26"
LT = 133.43'
ST = 66.75'
x = 199.26'
y = 15.66'
k = 99.95'
p = 1.96'
C = 199.88'
Start = Sta. 59+56.58
End = Sta. 61+56.58
C.B. = N82°59'10"E

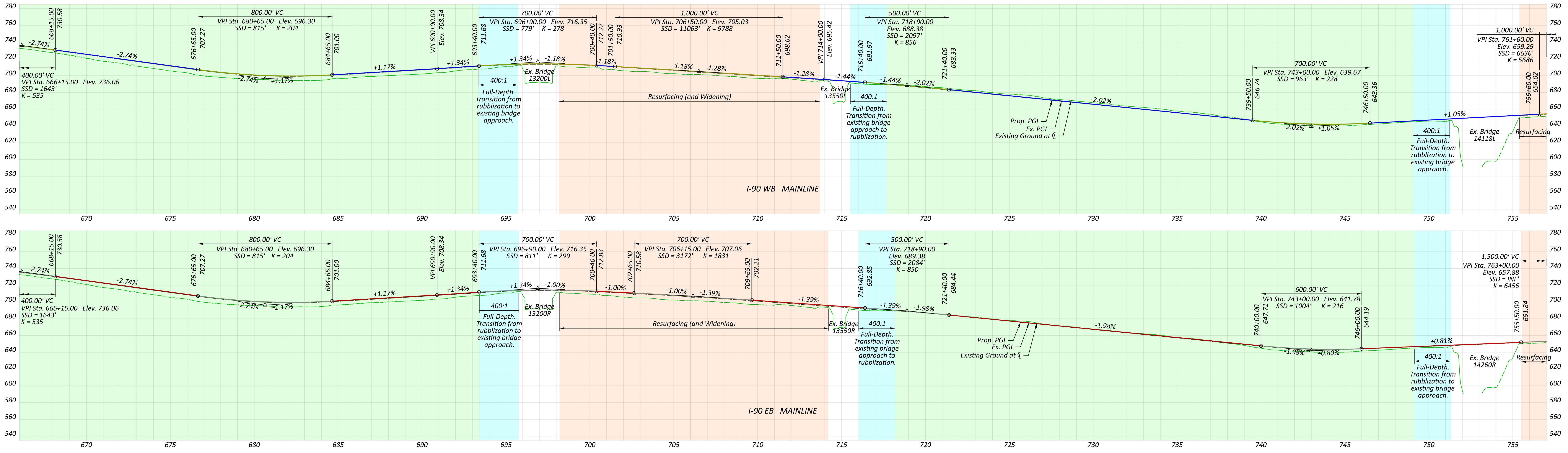


I-90 MAINLINE CURVE DATA

SPIRAL DATA
P.I. = STA. 718+65.50
Ls = 300.00'
Θs = 02°59'40"
LT = 200.03'
ST = 100.03'
x = 299.92'
y = 5.23'
k = 149.99'
p = 1.31'
C = 299.96'
Start = Sta. 715+65.48
End = Sta. 719+65.48
C.B. = N84°14'04"E

CURVE DATA
P.I. = STA. 734+22.83
Δ = 53°50'31" LT
Dc = 01°59'47"
R = 2,870.00'
T = 1,457.35'
L = 2,696.99'
E = 348.82'

SPIRAL DATA
P.I. = STA. 747+62.49
Ls = 300.00'
Θs = 02°59.40'
LT = 200.03'
ST = 100.03'
x = 299.78'
y = 10.45'
k = 149.99'
p = 1.31'
C = 299.96
Start = Sta. 746+62.46
End = Sta. 749+62.46
C.B. = N26°23'59"E



PLAN & PROFILE COLOR-CODE LEGEND

RUBBLIZE & ROLL: *Projected project area where rubblize & roll construction techniques are likely to be utilized. The remaining elements of the proposed typical section will be full-depth pavement replacement and widening per Scope.*

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RESURFACING: *Projected project area where resurfacing or resurfacing and widening will be utilized.*

HORIZONTAL SCALE IN FEET 0 100 200 400

Roll Plot Plans & Profiles
STA. 666+00.00 to STA. 757+00.00

DESIGN AGENCY
DESIGNER MET
REVIEWER JFM XX/XX/24
PROJECT ID 107714
SHEET P. 2 TOTAL 4

NOTE:
For plan clarity, individual vegetated filter strips used for BMP treatment are not shown herein. The vegetated filter strips, along with the shown and labeled bioretention cells, will fully account for the necessary project BMP treatment.

Section 11 of the SDS requires roadway reconstruction "while generally retaining the existing constructed horizontal and vertical alignments". A top-of-existing-concrete profile was created using the original profile and follow-on projects to accurately estimate where Rubblize and Roll could be used and to calculate quantities (ATC No. 1). That profile was then raised accordingly to obtain the proposed profile shown. The final design will optimize the profile for this treatment. 400:1 transitions show approximate grade adjustment limits for bridge tie-ins, where full-depth, full-width replacement/widening will occur. Field surveys at all bridges will inform tie-ins and clearances. The proposed profile will meet ODOT design requirements (L&D, Vol. 1, Section 200). Rubblizing/replacement limits will be adjusted in the final design to meet standards.

I-90 MAINLINE CURVE DATA

CURVE DATA	CURVE DATA	SPIRAL DATA	SPIRAL DATA	CURVE DATA	SPIRAL DATA	CURVE DATA
P.I. = STA. 758+98.36	P.I. = STA. 765+65.21	P.I. = STA. 772+13.49	P.I. = STA. 798+70.18	P.I. = STA. 811+29.87	P.I. = STA. 822+30.80	P.I. = STA. 857+72.40
Ls = 400.00'	Δ = 26°12'32" RT	Ls = 400.00'	Ls = 400.00'	Δ = 52°20'56"	Ls = 400.00'	Δ = 30°13'59" RT
Θs = 05°00'00"	Dc = 02°30'00"	Θs = 05°00'00"	Θs = 05°00'00"	Dc = 02°30'00"	Θs = 05°00'00"	Dc = 01°28'00"
LT = 266.77'	R = 2,291.83'	LT = 266.77'	LT = 266.77'	R = 2,291.83'	LT = 266.77'	R = 3,906.53'
ST = 133.43'	T = 533.51'	ST = 133.43'	ST = 133.43'	T = 1,126.45'	ST = 133.43'	T = 1,055.27'
x = 399.70'	L = 1,048.36'	x = 399.19'	x = 399.70'	L = 2,093.96'	x = 399.19'	L = 2,061.34'
y = 11.63'	E = 61.28'	y = 23.25'	y = 11.63'	E = 261.87'	y = 23.25'	E = 140.02'
k = 199.95'		k = 199.95'	k = 199.95'		k = 199.95'	
p = 2.91'		p = 2.91'	p = 2.91'		p = 2.91'	
C = 399.86'		C = 399.86'	C = 399.86'		C = 399.86'	
Start = Sta. 756+31.59		Start = Sta. 770+80.06	Start = Sta. 796+03.41		Start = Sta. 820+97.37	
End = Sta. 760+31.70		End = Sta. 774+80.06	End = Sta. 800+03.41		End = Sta. 824+97.37	
C.B. = N27°04'06"E		C.B. = N59°56'38"E	C.B. = N59°56'38"E		C.B. = N00°55'41"E	

RAMP H CURVE DATA

CURVE DATA	CURVE DATA	SPIRAL DATA
P.I. = STA. 795+80.99	P.I. = STA. 799+87.81	P.I. = STA. 802+91.12
Δ = 07°30'00" LT	Δ = 39°29'02" LT	Ls = 200.00'
Dc = 02°30'00"	Dc = 08°00'00"	Θs = 08°00'00"
R = 2,291.83'	R = 716.20'	LT = 133.47'
T = 150.21'	T = 252.03'	ST = 66.79'
L = 300.00'	L = 493.55'	x = 198.96'
E = 4.92'	E = 44.72'	y = 18.58'
		k = 99.94'
		p = 2.33'
		C = 199.83'
		Start = Sta. 802+24.33
		End = Sta. 804+24.33
		C.B. = N19°55'38"W

RAMP L CURVE DATA

CURVE DATA	SPIRAL DATA	CURVE DATA	SPIRAL DATA	CURVE DATA
P.I. = STA. 801+34.05	P.I. = STA. 805+68.03	P.I. = STA. 807+03.25	P.I. = STA. 808+05.66	P.I. = STA. 811+88.91
Δ = 04°40'22" LT	Ls = 300.00'	Δ = 05°42'14" RT	Ls = 200.00'	Δ = 45°28'04" LT
Dc = 01°00'00"	Θs = 12°00'00"	Dc = 08°00'00"	Θs = 08°00'00"	Dc = 16°00'00"
R = 5,729.58'	LT = 200.46'	R = 716.20'	LT = 133.47'	R = 358.10'
T = 233.77'	ST = 100.42'	T = 35.68'	ST = 66.79'	T = 150.04'
L = 467.29'	x = 298.69'	L = 71.30'	x = 198.96'	L = 284.17'
E = 4.77'	y = 20.88'	E = 0.89'	y = 18.58'	E = 30.16'
	k = 149.78'		k = 99.94'	
	p = 5.23'		p = 2.33'	
	C = 299.42'		C = 199.83'	
	Start = Sta. 803+67.57		Start = Sta. 807+38.87	
	End = Sta. 806+67.57		End = Sta. 809+38.87	
	C.B. = N21°10'08"E		C.B. = N40°12'29"E	

RAMP J CURVE DATA

CURVE DATA	SPIRAL DATA	CURVE DATA	CURVE DATA
P.I. = STA. 809+44.27	P.I. = STA. 813+05.17	P.I. = STA. 815+28.83	P.I. = STA. 819+58.08
Δ = 42°54'00" RT	Ls = 200.00'	Δ = 24°44'56" LT	Δ = 08°17'46"
Dc = 16°00'00"	Θs = 08°00'00"	Dc = 08°00'00"	Dc = 01°30'00"
R = 358.10'	LT = 133.47'	R = 716.20'	R = 3,819.72'
T = 140.70'	ST = 66.79'	T = 157.13'	T = 277.02'
L = 268.12'	x = 199.61'	L = 309.36'	L = 553.07'
E = 26.65'	y = 9.30'	E = 17.03'	E = 10.03'
	k = 99.94'		
	p = 2.83'		
	C = 199.83'		
	Start = Sta. 811+71.70		
	End = Sta. 813+71.70		
	C.B. = N37°38'25"E		

