



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator



August 27, 2020

604123-111717

ADDENDUM NO. 5

To Prospective Bidders and Others on:

ASHLAND

**Federal Aid Project Nos. CMQ-003S(390), STP-003S(390) & TAP-003S(390)
Roadway Reconstruction and Related Work along Route 126 (Pond Street)**

BIDS TO BE OPENED AND READ ON: TUESDAY, SEPTEMBER 1, 2020 AT 2:00 P.M.

Transmitting revisions to the Contract Documents as follows:

RESPONSES TO

CONTRACTORS' QUESTIONS:

9 Pages

DOCUMENT 00010:

Revised page 3

DOCUMENT A00801:

Revised pages 97, 99, 128, 173, 177, 178, 195,
196, 203, 207, 208, and 213

DOCUMENT A00802:

Revised page 7

DOCUMENT A00892:

Inserted new pages 21-26 (6 pages)

DOCUMENT B00420:

Revised pages 6, 8, 11, 12, 13 through 33

PLAN SET:

Revised sheets 19, 20, 97, 98, 100, 101, 103,
105 through 109, 147, 155, 159, 191,
201, 205, 206, and 212 of 331.

Take note of the above, substitute revised pages and plans for the originals, insert new pages in proper order, and acknowledge Addendum No. 5 in your Expedite Proposal file before submitting your bid.

Sincerely,

Eric M. Cardone, P.E.
Construction Contracts Engineer

Cc: Lawrence Cash, Project Manager
EMC/jmr

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RESPONSES TO CONTRACTORS' QUESTIONS

ADDENDUM NO. 5, AUGUST 27, 2020

J.H. Lynch & Sons, Inc., email dated August 4, 2020 (from Addendum No. 3):

Question #19: Regarding traffic management plans the note on plan sheet 155 states it is recommended that the wall is to be constructed prior to any utility pole relocation. Please provide a temporary traffic control plan for the construction of the Eliot St. wall.

Response #19: The Phase 1 traffic management plan at Eliot Street/Pond Street intersection is intended to cover the temporary traffic control setup needed for the construction of the retaining wall, no additional site-specific temporary traffic control plans are needed. See revised sheets 155 and 159 of 331.

Question #20: The Parking lot behind the retaining wall at Sta. 32+15 – 34+90 Left will likely need to be patched/paved as a result of excavation impacts with the wall, under what item will this HMA be paid for? Confirm it will be constructed as an HMA driveway-2.5" SIC 19.0 & 1.75" of SSC-12.5 and paid under Item 702. Confirm fine grading of the area prior to driveway repair will be paid for under Item 170.

Response #20: The repairs to the noted parking lot will be paid under Items 415.3, 450.23 and 451. See revised sheets 19, 20, and 97 of 331.

Question #22: Can the parking lot behind the wall within the Temp. Easement shown on plan sheet 19 and 20 be closed during construction to not allow traffic on top of the support of excavation area?

Response #22: No, the entire parking cannot be closed off. Only the parking located within the temporary easement can be closed off. The temporary easement is to allow the Contractor to access and construct the wall and guardrail only. Any further closing of parking spaces beyond the temporary easement (for constructability, not convenience) would need to be discussed first with the Town, property owner, and MassDOT ROW during construction. The easement is not for storage of construction equipment, materials, or stockpiles not associated with the wall and guardrail.

Question #23: Please provide a traffic management plan for the Spyglass retaining wall.

Response #23: The typical temporary two-lane road shoulder and/or travel lane closure application on Sheet 147 can be used as a temporary traffic management setup for the construction of the Spyglass retaining wall. See revised Sheet 147 of 331 for additional notes.

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J.H. Lynch & Sons, Inc., email dated August 4, 2020 (from Addendum No. 3):

Question #28: At the start and end of Eliot St. retaining wall, the exposed heights are +/-7' +/-10' respectively. Can the wall ends be extended or grading plans be provided for the Eliot St. wall ends as this seems extremely high to have the retaining walls end at those heights.

Response #28: See revised Sheets 205 and 206 of 331.

Question #29: Would extending the wall be considered incidental to the lump sum wall item or will the contractor be paid if the walls need to be lengthened to adjust for field conditions.

Response #29: A wall extension/lengthening is not anticipated for this item.

Question #36: Item 997.2 Special Drainage Structure No. 2 states that it is for the work required to cast-in-place the culvert extension. It then states the "The manufacturer shall submit evidence at the request of the Engineer showing that he has successfully completed work of similar magnitude prior to being approved as the source of the material for this work. The manufacturing process shall be closely supervised by experienced plant personnel and records of plastic and concrete strength shall be kept and submitted to the Engineer for control." If this work is Cast-in-Place, what is this requirement referring to? The last 4 paragraphs on Page A00801-207 go on describing precast requirements. Is the culvert extension Cast-In-Place or Precast?

Response #36: See revised page A00801 – 207.

Question #37: Item 997.2 special provision also references that the work includes the Headwalls and rip rap. Confirm that rip rap shall be paid under Item 983.1 and not as part of the Lump Sum.

Response #37: The stones for Item 997.2 will be paid for under Item 258. See revised pages A00801-207 and A00801-208.

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J.H. Lynch & Sons, Inc., email dated August 4, 2020 (from Addendum No. 3):

Question #39: Regarding Item 945.011-30 Inch Utility Pole Caisson-please provide the loads and pole height that the special provisions state will be provided by Eversource so that contractors can design the caisson.

Response #39: See revised pages A00801-195 and A00801-196.

Question #41: The plans for the Eliot Street retaining wall include footing elevations that differ from the elevations shown in the cross section. At station 32+50, the cross section shows the bottom of the footing for the wall slightly below 232'. The Plans show the footing to be placed at 234'. Please clarify which drawing will govern.

Response #41: The plans for the Eliot Street retaining wall will govern the bottom of footing elevation. See revised Sheets 205 and 206 of 331.

McCourt Construction email dated August 6, 2020 (from Addendum No. 3):

Question #44: What are the work area restrictions and allowable work hours for the full depth pavement construction work?

Response #44: See page A00801-25.

Question #45: Will existing traffic be allowed to travel on unpaved sections of the roadway?

Response #45: Yes, existing traffic will be allowed to travel on unpaved sections of the roadway.

Question #46: What is the length of the work zone that existing traffic can travel on unpaved sections of the roadway?

Response #46: The portions of unpaved roadway open to vehicular traffic shall be at the discretion of the Engineer. The Contractor shall be required to provide dust control and maintain the unpaved road to allow for the safe and efficient passage of traffic or as directed by the Engineer.