RAMP K CURVE DATA

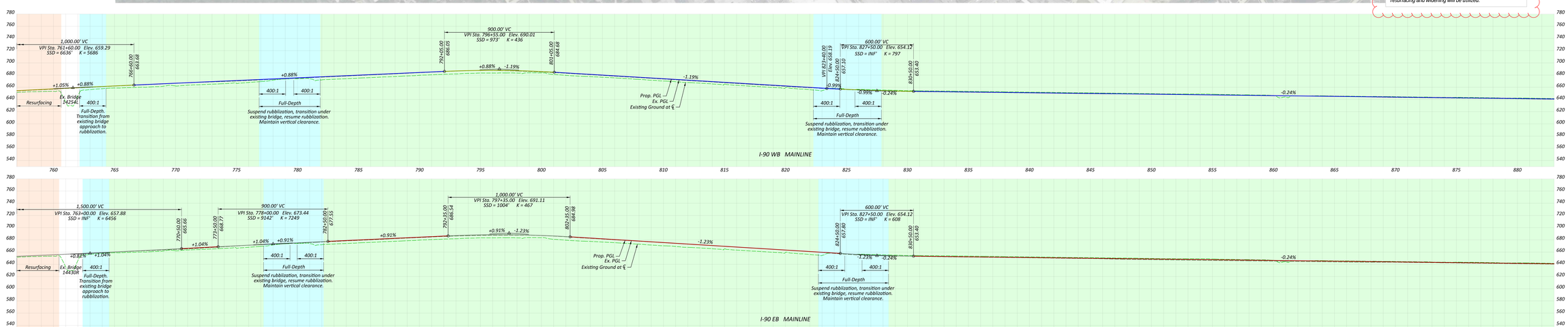
CURVE DATA	SPIRAL DATA	CURVE DATA
P.I. = STA. 813+11.95	P.I. = STA. 816+00.47	P.I. = STA. 818+62.04
Δ = 17°45'28" LT	Ls = 200.00'	Δ = 30°28'02" RT
Dc = 16°00'00"	Θs = 08°00'00"	Dc = 08°00'00"
R = 358.10'	LT = 133.47'	R = 716.20'
T = 55.94'	ST = 66.79'	T = 195.04'
L = 110.99'	x = 199.61'	L = 380.84'
E = 4.34'	y = 9.30'	E = 26.08'
	k = 99.94'	
	p = 2.83'	
	C = 199.83'	
	Start = Sta. 814+67.00	
	End = Sta. 816+67.00	
	C.B. = N37°41'07"W	

PLAN & PROFILE COLOR-CODE LEGEND

RUBBLIZE & ROLL: *Projected project area where rubblize & roll construction techniques are likely to be utilized. The remaining elements of the proposed typical section will be full-depth pavement replacement and widening per Scope.*

TRANSITIONS: *Projected project area where the road profile will be transitioned between areas of rubblization and bridge approaches or under overhead bridges to maintain or better existing vertical clearance. These areas will be full-depth pavement replacement and widening.*

RESURFACING: *Projected project area where resurfacing or resurfacing and widening will be utilized.*



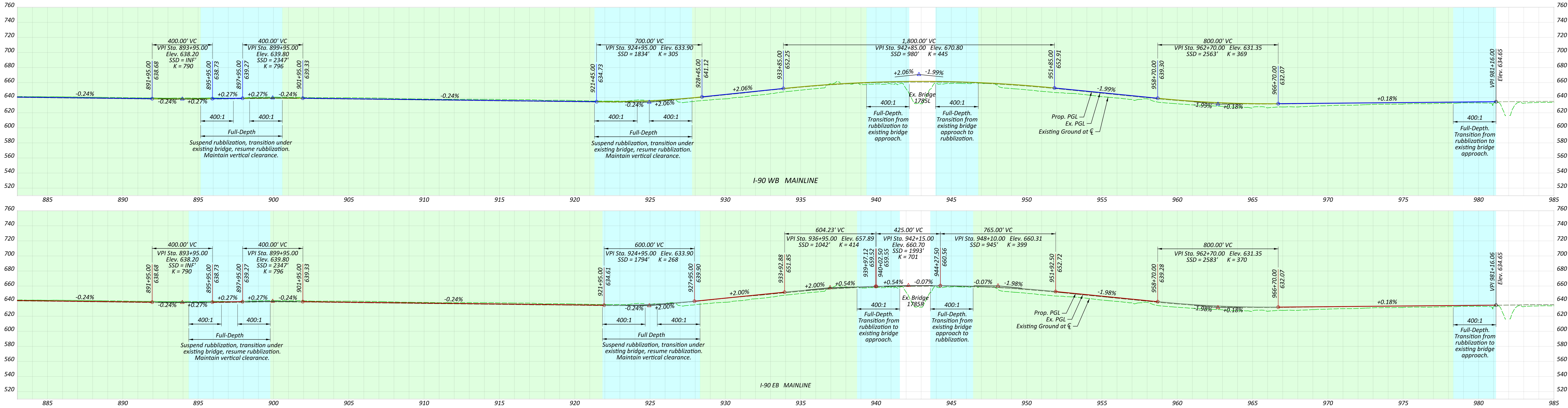
Roll Plot Plans & Profiles
STA. 757+00.00 to STA. 883+00.00

HORIZONTAL SCALE IN FEET 0 100 200 400

DESIGNER MET
REVIEW JFM XX/XX/24
PROJECT NO. 107714
SHEET NO. P. 3 4

NOTE:
For plan clarity, individual vegetated filter strips used for BMP treatment are not shown herein. The vegetated filter strips, along with the shown and labeled bioretention cells, will fully account for the necessary project BMP treatment.

Section 11 of the SOS requires roadway reconstruction "while generally retaining the existing constructed horizontal and vertical alignments". A top-of-existing-concrete profile was created using the original profile and follow-on projects to accurately estimate where Rubblize and Roll could be used and to calculate quantities (ATC No. 1). That profile was then raised accordingly to obtain the proposed profile shown. The final design will optimize the profile for this treatment. 400:1 transitions show approximate grade adjustment limits for bridge tie-ins, where full-depth, full-width replacement/widening will occur. Field surveys at all bridges will inform tie-ins and clearances. The proposed profile will meet ODOT design requirements (L&D, Vol. 1, Section 200). Rubblizing/replacement limits will be adjusted in the final design to meet standards.



PLAN & PROFILE COLOR-CODE LEGEND

RUBBLIZE & ROLL: *Projected project area where rubblize & roll construction techniques are likely to be utilized. The remaining elements of the proposed typical section will be full-depth pavement replacement and widening per Scope.*

TRANSITIONS: *Projected project area where the road profile will be transitioned between areas of rubblization and bridge approaches or under overhead bridges to maintain or better existing vertical clearance. These areas will be full-depth pavement replacement and widening.*

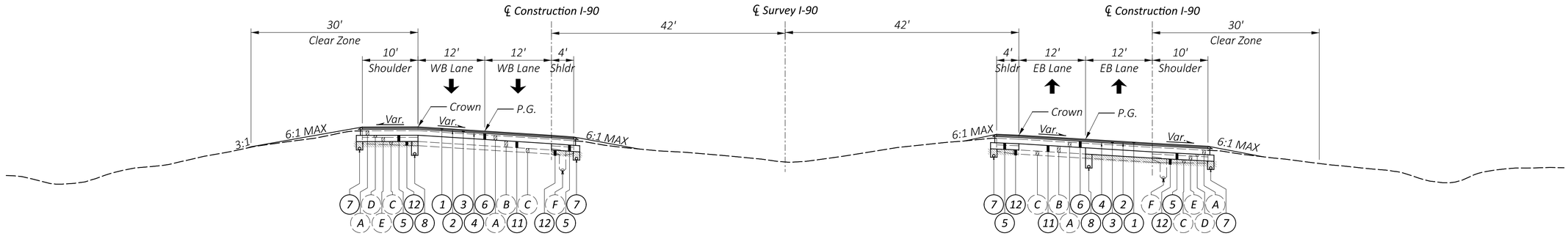
RESURFACING: *Projected project area where resurfacing or resurfacing and widening will be utilized.*

Roll Plot Plans & Profiles
STA. 883+00.00 to STA. 981+15.00

DESIGNER: MET
REVIEWER: JFM XX/XX/24
PROJECT ID: 107714
SHEET: P.4 TOTAL: 4

APPENDIX C

TYPICAL SECTIONS



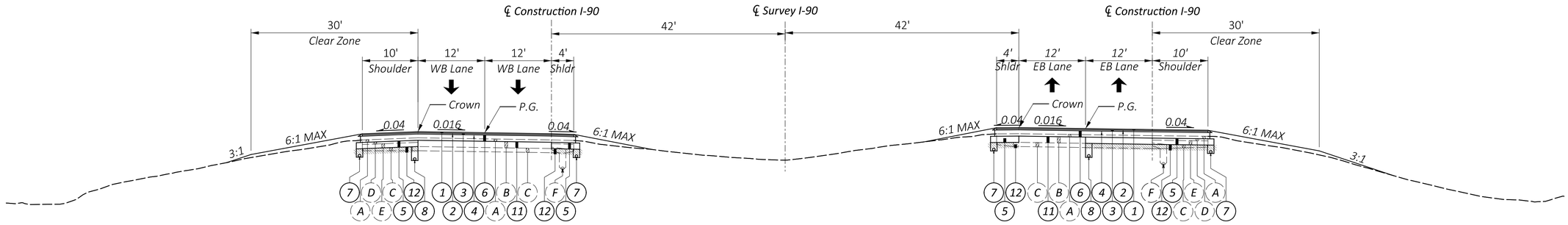
SUPERELEVATED I-90 DIRECTIONAL RAMPS
(SHOWN AT STA. 590+00)

LEGEND

1. *ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447)*
2. *ITEM 407 - TACK COAT*
3. *ITEM 442 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)*
4. *ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE*
5. *ITEM 304 - 9" OR 10" AGGREGATE BASE (MATCH RUBBLIZED CONC THICKNESS)*
6. * *ITEM 302 - 9" ASPHALT CONCRETE BASE (TWO LIFTS WITH TACK COAT)*
7. *ITEM 605 - 6" BASE PIPE UNDERDRAIN*
8. *ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN*
9. *ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE*
10. *ITEM 606 - CABLE BARRIER*
11. *ITEM 320 - RUBBLIZE AND ROLL*
12. *SUBGRADE STABILIZATION (PER SCOPE, AS REQUIRED)*

A. *EXISTING 3.25" TO 3.75" ASPHALT OVERLAY*
B. *EXISTING 9" OR 10" REINFORCED CONCRETE PAVEMENT*
C. *EXISTING VARIABLE THICKNESS SUBBASE*
D. *EXISTING 3" ASPHALT BASE*
E. *EXISTING 6" AGGREGATE BASE*
F. *EXISTING 6" SHALLOW PIPE UNDERDRAIN*

* *ITEM 302 - 9" ASPHALT CONCRETE BASE WILL BE USED TO ADDRESS ANY PAVEMENT SURFACE LEVELING*



TRANSITIONAL I-90 DIRECTIONAL RAMPS
(SHOWN AT STA. 608+00)

I-90 & SR-2 TYPICAL SECTIONS

DESIGN AGENCY

DESIGNER ASB

REVIEWER JFM 12-12-24

PROJECT ID 107714

SHEET P.1 TOTAL 1

LOR-090-10.76

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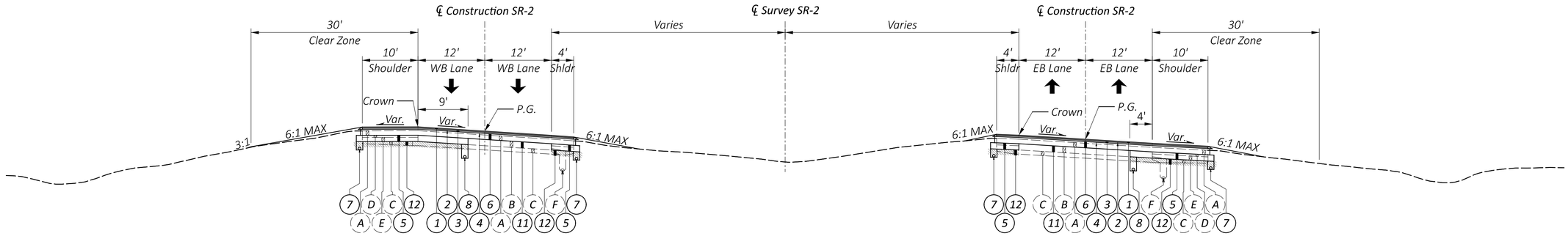
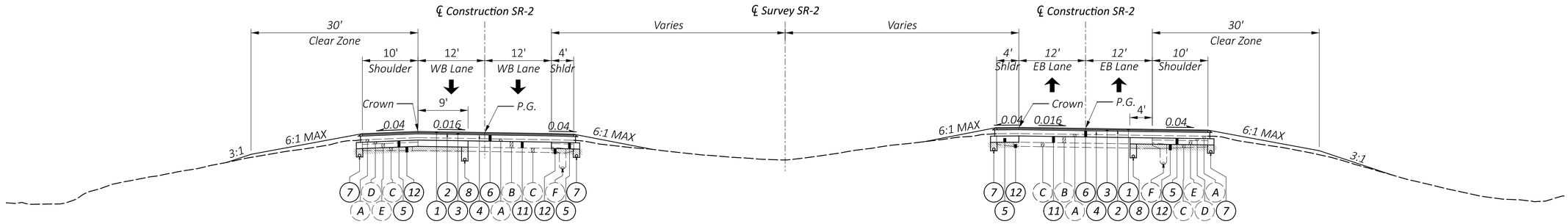


SUPERELEVATED SR-2 DIRECTIONAL RAMPS
(SHOWN AT STA. 625+00)

LEGEND

- (1) *ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447)*
- (2) *ITEM 407 - TACK COAT*
- (3) *ITEM 442 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)*
- (4) *ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE*
- (5) *ITEM 304 - 9" OR 10" AGGREGATE BASE (MATCH RUBBLIZED CONC THICKNESS)*
- * (6) *ITEM 302 - 9" ASPHALT CONCRETE BASE (TWO LIFTS WITH TACK COAT)*
- (7) *ITEM 605 - 6" BASE PIPE UNDERDRAIN*
- (8) *ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN*
- (9) *ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE*
- (10) *ITEM 606 - CABLE BARRIER*
- (11) *ITEM 320 - RUBBLIZE AND ROLL*
- (12) *SUBGRADE STABILIZATION (PER SCOPE, AS REQUIRED)*
- * *ITEM 302 - 9" ASPHALT CONCRETE BASE WILL BE USED TO ADDRESS ANY PAVEMENT SURFACE LEVELING*

- (A) *EXISTING 3.25" TO 3.75" ASPHALT OVERLAY*
- (B) *EXISTING 9" OR 10" REINFORCED CONCRETE PAVEMENT*
- (C) *EXISTING VARIABLE THICKNESS SUBBASE*
- (D) *EXISTING 3" ASPHALT BASE*
- (E) *EXISTING 6" AGGREGATE BASE*
- (F) *EXISTING 6" SHALLOW PIPE UNDERDRAIN*



TRANSITIONAL SR-2 DIRECTIONAL RAMPS
(SHOWN AT STA. 613+00)

I-90 & SR-2 TYPICAL SECTIONS

DESIGN AGENCY

DESIGNER ASB

REVIEWER JFM 12-12-24

PROJECT ID 107714

SHEET P.1 TOTAL 1

LOR-090-10.76

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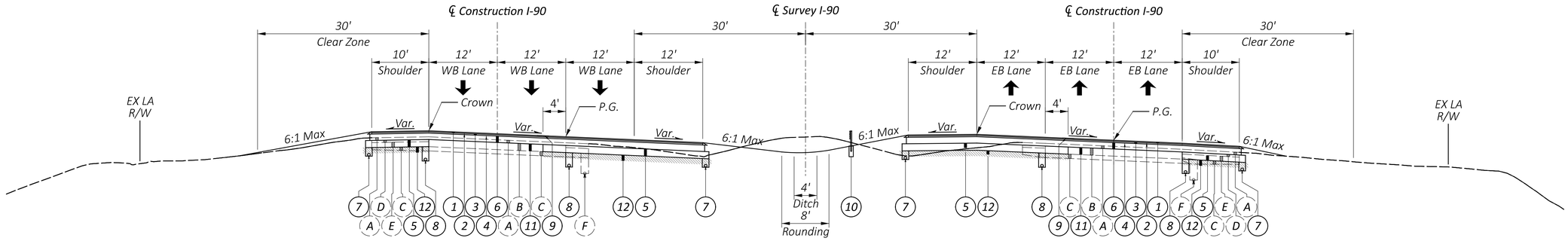


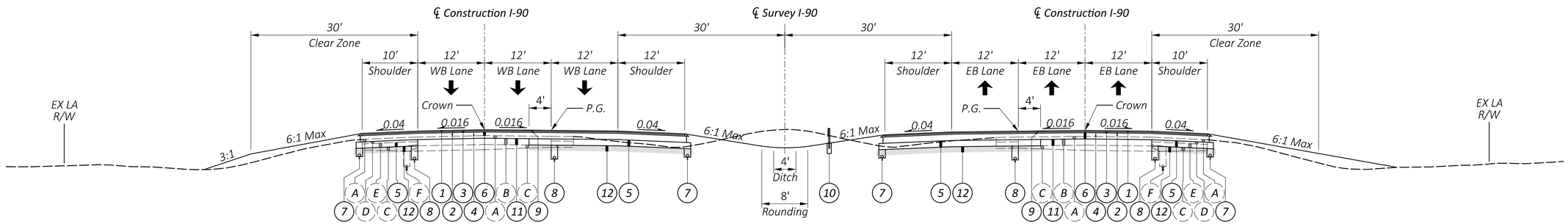
SUPERELEVATED I-90 WIDENING
(SHOWN AT 857+00)

LEGEND

1. *ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447)*
2. *ITEM 407 - TACK COAT*
3. *ITEM 442 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)*
4. *ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE*
5. *ITEM 304 - 9" OR 10" AGGREGATE BASE (MATCH RUBBLIZED CONC THICKNESS)*
6. * *ITEM 302 - 9" ASPHALT CONCRETE BASE (TWO LIFTS WITH TACK COAT)*
7. *ITEM 605 - 6" BASE PIPE UNDERDRAIN*
8. *ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN*
9. *ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE*
10. *ITEM 606 - CABLE BARRIER*
11. *ITEM 320 - RUBBLIZE AND ROLL*
12. *SUBGRADE STABILIZATION (PER SCOPE, AS REQUIRED)*

* *ITEM 302 - ASPHALT CONCRETE BASE WILL BE USED TO ADDRESS ANY PAVEMENT SURFACE LEVELING*

- A. *EXISTING 3.25" TO 3.75" ASPHALT OVERLAY*
- B. *EXISTING 9" OR 10" REINFORCED CONCRETE PAVEMENT*
- C. *EXISTING VARIABLE THICKNESS SUBBASE*
- D. *EXISTING 3" ASPHALT BASE*
- E. *EXISTING 6" AGGREGATE BASE*
- F. *EXISTING 6" SHALLOW PIPE UNDERDRAIN*



NORMAL I-90 WIDENING
(SHOWN AT STA. 877+00)