Question #48: Per the COVID 19 Guidelines and Procedures included within Article A00801, please provide the number of field stall that MassDOT will assign to the project so that the PPE that the Contractor supplies to department field personnel can be determined.

Response #48: There will be no more than three MassDOT field staff.

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ADDENDUM NO. 5, AUGUST 27, 2020

McCourt Construction email dated August 6, 2020 (from Addendum No. 3):

Question #50: Typical Sections shown on Sheet 13 show either 8" of existing subbase meeting Specification M1.03.0 or 8" of gravel borrow below the sidewalks, multi-use path/sidewalk, ect. Will payment of the use of the existing subbase material be paid under Item 151.2, Gravel Borrow, once it meets Specification M1.03.0?

Response #50: The Contractor will be paid under Item 151.2 if existing material meeting M1.03.0 is excavated and installed at the noted locations.

Question #51: Under what bid item shall the Proposed Cement Concrete Bike Ramps be paid under?

Response #51: The proposed cement concrete bike ramps are paid under Item 701.2. See revised Sheet 201 of 331.

Question #52: On Sheet No. 19, Construction Plans (4 of 17), proposed cement concrete curb is shown. Please add pay item for this work.

Response #52: See revised Sheet No. 19 of 331.

E.T.& L. Corp. email dated August 6, 2020 (from Addendum No. 3):

Question #53: 6"x6" tapping sleeves are proposed at relocate hydrant locations on Rte. 126, Sta.'s 78+68 & 96+58. There is no bid item for 6"x6" tapping sleeves.

Response #53: See revised Sheets 98, 100, 101, 103, 105, 106, 107, 108, and 109 of 331 and revised page B00420-12.

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P. Gioioso & Sons, Inc. email dated August 10, 2020 (from Addendum No. 3):

Question: #54: Regarding Item 120 Earth Excavation, would it be possible to add a Bid Item for excavation of existing HMA and Concrete Pavements ?

Response #54: Per MassDOT's Standard Specifications Subsection 120.21, the excavation of existing HMA and concrete pavement is included under Item 120.

J.H. Lynch & Sons, Inc., email dated August 12, 2020 (from Addendum No. 3):

Question #55: The Special Provisions for Item 755.35 state that monitoring wells shall include data loggers.

Please provide a detail of the monitoring well

Please provide information regarding the data loggers such as acceptable brands and model numbers.

Response #55: See revised Sheet 191 of 331. The Contractor shall submit data logger shop drawings to the Wetland Specialist for approval.

J.H. Lynch & Sons, Inc., email dated August 13, 2020 (from Addendum No. 3):

Question #56a: The Special Provisions state "All trees, stumps, or brush not specified to remain shall be removed and shall not be stockpiled in the wetland resource areas while awaiting disposal. Work shall be coordinated with the Clearing or Tree Removal item and compensated under that Item."

Please confirm that 'that Item' refers to the Clearing and/or Tree Removal items and not Item 755.35.

Question #56b: The Basis of Payment states "Excavation in excess of 12 inches needed for wetland soil will be paid under Item 120.1"

Should this read 'Excavation in excess of 12 inches needed for wetland soil will be paid under Item 120.1'?

Response #56a: The special provision is referring to the Item 101. Clearing and Grubbing, Item 103. Tree Removed – Diameter Under 24 Inches, and Item 104. Tree Removed – Diameter 24 Inches and Over.

Response #56b: See revised page A00801 - 128

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E.T.& L. Corp. email dated August 13, 2020:

Question #57: Will any clearing and grubbing that may be required at the Wetland Replication Area (70 Cedar Street) be compensated under Item # 101. – Clearing and Grubbing?

Response #57: Yes, any clearing and grubbing that is required at the wetland replication area will be compensated under Item 101.

Question #58: Please inform which service connections are to be included under Item # 813.81? Is this item only for the (3) each traffic signal locations? Or does this item include the service connections for the two lighting load centers and the AC powered rectangular rapid flashing beacon?

Response #58: Item 813.81 only includes the service connections for the lighting load centers. Per the specifications, the service connections for the traffic signals are included in Item 815.1, 815.2, and 815.3.

Question #59: Please confirm the bid quantity for Item # 220. – Drainage Structure Adjusted. For the 200+ new drainage structures installed within this project, under which item shall the adjustment of castings from HMA intermediate course grade to final surface course grade be paid?

Response #59: The adjustment will be paid for under Item 220. See revised page B00420 – 8,

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J.H. Lynch & Sons, Inc., email dated August 17, 2020:

Question #60: In regards to the response to Question #38

*The Pavement Core reports to do not indicate the thickness of HMA pavement.

Was this information recorded?

*Please provide the data for the 48 Test Pits.

*If no information regarding the thickness of the existing roadway pavement is available, please consider adding an item for pavement excavation by the cubic yard.

Response #60: See new pages A00892-21 through A00892-26. Per MassDOT's Standard Specifications, excavation of existing HMA will be paid for as identified in Subsection 120.21.

Dagle Electrical Construction email dated August 18, 2020:

Question #61: The specifications for the project call for the mast arms to follow MassDOT's December 2015 Overhead Signal Structure & Foundation Standard Drawings. The project specifications go on to state that longhand design calculations shall be submitted by the Contractor with the shop drawings for all Type 2 mast arm poles. The Contractor shall provide a set of calculations, stamped by a Structural Engineer registered in the Commonwealth of Massachusetts, along with plans and specifications for the poles for review by the Project Engineer. These two statements contradict in the MassDOT 2015 Overhead Signal Structure & Foundation Standard Drawings. The Engineering Directive E-16-001 state that the contractor is not required to submit load calculations for mast arm designs that conform to the standard drawings. Shop drawings are to be limited to identifying the dimensions of the mast arm and foundation. Furthermore, note 3 on the standard drawings states that for non-standard mast arms, including but not limited to specialty mast arms or mast arms that have loading conditions that exceed what is depicted on Sheets 2 and 3 of this set, it shall be the responsibility of the Design Engineer to submit a design for the structure and foundation that conforms to the latest edition of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals. Please clarify if the mast arm submission for this project should follow the MassDOT standard guidelines.

Response #61: Per Special Provisions for Items 815.1 through 816.801, the Contractor is responsible for providing designs and calculations for the pole and arm for non-standard loading only.

The Contractor is not responsible for providing designs or calculations for the mast arms that conform to the standard loading conditions.