I-90 TYPICAL SECTIONS

LOR-090-10.76

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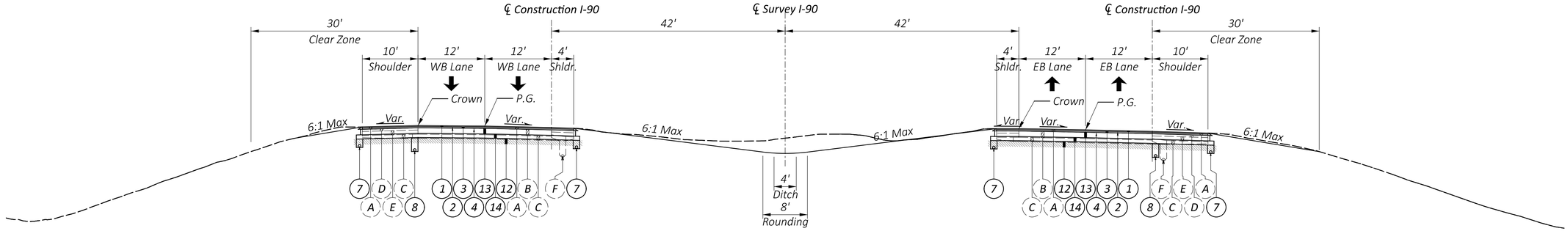
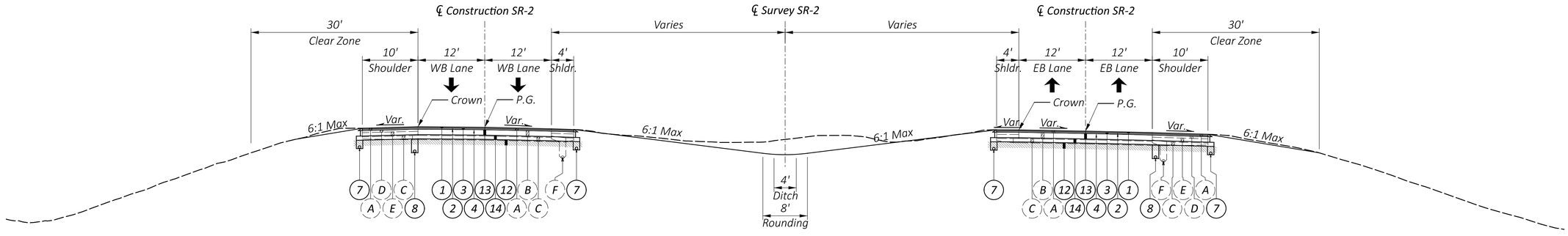
DESIGN AGENCY

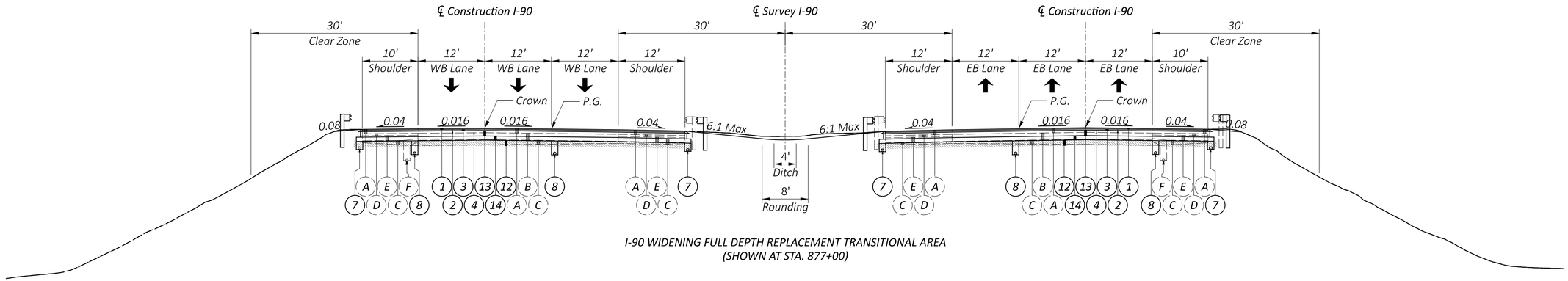
DESIGNER	ASB
REVIEWER	JFM 12-12-24
PROJECT ID	107714
SHEET	P.1
TOTAL	1



I-90 DIRECTIONAL RAMPS FULL DEPTH TRANSITIONAL AREA
(SHOWN AT 611+00.00)



SR-2 DIRECTIONAL RAMPS FULL DEPTH TRANSITIONAL AREA
(SHOWN AT 610+00.00)



I-90 WIDENING FULL DEPTH REPLACEMENT TRANSITIONAL AREA
(SHOWN AT STA. 877+00)

LEGEND

1. ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447)
2. ITEM 407 - TACK COAT
3. ITEM 442 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)
4. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
5. ITEM 304 - 9" OR 10" AGGREGATE BASE (MATCH RUBBLIZED CONC THICKNESS)
6. * ITEM 302 - 9" ASPHALT CONCRETE BASE (TWO LIFTS WITH TACK COAT)

* ITEM 302 - 9" ASPHALT CONCRETE BASE WILL BE USED ADDRESS ANY PAVEMENT SURFACE LEVELING

7. ITEM 605 - 6" BASE PIPE UNDERDRAIN
8. ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN
9. ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE
10. ITEM 606 - CABLE BARRIER
11. ITEM 320 - RUBBLIZE AND ROLL
12. SUBGRADE STABILIZATION (PER SCOPE, AS REQUIRED)
13. ITEM 302 - 8" ASPHALT CONCRETE BASE (TWO LIFTS WITH TACK COAT)
14. ITEM 304 - 6" AGGREGATE BASE

A. EXISTING 3.25" TO 3.75" ASPHALT OVERLAY
B. EXISTING 9" OR 10" REINFORCED CONCRETE PAVEMENT
C. EXISTING VARIABLE THICKNESS SUBBASE
D. EXISTING 3" ASPHALT BASE
E. EXISTING 6" AGGREGATE BASE
F. EXISTING 6" SHALLOW PIPE UNDERDRAIN

I-90 TYPICAL SECTIONS

LOR-090-10.76

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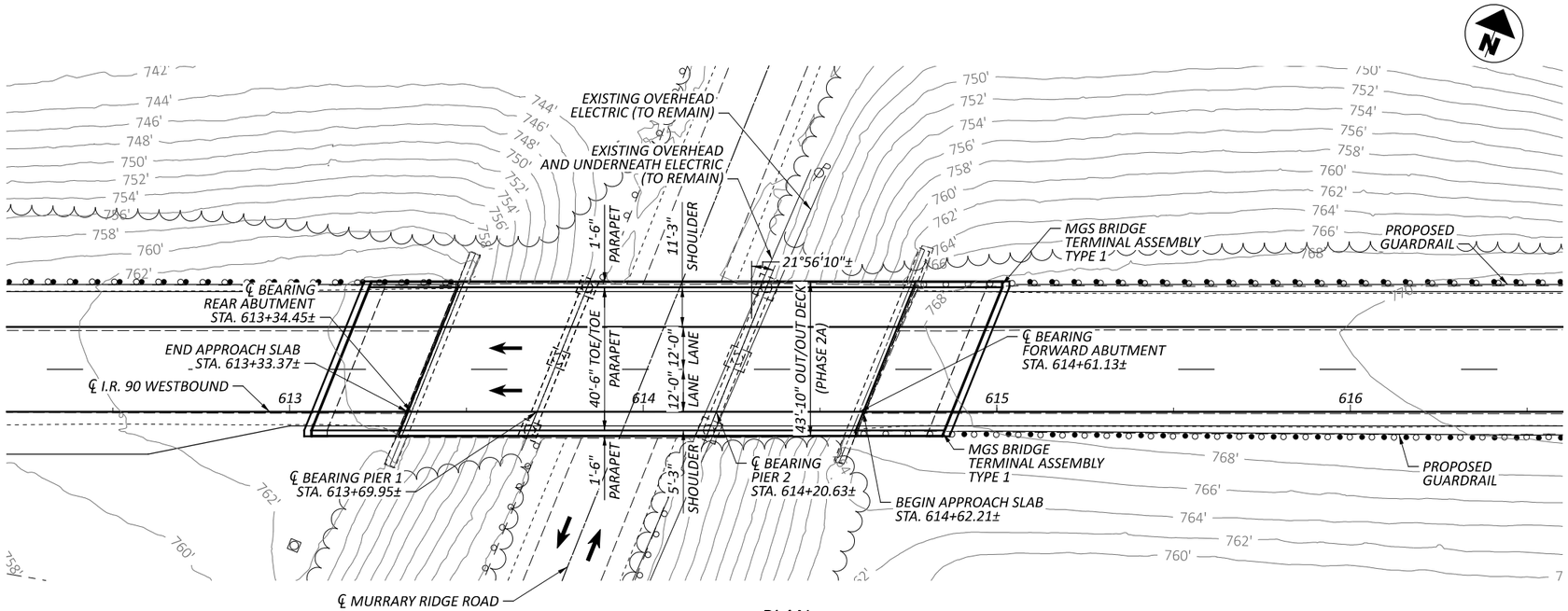
DESIGN AGENCY