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P. Gioioso & Sons, Inc. email dated August 19, 2020:

Question #62: Would it be possible to add a Bid Item 703 for the HMA Driveways? The cost of the driveways is substantially different from the other HMA mixes provided in the bid.

Response #62: The cost of the driveways will be paid for under Item 702.

Question #63: Please confirm that Item 702 includes the paving for the HMA Multi-Use Path.

Response #63: Confirmed. The HMA Multi-Use Paths will be paid for under Item 702.

P. Gioioso & Sons, Inc. email dated August 20, 2020:

Question #64: Items 815.1 to 815.3 (Traffic Signals, page 172) indicate that 6 of the 11 mast arm foundations are paid under Items 945.102-202-502. The remaining 5 mast arms are similar in soil conditions, excavation and construction. Would the Department consider payment of all 11 foundations under Items 945.102 to 502.

Response #64: All 11 foundations will not be paid for under Items 945.102 through 945.502.

The 6 mast arm foundations to be paid for under Items 945.102, 945.202, and 945.502 (Mast Arm Nos. MA-1 to MA-6) are to be Drilled Shaft foundations. These foundations are used at these locations because the soil conditions or ledge prevent the use of MassDOT standard foundation type.

See Items 815.1 through 816.801 for information on soil conditions, excavation, and construction. The remaining 5 mast arms are Pier foundations and are to be constructed in accordance with MassDOT's "Overhead Signal Structure & Foundation Standard Drawings" dated December 2015.

The costs of the 5 Pier foundations are to be included in the respective lump sum prices bid for Items 815.1 through 815.3

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ADDENDUM NO. 5, AUGUST 27, 2020

P. Gioioso & Sons, Inc. email dated August 20, 2020 (Continued):

Question #65: Regarding Item 813.81 Service Connection (underground), does this Lump Sum include the connections for all of the 3 new Traffic Signals and 2 new Lighting Load Centers ? Are conduits and wires paid under the separate bid items, or included in this Lump Sum ? Also is the contractor responsible for the connection fees to the electrical utility, or will the utility connect as part of their force account with the Department ?

Response #65: Item 813.81 only includes the service connections for the lighting load centers. Per the specifications, the service connections for the traffic signals are included in Item 815.1, 815.2 and 815.3. In addition, the conduits and wires required for the service connections are included and paid for under the lump sum for Items 813.81, 815.1, 815.2 and 815. Lastly, the Contractor is responsible for the connection fees.

Dagle Electrical Construction email dated August 24, 2020:

Question #66: Please look at the attached page from specification 812.50 through 821.53 there is a reference to REMOVE the GFCI outlets and the Town of Ashland Seal from the Base Casing
Please confirm that this is incorrect and that the requirement for the outlet and seal are required for this project

Response #66: GFCI outlets will be included. The Town seal will not be included. See revised pages A00801-173, A00801-177, and A00801-178.

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

③ ADDENDUM NO. 3, AUGUST 13, 2020

③	DOCUMENT A00891	
	MAST ARM FOUNDATION DESIGN	A00891-1 through 72
⑤ ③	DOCUMENT A00892	
	PAVEMENT CORES	A00892-1 through 26
	DOCUMENT B00420	
	PROPOSAL	B00420-1 through 34
	DOCUMENT B00853	
	SCHEDULE OF PARTICIPATION BY DISADVANTAGED	
	BUSINESS ENTERPRISES (DBEs)	B00853-1 through 2
	DOCUMENT B00854	
	DISADVANTAGED BUSINESS ENTERPRISES (DBE) PARTICIPATION	
	LETTER OF INTENT	B00854-1 through 2
	DOCUMENT B00855	
	DBE JOINT CHECK ARRANGEMENT APPROVAL FORM	B00855-1 through 2
	DOCUMENT B00856	
	JOINT VENTURE AFFIDAVIT	B00856-1 through 4

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5 ADDENDUM NO. 5, AUGUST 27, 2020**5**

<u>ITEM 371.06</u>	<u>6 INCH COUPLING</u>	<u>EACH</u>
<u>ITEM 371.08</u>	<u>8 INCH COUPLING</u>	<u>EACH</u>
<u>ITEM 371.12</u>	<u>12 INCH COUPLING</u>	<u>EACH</u>

The work under these items shall conform to the relevant provisions of Subsection 300 of the Standard Specifications and the following:

The Contractor shall furnish and install couplings.

All couplings connected to existing pipes shall be restrained insulating mechanical transition couplings.

Couplings shall be of a type equal to Smith Blair, Style 441; Dresser, Style 153; Romac Style 501, or an equal approved by the Municipality's Water Superintendent.

Couplings shall be provided with plain, Grade 27, rubber gaskets and with black, steel, track-head bolts with nuts.

ITEM 371.06 through ITEM 371.12 (Continued)**Construction Methods**

Test pits shall be performed to specify material of existing water prior to ordering products.

Shut down of water mains shall be coordinated with the Town of Ashland.

There shall be zero gaps between proposed water mains and existing water mains within proposed couplings.

Method of Measurement

Items 371.06, 371.08, and 371.12 will be measured per Each coupling furnished and installed, complete in place.

Basis of Payment

Items 371.06, 371.08, and 371.12 will be paid for at the respective contract unit price per Each, which price shall include all labor, materials, equipment, and incidentals necessary to complete the work.

ITEM 373.**WATER PIPE INSULATION BOARD****FOOT**

The work under this item shall conform to the relevant provisions of Subsection 301.60 of the Standard Specifications and the following:

The work under this item includes all work required to furnish and install insulation for sections of the existing water main in areas identified on the plans or as required by the Engineer.

The Contractor shall dig test pits to determine the depth of the existing pipe prior to adding insulation. The test pits shall be performed at the end of each run of insulation and as directed by the Engineer. The Contractor shall request the Town mark out or trace the waterline prior to performing the test pit. Test pits shall be paid under Item 141.1.

Pipe Insulation shall be cellular glass conforming to ASTM C-552 or conforming to ASTM C-578. Buried pipe insulation shall be high-density, moisture resistant, and suitable for underground insulation.

Insulation shall be installed where required, in accordance with Sections 300 and M9.11 of the Standard Specifications, as directed by the Engineer, and the manufacturer's instructions.

Method of Measurement

Item 373. will be measured per Foot for the length of pipe insulation board actually installed in accordance with the plans and/or as required by the Engineer.

Basis of Payment

Item 373. will be paid for at the contract unit price bid per Foot which shall include all labor, materials, excavation, placement of insulation board, backfill, equipment and incidentals necessary to finish the work.

5 ADDENDUM NO. 5, AUGUST 27, 2020

5	<u>ITEM 375.06</u>	<u>6 INCH INSERTION VALVE AND BOX</u>	<u>EACH</u>
	<u>ITEM 375.08</u>	<u>8 INCH INSERTION VALVE AND BOX</u>	<u>EACH</u>
	<u>ITEM 375.12</u>	<u>12 INCH INSERTION VALVE AND BOX</u>	<u>EACH</u>

The work under these items shall conform to the relevant provisions of Subsection 300 of the Standard Specifications and the following:

Under this Item, the Contractor shall furnish and install insertion valves and boxes as indicated on the Contract Drawings.

Valves shall be constructed of a two (2) piece ductile iron casting, pieces to be bolted together using ductile iron bolts with zinc alloy anodes manufactured to comply with ASTM A536 65-45-12.

Ductile Iron Gate shall have a resilient rubber seal 360 degrees around the gate which is expandable to the inside diameter of the pipe.

Test pits shall be performed to specify material of existing water pipe prior to ordering products.

The valve assembly shall be designed to enable the valve assembly to be rotated 120 degrees, perpendicular across the top of the pipe, while riding on two styrene butadiene rubber (SBR) rubber gaskets construed of SBR, by using a perpendicular rotary feed mechanism, driven by a chain.

5 **Method of Measurement**

Items 375.06, 375.08, and 375.12 will be measured per Each valve and box unit furnished and installed.

Valves will be measured per each, complete in place.

5 **Basis of Payment**

Items 375.06, 375.08, and 375.12 will be paid for at the respective contract unit price per Each, which price shall include all labor, materials, equipment, and incidentals necessary to complete the work.

ITEM 376.5**HYDRANT - ADJUSTED****EACH**

The work under this item shall conform to the relevant provisions of Subsection 300 of the Standard Specifications, the Town of Ashland requirements, and the following:

The Contractor will be held responsible for retaining and protecting the existing hydrants. Any materials damaged during construction shall be replaced with materials in conformance with Subsection 300 of the Standard Specifications and the Municipality's requirements.

When the proposed surface varies from the existing surface at an existing hydrant, the existing hydrant shall be adjusted so the safety flange is at the height recommended by the manufacturer at the final grade.

Method of Measurement

Item 376.5 will be measured per Each hydrant, adjustment complete.

Basis of Payment

Item 376.5 will be paid for at the Contract unit price per Each, which price shall include all labor, materials, equipment, and incidentals necessary to complete the work.

ITEM 506.**GRANITE CURB TYPE VB - STRAIGHT****FOOT****ITEM 506.1****GRANITE CURB TYPE VB - CURVED****FOOT**

The work under items shall conform to the relevant provisions of Subsection 501 of the Standard Provisions and the following:

The work includes furnishing and installing granite curb type VB as shown on the Contract Drawings.

Materials shall be in accordance with sections M9.04.0 and M9.04.01 of the Standard Specifications. Curb shall be as shown on the Plans and cut to the radius specified.

Granite curb type VB shall be installed at the radius and final grades as shown on the Plans and as required by the Engineer.

Method of Measurement

Item 506. and 506.1 will be measured by the Foot along the front face of curb, installed complete in place.

Basis of Payment

Item 506. and 506.1 will be paid for at the respective contract unit price per Foot, which price shall include all labor, materials, furnishing and installing the concrete placed behind the granite curb as shown in the Tree Planting Trench detail, equipment, and incidentals required to install the curb.

ITEM 755.35 (Continued)

The following conditions shall be inspected and approved for acceptance and payment.

- Hydrology is functioning as intended.
- Seeded species are establishing well and cover 95 percent of the area, excluding areas of open water areas or planned bare soil.
- No sediments have entered wetland.
- Adjacent slopes are stabilized with desirable vegetation.
- All planted species (if included) are living and establishing well.
- There are no visible invasive plants.
- Silt fence and non-biodegradable sediment barrier materials have been removed.

If the mitigation work does not meet the above condition and is not approved, MassDOT will issue a rejection letter requiring corrective action. The Wetland Specialist shall recommend corrective actions. Work not approved will be addressed by the Contractor at no extra cost.

Wetland Specialist shall be compensated under Item 755.75.

Monitoring Reports for Regulatory Compliance

Post wetland construction Monitoring Reports shall be completed and submitted by the Wetland Specialist as specified and compensated under Item 755.76 Wetland Monitoring Reports.

Generally, the following conditions shall be met upon each inspection:

- Hydrology is functioning as intended.
- Seeded species are establishing well and cover 100 percent of the area, excluding areas of open water areas or planned bare soil.
- No sediments have entered into wetland.
- Adjacent slopes are stabilized with desirable vegetation.
- All planted species (if included) are living and establishing well.
- There are no visible invasive plants.

If, at the end of the required monitoring period, the requirements have not been met and success of the wetland replication area has not been achieved as determined by the Monitoring Reports, the Contractor shall provide corrective measures. All costs associated with corrective measures and plant replacement shall be incidental to this item with no additional compensation.

5 ADDENDUM NO. 5, AUGUST 27, 2020**ITEM 755.35** (Continued)**Basis of Payment**

Item 755.35 will be paid for at the Contract unit price, Lump Sum, which price shall include all labor, materials, equipment, submittals, maintenance, all required hydric soil, site preparation, grading, wetland seeding, mulching, watering, monitoring wells, as-built plans, request for Certificate of Compliance, and all incidental costs necessary to complete the work as required.

Payment shall be as follows:

- 60% upon Conditional Acceptance.
- 20% after receipt and acceptance of Certificate of Compliance by the Engineer and once all permit construction requirements have been met and approved.
- 20% upon Final Acceptance.

- 5** Excavation in excess of 12 inches needed for wetland soil will be paid under Item 120.1
Compost Topdressing will be paid under Item 751.72 unless used in conjunction with seeding.
Wetland Specialist will be paid under Item 755.75
Wetland Monitoring Reports for follow-up monitoring will be paid under Item 755.76

ITEM 755.75**WETLAND SPECIALIST****HOUR**

This special provision is specific to Project #604123.

Work under this Item shall be for services of a Wetland Scientist, Wetland Ecologist, Restoration Ecologist, or other professional with similar qualifications hereafter referred to as the Wetland Specialist. Wetland Specialist shall demonstrate knowledge and expertise to coordinate and oversee all work associated with all wetland mitigation, as defined herein, as shown on the Plans, as required by permits, and as specified under Item 755.35 Inland Wetland Replication Area (hereafter referred to as 755.35) .