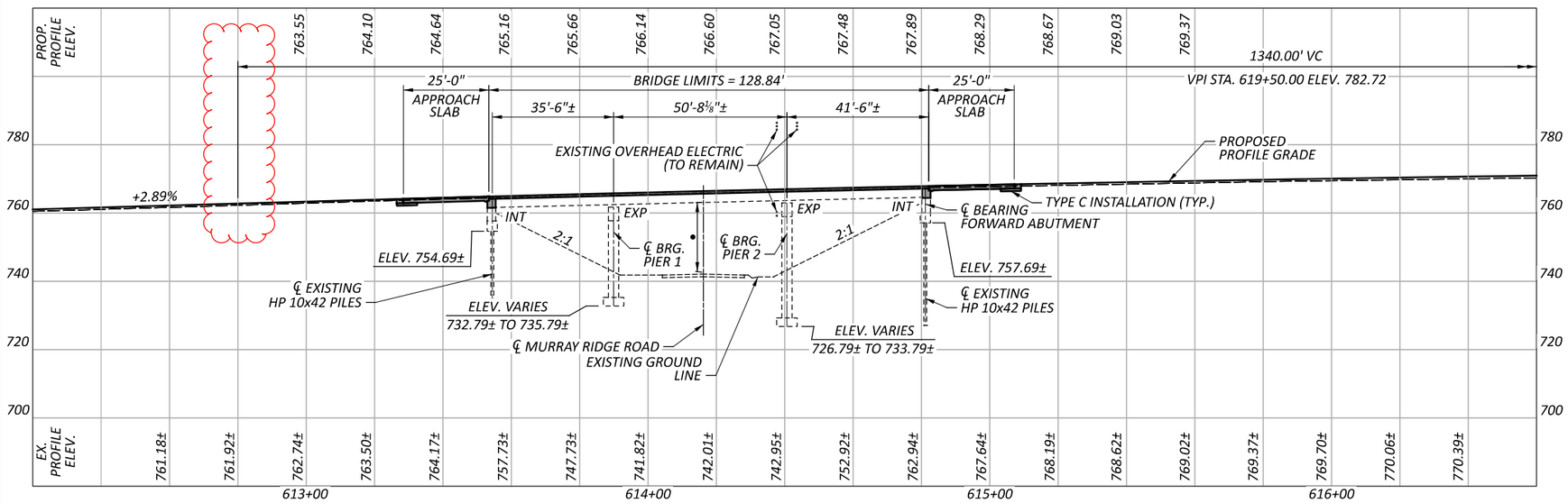
DESIGNER ASB
REVIEWER JFM 12-12-24
PROJECT ID 107714
SHEET P.1 TOTAL 1

APPENDIX D

BRIDGE PLANS



PLAN



PROFILE ALONG ℄ CONSTRUCTION I.R. 90 WESTBOUND

BENCHMARK DATA

BM #1 STA.	,	ELEV.	,	OFFSET	,
BM #2 STA.	,	ELEV.	,	OFFSET	,
BM #3 STA.	,	ELEV.	,	OFFSET	,
BM #4 STA.	,	ELEV.	,	OFFSET	,

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:

2025 ADT = 7,360 2025 ADTT = 3,091
2045 ADT = 8,470 2045 ADTT = 3,557
DIRECTIONAL DISTRIBUTION = 1.00

LEGEND

- *BORING LOCATION*
- *15'-0" REQUIRED MINIMUM VERTICAL CLEARANCE*
- *20'-6"± EXISTING MINIMUM VERTICAL CLEARANCE*

EXISTING STRUCTURE

TYPE: THREE-SPAN CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE FOUNDED ON PILES (ABUTMENTS) OR SPREAD FOOTING (PIERS).

SPANS: 35'-6"±, 50'-8⅛"±, 40'-6"± C/C BEARING

ROADWAY: 42'-0"± F/F PARAPET

LOADING: HS20-44 AND ALTERNATE INTERSTATE LOADING

SKEW: 21°56'10"± LEFT FORWARD

WEARING SURFACE: 2½"± ASPHALT CONCRETE

APPROACH SLABS: 25'-0"± LONG (AS-1-67)

ALIGNMENT: TANGENT

CROWN: 0.0156± FT/FT

STRUCTURE FILE NUMBER: 4704398

DATE BUILT: 1974

DISPOSITION: REHABILITATION

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING DECK WITH NEW COMPOSITE DECK. REPLACE EXISTING INTEGRAL END DIAPHRAGM AND REPLACE EXISTING BEARINGS WITH ELASTOMERIC BEARINGS, ADD MOMENT RETROFITS, PAINT SUPERSTRUCTURE.

SPANS: 35'-6"±, 50'-8⅛"±, 40'-6"± C/C BEARING

ROADWAY: 40'-6" TOE/TOE PARAPET

LOADING: HL93 AND 0.060 KSF FUTURE WEARING SURFACE (DECK & SUPERSTRUCTURE)
HS20-44 AND ALTERNATE INTERSTATE LOADING (SUBSTRUCTURE)

SKEW: 21°56'10"± LEFT FORWARD

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0" LONG (AS-1-15, AS-2-15)

ALIGNMENT: TANGENT

CROWN: 0.0156 FT/FT

DECK AREA: 5,648 SF

COORDINATES: LATITUDE 41°24'10.44" N
LONGITUDE 82°08'56.35" W

HORIZONTAL SCALE IN FEET
0 10 20 40

SITE PLAN (1 OF 2)
BRIDGE NO. LOR-90-11385L
I.R. WESTBOUND 90 OVER MURRAY RIDGE ROAD

SFN	4704398
DESIGN AGENCY	
DESIGNER	ZES
CHECKER	KDC
REVIEWER	TES 01/16/25
PROJECT ID	107714
SUBSET	0
TOTAL	0
SHEET	P.0
TOTAL	0

LOR-90-10.76

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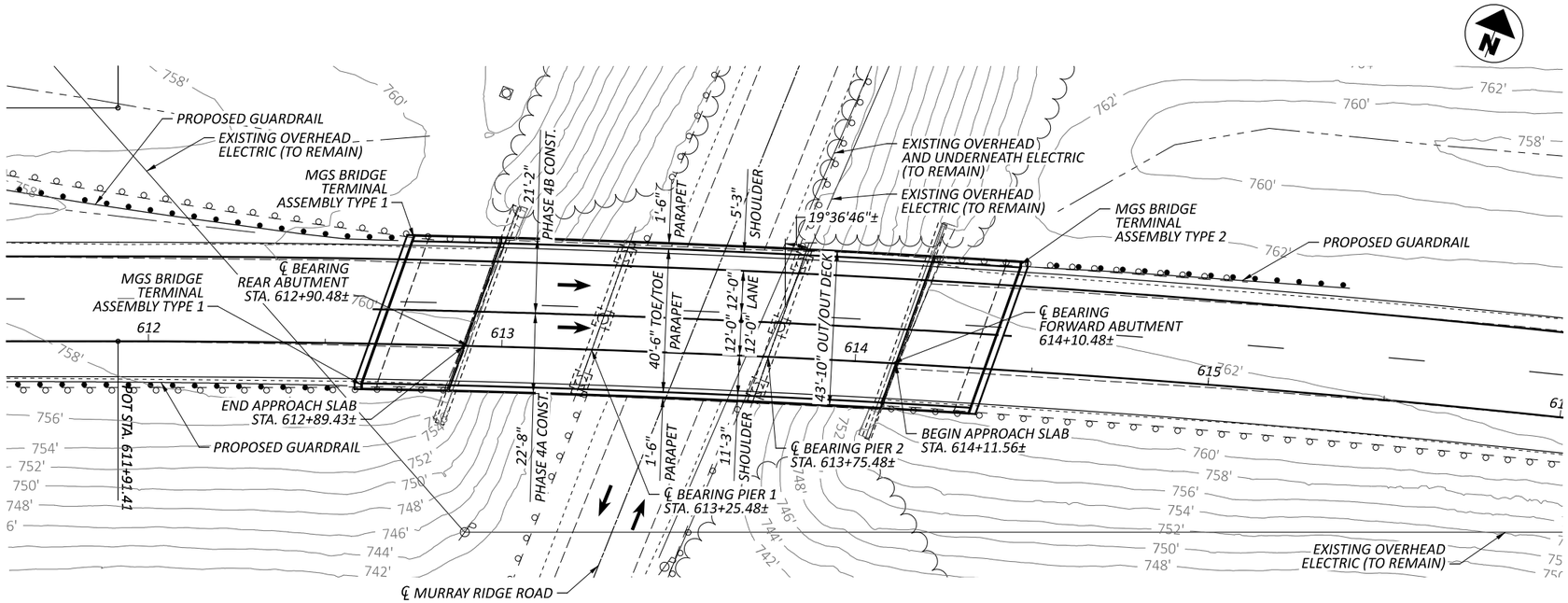
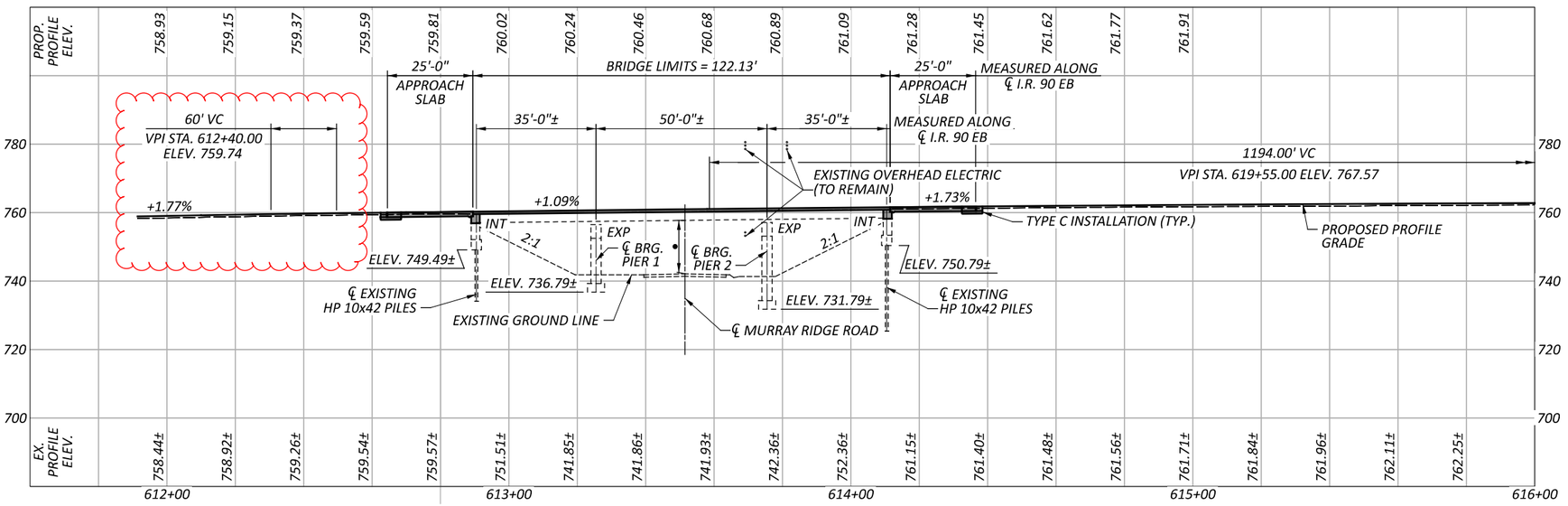