“Wetland Mitigation” shall be used herein for applicable wetland work, whether Wetland Replication (creation of a new wetland) or Wetland Restoration (restoration after temporary impacts).

Regulatory monitoring reports following Final Acceptance of the Wetland Mitigation shall be per Item 755.76, Wetland Monitoring Reports.

For all onsite work, the Wetland Specialist shall sign in and sign out with the Engineer.

The Wetland Specialist shall not be from the same company as the company responsible for planting, seeding, and/or maintaining the wetland.

5 ADDENDUM NO. 5, AUGUST 27, 2020

ITEM 821.50 through ITEM 821.53 (Continued)

9. Wall Thickness: .109
10. Hand Hole: 3" x 5" opening, with reinforced flush doorway and grounding lug, opposite opening inside pole.
11. Access Door: Flush with pole and inline with base cover access.
12. Ground Provision: 5/16" – 16 ground lug welded to inside wall of pole shaft, opposite hand hole opening, to accommodate ground stud (ground stud by others).
13. Material:
 - a. Pole shaft: ASTM A240 201L Stainless Steel
 - b. Anchor bolts: ASTM F1554 grade 55 steel w/ 12" min. galvanized threads.
 - c. Base Plate: ASTM A240 stainless steel with circumferential welding top and bottom, to pole.
14. Finish:
 - a. Prime Coat: One component moisture cure etching primer, two component high solids aliphatic.
 - b. Shaft, Base and Cross Arm finish coat: Polyurea coat system - Gloss Black
 - c. Testing: In accordance with ASTM
 - d. Salt Spray: ASTM B117 Salt Spray exposure: 5,000 hr min.
15. Anchor Bolt: (4) 1" x 36" +4" Leg (fully galvanized with (2) hexagonal nuts and (2) flat washers per bolt).
16. Bolt Projection: 5"
17. GFCI Outlet: See basis of design.

B. Base Cover:

1. Qty: 1 (Item 821.50, 821.51, 821.52), 2 (Item 821.53)
2. 2'-9" Overall height.
3. Diameter: 1'-5"
4. Material: Cast Aluminum
5. Finish
 - a. Prime Coat: One component moisture cure etching primer, two component high solids aliphatic.
 - b. Shaft, Base and Cross Arm finish coat: Polyurea coat system - Gloss Black
 - c. Testing: In accordance with ASTM
 - d. Salt Spray: ASTM B117 Salt Spray exposure: 5,000 hr min.
6. Ashland Town Seal Casting: REMOVED

C. Banner Arm:

1. Qty: 1 (Item 821.50, 821.51, 821.52), 2 (Item 821.53)
2. Overall Height: 5'-0"
3. Location: 15'-0" AFF for bottom arm, 20'-0" AFF to top arm.
4. Material: Spring loaded cast aluminum with fiberglass
5. Location: Located on sidewalk side of pole, 180 degrees offset from cross arm.
6. Finish: Gloss Black.

ITEM 821.50 through ITEM 821.53 (Continued)**D. Cross Arm:**

1. Qty: 1 (Item 821.50, 821.51, 821.52), 2 (Item 821.53)
2. Arm Rise: 2'-10 1/2"
3. Arm Span: 4'-0" (Item 821.52), 8'-0" (Item 821.50, 821.53), 12'-0" (Item 821.51)
4. Material: 2" (2.38 O.D.) Sch. 40 pipe
5. Attachment to Pole: Steel Outer Slipfitter, 4" ID.
6. Securement: 3 Stainless steel screws.
7. Finish:
 - a. Prime Coat: One component moisture cure etching primer, two component high solids aliphatic.
 - b. Shaft, Base and Cross Arm finish coat: Polyurea coat system - Gloss Black
 - c. Testing: In accordance with ASTM
 - d. Salt Spray: ASTM B117 Salt Spray exposure: 5,000 hr min.

E. Luminaire:

1. Qty: 1 (Item 821.50, 821.51, 821.52), 2 (Item 821.53)
2. Height: 2'-1 1/8"
3. Width: 1'10"
4. Material:
 - a. Heavy grade A319 cast aluminum housing, with attached decorative one-piece spun aluminum alloy bottom shroud. Minimum thickness of 0.09".
 - b. Lens: #9000 clear borosilicate glass (fully annealed), with minimum thickness of 0.3".
5. Lens: Sag glass lens, secured by means of a cast A319 aluminum holding ring. Sealed to provide IP66 ingress rating. Continuous circular gasket rated for 270°F holds the lens in place with the cast ring assembly.
6. Fixture Connection: Stainless steel alloy hardware.
7. Finish:
 - a. Housing finished with 13 step KingCoat Super Durable polyester TGCI Glass Black powder coat.
 - b. Testing: In accordance with ASTM
8. Lamping: 120 watt LED
9. Lumens: 14,470 lm
10. Voltage: Universal Electronic, wired at 120v to 277v
11. CCT: 4000K
12. CRI: Minimum of 70
13. Distribution: Type III, achieved through an integral refractive lens.
14. Driver: Class 2 dimmable driver w/ IP66 minimum rating.
 - a. Power Factor: 0.9 or greater
 - b. Harmonic Distortion: 20% or less
 - c. Temp Range: -35deg Celsius to 65deg Celsius
 - d. Surge Protection: ANSI C136.2 and designed to withstand surges of up to 20kA and 10kV of transient line surge as per IEEE C62.41.2 C
 - e. EFT Protection: In-line ferrite choke
15. Driver Location: Integral to fixture, mounted to heavy duty fabricated galvanized steel bracket to allow for tool-less maintenance.