PLAN

CURVE DATA
P.I. = STA. 620+62.79
Δ = 25°08'55" RT
Dc = 01°28'00"
R = 3,906.53'
T = 871.38'
L = 1,714.68'
E = 96'



PROFILE ALONG ℄ CONSTRUCTION I.R. 90 EASTBOUND

BENCHMARK DATA

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BM #2 STA.	,	ELEV.	,	OFFSET	,
BM #3 STA.	,	ELEV.	,	OFFSET	,
BM #4 STA.	,	ELEV.	,	OFFSET	,

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2025 ADT = 11,950 2025 ADTT = 3,466
2045 ADT = 8,640 2045 ADTT = 2,506
DIRECTIONAL DISTRIBUTION = 1.00

LEGEND

- BORING LOCATION
- 15'-0" REQUIRED MINIMUM VERTICAL CLEARANCE
  14'-7"± EXISTING MINIMUM VERTICAL CLEARANCE

EXISTING STRUCTURE

TYPE: THREE-SPAN CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE FOUNDED ON PILES (ABUTMENTS) OR SPREAD FOOTING (PIERS).

SPANS: 35'-0"±, 50'-0"±, 35'-0"± C/C BEARINGS

ROADWAY: 42'-0"± F/F PARAPETS

LOADING: HS 20-44 AND ALTERNATE INTERSTATE LOADING

SKEW: 19°36'46"± LEFT FORWARD

WEARING SURFACE: 2½"± ASPHALT CONCRETE

APPROACH SLABS: 25'± LONG (AS-1-67)

ALIGNMENT: 1°28'00"± CURVE RIGHT

CROWN: 0.047± FT/FT

STRUCTURE FILE NUMBER: 470371

DATE BUILT: 1974

DISPOSITION: REHABILITATION

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING DECK WITH NEW COMPOSITE DECK. REPLACE EXISTING INTEGRAL END DIAPHRAGM AND REPLACE EXISTING BEARINGS WITH ELASTOMERIC BEARINGS, ADD MOMENT RETROFITS, PAINT SUPERSTRUCTURE.

SPANS: 35'-0"±, 50'-0"±, 35'-0"± C/C BEARINGS

ROADWAY: 40'-6" TOE/TOE PARAPET

LOADING: HL93 AND 0.060 KSF FUTURE WEARING SURFACE (DECK & SUPERSTRUCTURE)
HS20-44 AND ALTERNATE INTERSTATE LOADING (SUBSTRUCTURE)

SKEW: 19°36'46"± LEFT FORWARD

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0" LONG (AS-1-15, AS-2-15)

ALIGNMENT: 1°28'00" CURVE RIGHT

CROWN: 0.047 FT/FT

DECK AREA: 5,354 SF

COORDINATES: LATITUDE 41°24'09.54" N
LONGITUDE 82°08'56.51" W

HORIZONTAL SCALE IN FEET
0 10 20 40

SITE PLAN (2 OF 2)
BRIDGE NO. LOR-90-11570R
I.R. 90 EASTBOUND OVER MURRAY RIDGE ROAD

SFN	4704371
DESIGN AGENCY	
DESIGNER	ZES
CHECKER	KDC
REVIEWER	TES 01/16/25
PROJECT ID	107714
SUBSET	0
TOTAL	0
SHEET	P.0
TOTAL	0

LOR-90-10.76

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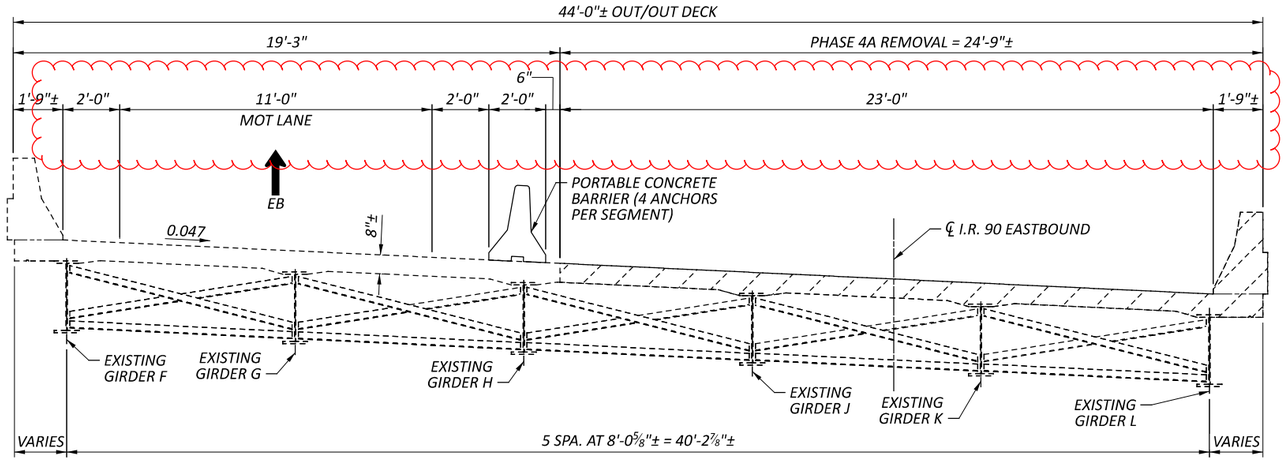
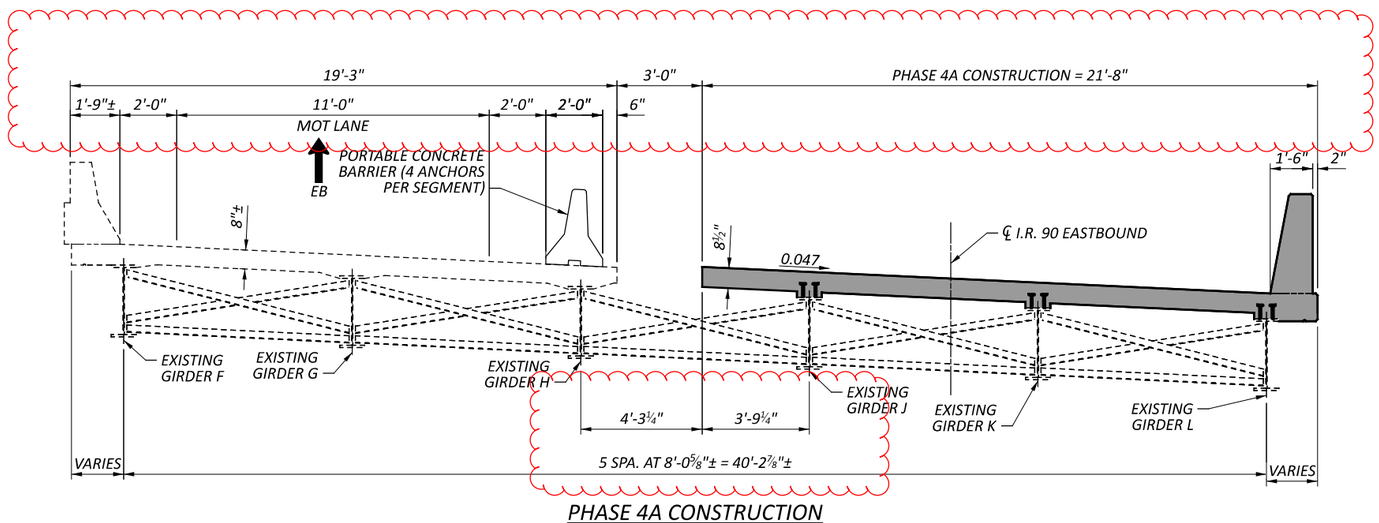


PHASE 4A REMOVAL



PHASE 4A CONSTRUCTION

LEGEND:

- INDICATES LIMITS OF REMOVAL OF EXISTING STRUCTURE (PHASE 4A)
- PORTION OF BRIDGE CONSTRUCTED IN PHASE 4A

PHASED CONSTRUCTION DETAILS (1 OF 2)
BRIDGE NO. LOR-90-11570R
I.R. 90 EASTBOUND OVER MURRAY RIDGE ROAD

SFN 4704371
DESIGN AGENCY
DESIGNER ZES | CHECKER KDC
REVIEWER TES 01/16/25
PROJECT ID 107714
SUBSET 0 | TOTAL 0
SHEET P.0 | TOTAL 0