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

ITEM 821.50 through ITEM 821.53 (Continued)**Basis of Design****Pole:**

- Millerbernd MFG # DTA-F-073-250-PT6-R-FP-BSP
- Spring City Electrical MFG# SSSHSM-G11-0700-25- TN2.875/6.00-CW (GLOSS BLACK)
- King Luminaire # KMRF-700A253-P9=GF-HH-AB-BK (GLOSS BLACK)
- An Approved Equal

Luminaire:

- King Luminaire # K820-P4FL-III-120(SSL)8060-120V-KPL21-4K-BK-PR-HSS
- Ghisamestieri # GAM F_GF09-1000-GLOSS BLACK
- Spring City Electrical MFG # ALMIVY-FG-LE120-120-40-CR3-CU (GLOSS BLACK)
- An Approved Equal

Cross Arm:

- Millerbernd MFG # BA4 (Item 821.52), BA8 (Item 821.50, 821.53), BA12 (Item 821.51)
- King Luminaire # KA30-T-1-96-BK(GLOSS BLACK)
- Spring City Electrical MFG # AARCL-1S-96-CU (GLOSS BLACK)
- An Approved Equal

Base:

- Millerbernd MFG # BCJEF1733
- Spring City Electrical MFG # WBCMB-17-CU (GLOSS BLACK)
- King Luminaire: KSB85-BK (GLOSS BLACK)
- An Approved Equal

Banner Arm:

- Britten # PRO2000-SMALL
- Kalamazoo Banner Works # D3 AIROW Series
- Sign Bracket # 300-BB-BSLG
- An Approved Equal

Photocell:

- EYE Lighting # EYE-124-DSS-BK
- Gateway International 360 # GW-124
- Intermatic # LED4536SC
- An Approved Equal

House Shield:

- King Luminaire # 50-01272
- Ghisamestieri # GAM - F-BACK SHIELD
- Spring City Electrical MFG # IVY-HSS
- An Approved Equal

⑤

GFCI Receptacle:

- Hubbell #GF20BKLA
- Eaton #SGF15BK
- Leviton #R95-GFTR2-0KE
- An Approved Equal

5 ADDENDUM NO. 5, AUGUST 27, 2020**ITEM 821.50 through ITEM 821.53** (Continued)**5** Receptable Cover:

- Taymac #MX4280S
- Red Dot #CKSUV
- Raco #MX4280S
- An Approved Equal

Method of Measurement

Item 821.50 through Item 821.53 will be measured per Each unit, complete, in place, and approved.

Basis of Payment

Item 821.50 through Item 821.53 will be will be paid for at the respective contract unit price, per Each, which price shall include all labor, materials, equipment, and incidentals required to complete the work.

ITEM 823.61
ITEM 823.62**HIGHWAY LIGHTING LOAD CENTER NO.1**
HIGHWAY LIGHTING LOAD CENTER NO.2**LUMP SUM**
LUMP SUM

The work under these items shall conform to the relevant provisions of Subsection 820 of the Standard Specifications and the following:

The work shall include furnishing and installing the highway lighting load centers at the locations shown on the plans.

Materials

The highway lighting load center shall be as follows:

A. Enclosure

The enclosure shall be a NEMA 3R rated UL: listed convection ventilated and consist of a cabinet and a gasketed door assembly, constructed from 5052-h32 sheet aluminum alloy (less than 0.02% copper) of at least 3,175mm thickness. The enclosure shall be free of dents, cracks and other imperfections.

The enclosure base shall be reinforced for pedestal mounting on a concrete base. Refer to plans and specifications for anchor bolt and mounting details to withstand dead loads and predicted dynamic loads developed by a minimum wind velocity of 90 MILES per hour with an additional 30% gust factor. The enclosure manufacturer shall review modifications or comments shall be so noted in the submittals.

The enclosure shall be provided with (2) two adjustable "c" mounting channels on both side walls and back wall of the enclosure and an aluminum back panel. The construction features and details shall comply with the specified product.

5 ADDENDUM NO. 5, AUGUST 27, 2020**ITEM 874.41** **TRAFFIC SIGN REMOVED AND DISCARDED** **EACH**

The work to be done under this item consists of dismantling, removing, and discarding existing warning and regulatory sign panels and guide signs, including their supports and all mounting hardware, designated to be removed and discarded on the plans or as required by the Engineer.

All signs and supports to be removed and discarded shall become the property of the Contractor, and the Contractor shall legally dispose of them away from the site.

The Contractor shall backfill all holes resulting from removal of existing signs and their foundations with compacted gravel and restore the area to match the existing conditions of adjacent areas.

The existing signs shall not be removed without the prior approval of the Engineer.

Method of Measurement

Item 874.41 will be measured as one unit, Each. One unit shall include the sign panel, signpost(s), appurtenances, and foundation(s).

Basis of Payment

Item 874.41 be paid for at the Contract unit price per Each, which price shall include all labor, materials, equipment, gravel borrow, site restoration, and incidental costs required to complete the work.

ITEM 945.011 **30 INCH UTILITY POLE CAISSON** **EACH**

The work under this item shall conform to the relevant provisions of Subsections 940 and 150 of the Standard Specifications and the following:

The caisson design is to be based on loads provided by Eversource Electric, based on soil type at the locations indicated on the drawings. Contractor is responsible for soil type determination. The design shall be performed by a Professional Engineer licensed in the Commonwealth of Massachusetts.

Utility pole caissons will be protected until the utility poles are installed. Location of each caisson shall not obstruct the use of the existing roadway or sidewalks and shall be installed in a manner to minimize impact and not impair the construction or long term maintenance of retaining wall.

- 5** The Contractor is responsible for coordinating with Eversource Electric to determine the loads and the pole height.

5 ADDENDUM NO. 5, AUGUST 27, 2020**ITEM 945.011** (Continued)**Submittals**

Forty-five (45) days prior to installing the caissons the Contractor shall submit for review and approval by the Engineer the shop drawings and installation plan which shall include but not be limited to the following:

1. A description of the equipment to be used including pile-driving equipment and cranes, as required.
2. A description of the overall pile installation operation and sequence.
3. Details of concrete formwork attachment to piles.
4. Splice details and approved welding procedure as required.

The Contractor shall not begin pile-driving operations until written approval of the above submittals have been received from the Engineer, including a schedule of their proposed methods and equipment for all related installation procedures.

Method of Measurement

Item 945.011 will be measured per Each caisson installed, complete in place.

5 Basis of Payment

Item 945.011 will be paid for at the contract unit price per Each, which price shall include all labor, materials, pre-drilling for caisson, drill through and/or remove obstruction(s), provide specified clearance necessary for driving the caisson within the specified tolerance and without damage, test borings, submission, shop drawings, utility coordination, concrete to secure pole in place, equipment, and incidentals necessary to complete the work.

<u>ITEM 953.31</u>	<u>EXCAVATION SUPPORT SYSTEM SPECIAL</u>	<u>LUMP SUM</u>
	<u>DRAINAGE STRUCTURE NO. 1</u>	
<u>ITEM 953.32</u>	<u>EXCAVATION SUPPORT SYSTEM SPECIAL</u>	<u>LUMP SUM</u>
	<u>DRAINAGE STRUCTURE NO. 2</u>	
<u>ITEM 953.33</u>	<u>EXCAVATION SUPPORT SYSTEM SPECIAL</u>	<u>LUMP SUM</u>
	<u>DRAINAGE STRUCTURE NO. 3</u>	
<u>ITEM 953.34</u>	<u>EXCAVATION SUPPORT SYSTEM SPECIAL</u>	<u>LUMP SUM</u>
	<u>DRAINAGE STRUCTURE NO. 4</u>	

The work under these items shall conform to the relevant provisions of Subsection 950 of the Standard Specifications and the following:

The Contractor shall furnish, install, maintain, and remove the excavation support system as required based upon the actual site conditions, for the protection of adjacent utilities, the proposed demolition of the existing culvert, wingwall and headwall and the construction of the proposed box culvert, headwalls and wingwalls. This excavation support system shall be designed by the Contractor and shall be configured to serve the intended purpose during all stages of construction without the need for reinstallation or major modifications. The maximum depth of excavation below existing ground is approximately 15 feet at the proposed wingwalls.

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

① ADDENDUM NO. 1, JULY 31, 2020

ITEM 996.01 and ITEM 996.02 (Continued)**SCHEDULE OF BASIS FOR PARTIAL PAYMENTS**

Within ten days after the Notice to Proceed, the Contractor shall submit a schedule of unit prices for the major component Sub-Items that make up Item 996.01 and 996.02 as well as their total wall structure Lump Sum cost for the Wall No. 1 and Wall No. 2. The wall structure Lump Sum breakdown quantities provided in the proposal form are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the Lump Sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual wall components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 996.01 and 996.02 and no further compensation will be allowed.

The schedule on the proposal form applies on to Wall No. 1 and Wall No. 2. Payment for similar materials and construction at locations other than at this wall structure shall not be included under this item. Sub-item numbering is presented for information only in coordination with MassDOT Standard Nomenclature.

Item 996.01 Wall Structure, Wall No. 1 (Spyglass Wall)

Sub-Item	Description	Quantity	Unit	Unit Price	Amount
904.	4000 PSI, 3/4 IN., 610 Cement Concrete	235	CY		
910.1	Steel Reinforcement for Structures – Epoxy Coated	25,700	LB		
970.	Damp-proofing	1,350	SF		

Total Cost of Item 996.01 = _____

Item 996.02 Wall Structure, Wall No. 2 (Eliot Street Wall)

Sub-Item	Description	Quantity	Unit	Unit Price	Amount
638.1	Protective Screen (Chain Link)	240	FT		
904.	4000 PSI, 3/4 IN., 610 Cement Concrete	845	CY		
910.1	Steel Reinforcement for Structures – Epoxy Coated	82,200	LB		
970.	Damp-proofing	3,690	SF		

Total Cost of Item 996.02 = _____

ITEM 997.1**SPECIAL DRAINAGE STRUCTURE NO.1****LUMP SUM**

The work under this Item shall conform to the relevant provisions of Subsections 901, 904, 910, 967, 970, and 983 of the Standard Specifications, and the following:

The work under this Item shall consist of furnishing all labor, materials, tools and equipment and the performance of all work required to furnish and install the 2'Wx2'H precast concrete box culvert at Sta. 37+48.51, the cast-in-place headwalls, and stones as shown on the plans. Stone baffles of 6" max thickness, placed every 7' including at the inlet and outlet, shall be provided along the bottom to retain the natural streambed material, as shown in the plans and details.

The Manufacturer shall submit evidence at the request of the Engineer showing that he has successfully completed work of similar magnitude prior to being approved as the source of the material for this work. The manufacturing process shall be closely supervised by experienced plant personnel and records of plastic and concrete strength shall be kept and submitted to the Engineer for control.

Materials

Materials shall meet the requirements specified in the following subsections of Division III, Materials Specifications of the Standard Specifications:

Cement Concrete	M4.02
Epoxy Coated Reinforcing Bars	M8.01.7
Stone for Pipe Ends	M2.02.3
Crushed Stone	M2.01.3
Geotextile Fabric	M9.50.0

The payment for Stone for Pipe Ends, Crushed Stone and Geotextile Fabric shall be paid under their respective items.

The precast box culvert (2'Wx2'H) shall be reinforced concrete and shall be manufactured in accordance with ASTM C76 standard specifications for reinforced concrete culvert. The culvert shall be designed to support an HS-20 (32,000 lbs.) truck axle load and dead load from earth cover over the top of the culvert as shown on the plans, and shall conform to all applicable 2017 AASHTO LRFD Bridge Design Specifications with current interim Specifications.

The Contractor shall submit shop drawings and structural calculations stamped by a Structural Engineer registered in the Commonwealth of Massachusetts for approval as specified in Section 5.02 of the Standard Specifications. The shop drawings shall show the size and location of all inserts and openings as shown on the Plans.

Existing utility locations shall be verified in the field prior to starting this work. The Contractor shall provide the Engineer with a plan showing existing utility locations and elevations prior to undertaking this work.

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

ITEM 997.2**SPECIAL DRAINAGE STRUCTURE NO.2****LUMP SUM**

The work under this Item shall conform to the relevant provisions of Subsections 901, 904, 910, 967, 970 and 983 of the Standard Specifications, and the following:

- ⑤ The work under this Item shall consist of furnishing all labor, materials, tools and equipment and the performance of all work required to furnish and install the 5'Wx3'H cast-in-place concrete box culvert extension at Sta. 41+98.85, the cast-in-place Headwalls as shown on the plans.

⑤

Materials

Materials shall meet the requirements specified in the following subsections of Division III, Materials Specifications of the Standard Specifications:

Cement Concrete	M4.02
Epoxy Coated Reinforcing Bars	M8.01.7
Stone for Pipe Ends	M2.02.3
Crushed Stone	M2.01.3
Geotextile Fabric	M9.50.0

The payment for Stone for Pipe Ends, Crushed Stone and Geotextile Fabric shall be paid under their respective items.

- ⑤ The box culvert (5'x3') shall be reinforced concrete and shall be manufactured in accordance with ASTM C76 standard specifications for reinforced concrete culvert. The culvert shall be designed to support an HS-20 (32,000 lbs.) truck axle load and dead load from earth cover over the top of the culvert as shown on the plans, and shall conform to all applicable 2017 AASHTO LRFD Bridge Design Specifications with current interim Specifications .

The Contractor shall submit shop drawings and structural calculations stamped by an Engineer registered in the Commonwealth of Massachusetts for approval as specified in Section 5.02 of the Standard Specifications. The shop drawings shall show the size and location of all inserts and openings as shown on the Plans.