LOR-90-10.76

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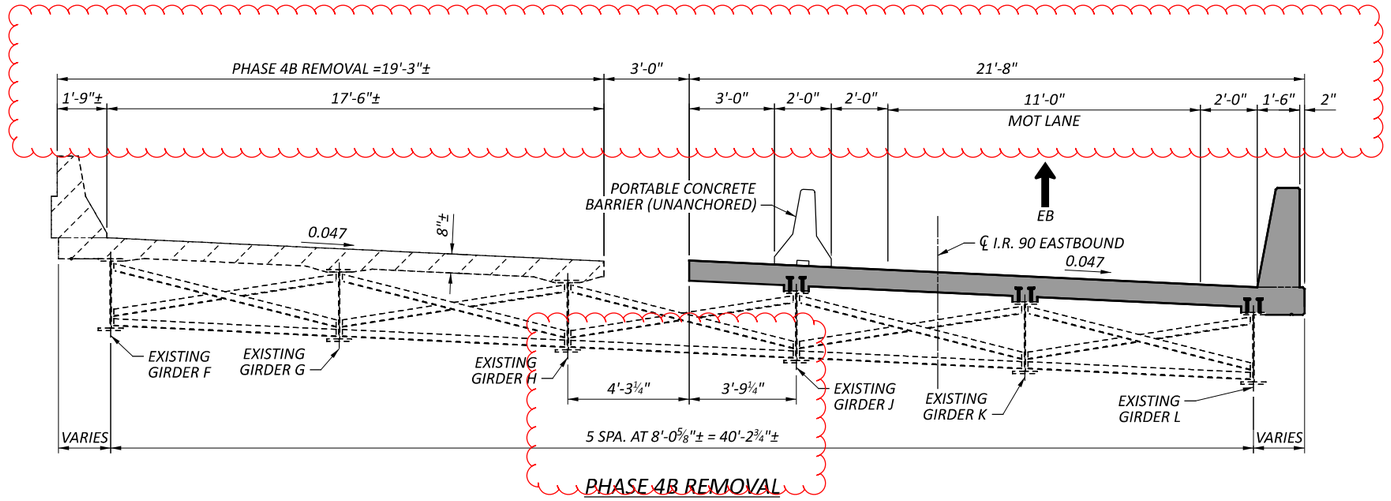
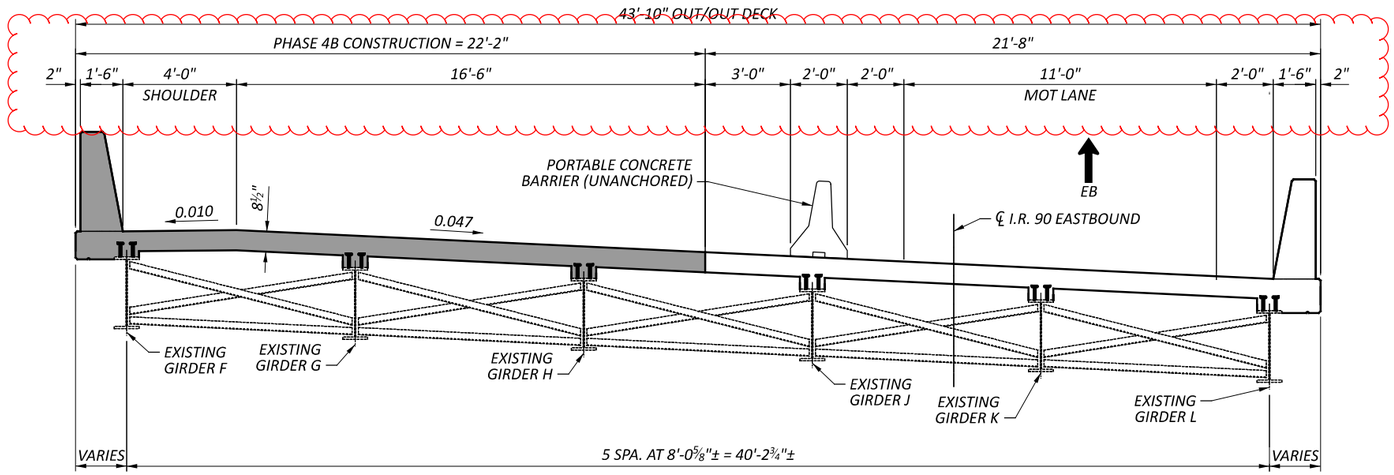


PHASE 4B REMOVAL



PHASE 4B CONSTRUCTION

LEGEND:

- INDICATES LIMITS OF REMOVAL OF EXISTING STRUCTURE (PHASE 4B)
- PORTION OF BRIDGE CONSTRUCTED IN PHASE 4B

PHASED CONSTRUCTION DETAILS (2 OF 2)
BRIDGE NO. LOR-90-11570R
I.R. 90 EASTBOUND OVER MURRAY RIDGE ROAD

SFN 4704371
DESIGN AGENCY
DESIGNER ZES | CHECKER KDC
REVIEWER TES 01/16/25
PROJECT ID 107714
SUBSET 0 | TOTAL 0
SHEET P.0 | TOTAL 0

LOR-90-10.76

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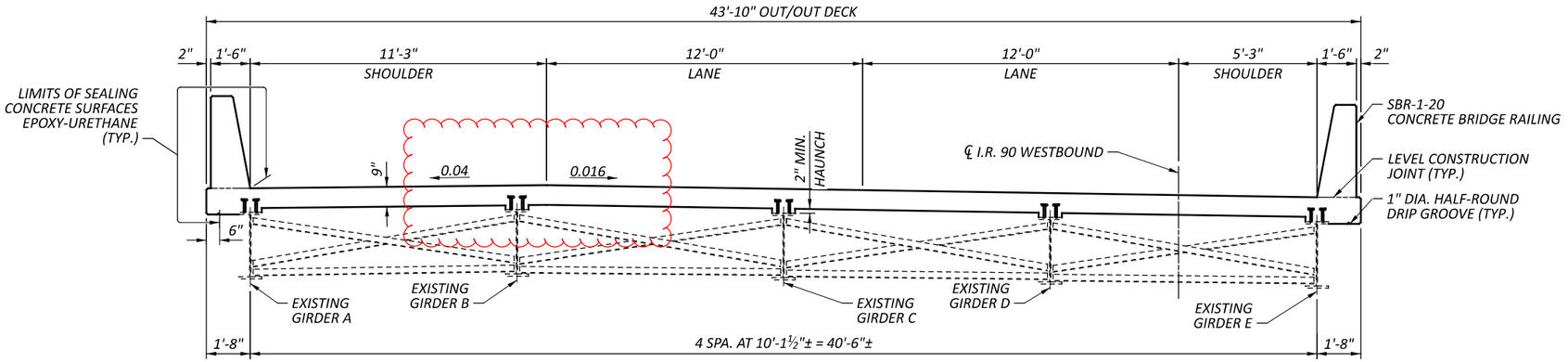
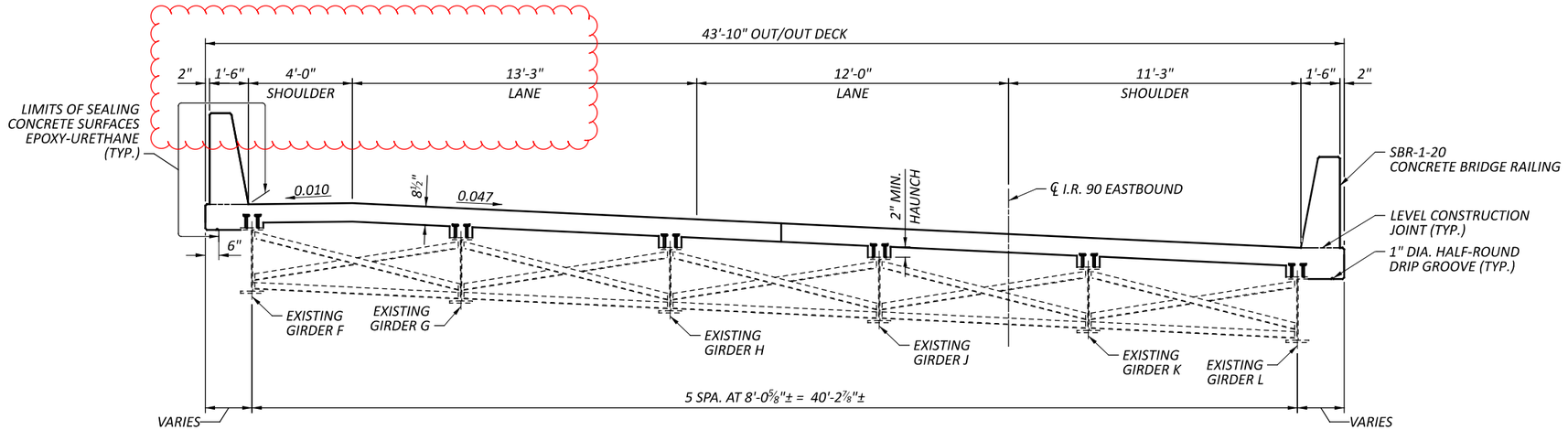


TRANSVERSE SECTION (WESTBOUND)



TRANSVERSE SECTION (EASTBOUND)

SHEAR STUD SUMMARY	
WESTBOUND	2,396
EASTBOUND	2,432

NOTES:

1. ⅞" Ø X 6" STUDS

TRANSVERSE SECTION
BRIDGE NO. LOR-90-11570R & BRIDGE NO. LOR-90-11385L
I.R. 90 EASTBOUND/WESTBOUND OVER MURRAY RIDGE ROAD

SFN 4704371
SFN 4704398
DESIGN AGENCY
DESIGNER ZES | CHECKER KDC
REVIEWER TES 01/16/25
PROJECT ID 107714
SUBSET 0 | TOTAL 0
SHEET P.0 | TOTAL 0

LOR-90-10.76

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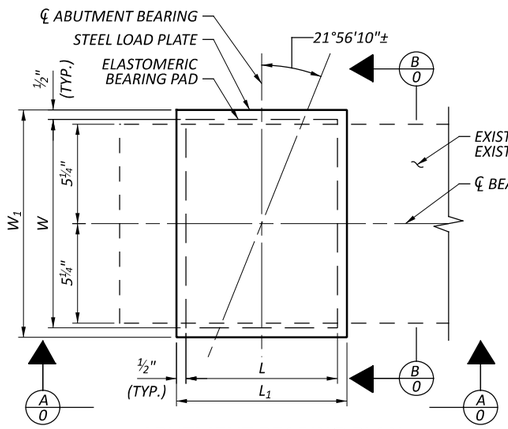
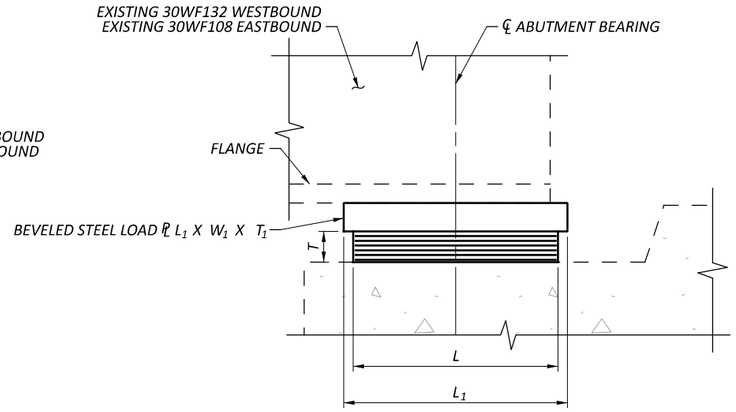
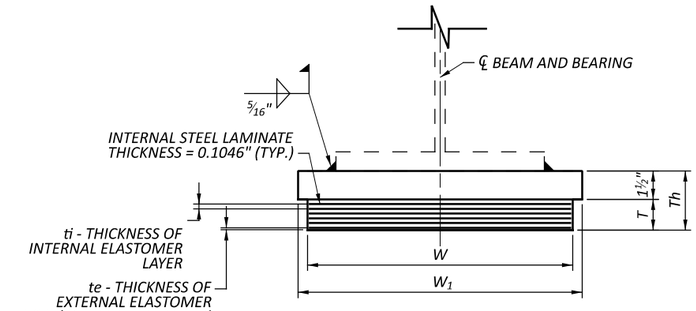


ABUTMENT BEARING PLAN
WESTBOUND SHOWN, EASTBOUND SIMILAR



A 0 SECTION THRU BEARING (AT ABUTMENTS)



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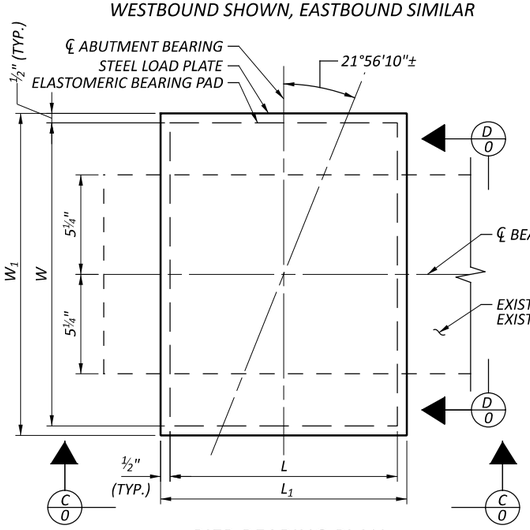
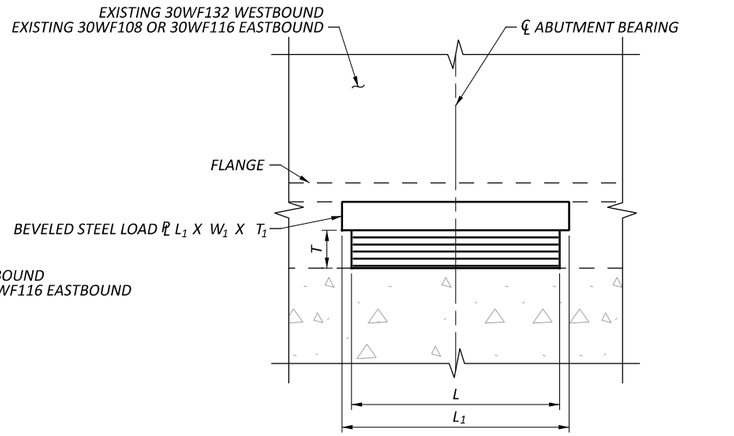
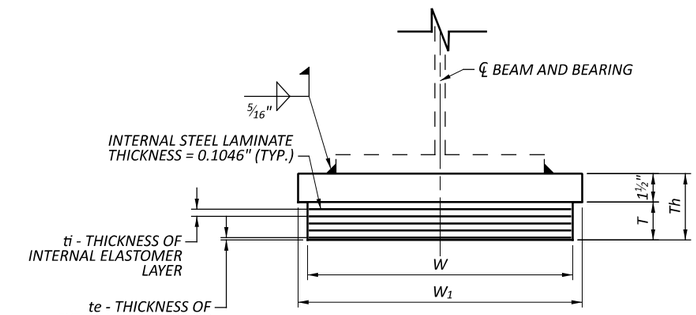


PIER BEARING PLAN
WESTBOUND SHOWN, EASTBOUND SIMILAR



C 0 SECTION THRU BEARING (AT PIERS)



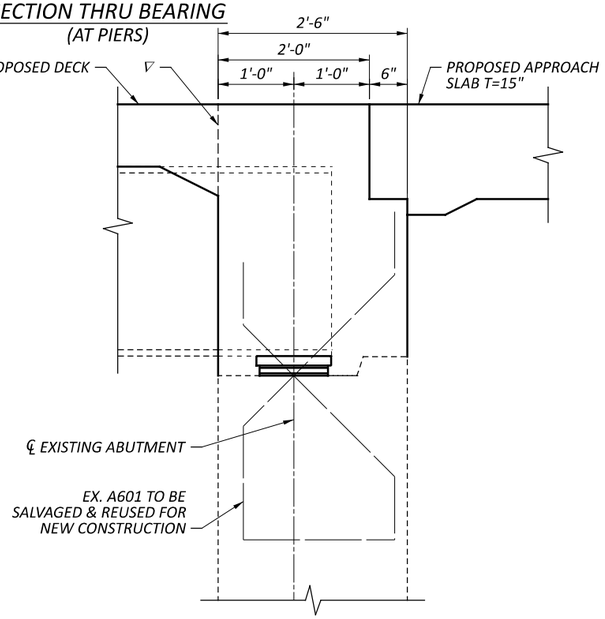
D 0 SECTION THRU BEARING (AT PIERS)

ELASTOMERIC BEARING DATA (WESTBOUND)

LOCATION	BEARING TYPE	NO. REQ'D	ELASTOMERIC BEARING PAD SIZE L (IN.)	W (IN.)	T (IN.)	Th (IN.)	NO. INTERNAL LAMINATES 0.1046" THICK (12 GAGE)	INTERNAL LAYERS ti (IN.)	NO.	EXTERNAL LAYERS te (IN.)	NO.	STEEL LOAD PLATE SIZE L_1 (IN.)	W_1 (IN.)	T_1 (IN.)	UNFACTORED DESIGN LOADS DL (KIP)	LL W/O IMPACT (KIP)	MAX DESIGN LOAD (DL+LL) (KIP)
ABUTMENT 1	EXP	5	8	11	2.253	3.753	6	0.25	6	0.125	1	9	12	1.5	35.96	58.61	94.57
ABUTMENT 2	EXP	5	8	11	2.253	4.023	6	0.25	6	0.125	1	9	12	1.5	40.70	60.11	100.80
PIER 1	EXP	5	12	16	2.523	4.023	5	0.375	5	0.125	1	13	17	1.5	98.79	92.91	191.70
PIER 2	EXP	5	12	16	2.523	3.753	5	0.375	5	0.125	1	13	17	1.5	105.48	93.68	199.16

ELASTOMERIC BEARING DATA (EASTBOUND)

LOCATION	BEARING TYPE	NO. REQ'D	ELASTOMERIC BEARING PAD SIZE L (IN.)	W (IN.)	T (IN.)	Th (IN.)	NO. INTERNAL LAMINATES 0.1046" THICK (12 GAGE)	INTERNAL LAYERS ti (IN.)	NO.	EXTERNAL LAYERS te (IN.)	NO.	STEEL LOAD PLATE SIZE L_1 (IN.)	W_1 (IN.)	T_1 (IN.)	UNFACTORED DESIGN LOADS DL (KIP)	LL W/O IMPACT (KIP)	MAX DESIGN LOAD (DL+LL) (KIP)
ABUTMENT 1	EXP	6	8	11	2.253	3.753	6	0.25	6	0.125	1	9	12	1.5	28.10	43.96	72.06
ABUTMENT 2	EXP	6	8	11	2.253	4.023	6	0.25	6	0.125	1	9	12	1.5	28.57	44.06	72.63
PIER 1	EXP	6	11	15	2.523	4.023	5	0.375	5	0.125	1	12	16	1.5	78.27	70.99	149.26
PIER 2	EXP	6	11	15	2.523	3.753	5	0.375	5	0.125	1	12	16	1.5	77.39	68.81	146.20



TYPICAL SECTION THRU ABUTMENT

LEGEND:

▽ - THE CONTRACTOR MAY ELECT TO SUBMIT AN ALTERNATE PROCEDURE THAT PLACES THE DIAPHRAGM AND DECK CONCRETE IN THE SAME POUR; HOWEVER, THIS REQUIRES APPROVAL OF THE ENGINEER.

NOTES:

1. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
2. LOAD PLATES: THE STEEL LOAD PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50 AND SHALL BE BONDED TO THE ELASTOMER BY VULCANIZATION DURING THE MOLDING PROCESS.
3. MARKINGS: ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
4. PAINTING: THE LOAD PLATES SHALL BE PAINTED IN ACCORDANCE WITH ITEM 514 AND C&MS 708. THE FINISH COAT SHALL MATCH THE NEW PAINT OF THE EXISTING GIRDERS. PAYMENT FOR PAINTING PLATES TO BE INCLUDED WITH ITEM 516, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
5. DESIGN LOAD: TOTAL DESIGN LOAD FOR BEARINGS EQUALS THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING TABLE. LOADS SHOWN ARE SERVICE LOADS WITHOUT LOAD FACTORS AND IMPACT FACTORS INCLUDED.

BEARING DETAILS
BRIDGE NO. LOR-90-11570R & BRIDGE NO. LOR-90-11385L
I.R. 90 EASTBOUND/WESTBOUND OVER MURRAY RIDGE ROAD

SFN 4704371
SFN 4704398
DESIGN AGENCY
DESIGNER ZES | CHECKER KDC
REVIEWER TES 01/16/25
PROJECT ID 107714
SUBSET 0 | TOTAL 0
SHEET P.0 | TOTAL 0

LOR-90-10.76

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 1/16/2025 TIME: 4:38:53 PM USER: p004213J
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