Existing utility locations shall be verified in the field prior to starting this work. The Contractor shall provide the Engineer with a plan showing existing utility locations and elevations prior to undertaking this work.

The Contractor shall dig test pits to verify the dimensions of the existing culvert prior to ordering the material. All costs shall be incidental and be paid for under the lump sum price.

5 ADDENDUM NO. 5, AUGUST 27, 2020**ITEM 997.2** (Continued)**Construction of Special Drainage Structure**

Work shall include removal and disposal of existing headwalls and installing new culvert connecting to existing culvert and installation of new cast-in-place headwalls.

The cast-in-place concrete box culvert shall be constructed as shown on the Plans.

Repair of Existing Culvert

The work to be performed shall include the repair of the existing Culvert. The culvert has a clear opening of approximately 5' wide x 3' high. The repairs shall be done within the limits of the culvert in accordance with these specifications and as shown on the plans and all the repair areas of the culvert shall be identified and located by the Engineer in the field. Below is the summary of the repairs based on inspection finding memo dated 10/9/2019.

1. Clean the stone masonry, as necessary.
2. Fill the voids in masonry walls and roof slab with MassDOT approved material or material from MassDOT QCML or grout bags.
3. Clear all the vegetation growing from stone masonry.
4. Clear all debris and vegetation from the channel.
5. Replace all chinking stones and fill voids with grout bags.

For the repair methods, material manufacturer's recommendations shall be utilized. All materials, labor and equipment necessary for the repair shall be incidental to Item 997.2.

5 Basis of Payment

Item 997.2 will be paid for at the contract unit price, Lump Sum, installed and completed in place. This price shall include full compensation for all labor, materials, tools, equipment, test pits, removal, delivery and disposal at an approved landfill, the cost for approvals, testing, transportation, the removal and disposal of existing headwalls, installing new culvert connecting to existing culvert, control of water, installing new cast-in-place headwalls, and incidentals necessary to complete this Item.

Schedule of Basis for Partial Payments

Within 10 days of the Notice to Proceed, the Contractor shall submit their proposal form a schedule of unit prices for the major component Sub-Items that make up Item 997.2 as well as their total drainage structure Lump Sum cost for the Special Drainage Structure No. 2. The drainage structure Lump Sum breakdown quantities provided in the proposal form are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the Lump Sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual drainage components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 997.2 and no further compensation will be allowed.

5 ADDENDUM NO. 5, AUGUST 27, 2020**ITEM 997.4****SPECIAL DRAINAGE STRUCTURE NO.4****LUMP SUM**

The work under this Item shall conform to the relevant provisions of Subsections 901, 904, 910, 967, 970 and 983 of the Standard Specifications, and the following:

- 5** The work under this Item shall consist of furnishing all labor, materials, tools and equipment and the performance of all work required to furnish and install the 4'Wx2'H precast concrete box culvert at Sta. 90+14.32, the cast-in-place Headwalls as shown on the plans.

The manufacturer shall submit evidence at the request of the Engineer showing that he has successfully completed work of similar magnitude prior to being approved as the source of the material for this work. The manufacturing process shall be closely supervised by experienced plant personnel and records of plastic and concrete strength shall be kept and submitted to the Engineer for control.

Materials

Materials shall meet the requirements specified in the following subsections of Division III, Materials Specifications of the Standard Specifications:

Cement Concrete	M4.02
Epoxy Coated Reinforcing Bars	M8.01.7
Stone for Pipe Ends	M2.02.3
Crushed Stone	M2.01.3
Geotextile Fabric	M9.50.0
Rockfill	M2.02.1

5

- 5** The payment for Stone for Pipe Ends, Crushed Stone, Rockfill, and Geotextile Fabric shall be paid under their respective items.

The precast box culvert (4'x2') shall be reinforced concrete and shall be manufactured in accordance with ASTM C76 standard specifications for reinforced concrete culvert. The culvert shall be designed to support an HS-20 (32,000 lbs.) truck axle load and dead load from earth cover over the top of the culvert as shown on the plans, and shall conform to all applicable 2017 AASHTO LRFD Bridge Design Specifications with current interim Specifications .

The Contractor shall submit shop drawings and structural calculations stamped by an Engineer registered in the Commonwealth of Massachusetts for approval as specified in Section 5.02 of the Standard Specifications. The shop drawings shall show the size and location of all inserts and openings as shown on the Plans.

Existing utility locations shall be verified in the field prior to starting this work. The Contractor shall provide the Engineer with a plan showing existing utility locations and elevations prior to undertaking this work.

The Contractor shall dig test pits to verify the dimensions of the existing culvert prior to ordering the material. All costs shall be incidental and be paid for under the lump sum price.

③ ADDENDUM NO. 3, AUGUST 14, 2020**ITEM 997.4** (Continued)**Construction of Special Drainage Structure**

Work shall include abandonment of existing culverts and removal and disposal of headwalls, installing new culvert connecting to the new special drainage manholes and new headwall, and installation of new cast-in-place headwalls.

The precast concrete box culvert shall be constructed as shown on the Plans.

All precast units shall be carefully loaded, hauled, stored and erected to prevent damage. They shall be erected by experienced workmen, true to the lines and grades as shown on the Plans or directed by the Engineer. Any members superficially damaged during shipment or erection shall be rejected and shall be repaired by experienced workmen. Units badly damaged shall be rejected and shall be replaced with new units at no additional cost to the Owner. The Engineer shall be the sole judge of this damage. No holes shall be cut or drilled in the field without written approval of the Engineer.

③ Basis of Payment

Item 997.4 will be paid for at the contract unit price, Lump Sum, installed and completed in place. This price shall include full compensation for all labor, materials, tools, equipment, test pits, the removal and disposal of existing headwalls and installing new culvert connecting to existing culvert, control of water, and installing new cast-in-place headwalls, delivery and disposal at an approved landfill, the cost for approvals, testing, transportation, and incidentals necessary to complete the work.

SCHEDULE OF BASIS FOR PARTIAL PAYMENTS

Within 10 days of the Notice to Proceed, the Contractor shall submit their proposal form a schedule of unit prices for the major component Sub-Items that make up Item 997.4 as well as their total drainage structure Lump Sum cost for the Special Drainage Structure No. 4. The drainage structure Lump Sum breakdown quantities provided in the proposal form are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the Lump Sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual drainage components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 997.4 and no further compensation will be allowed.

The schedule on the proposal form applies only to Special Drainage Structure No. 4. Payment for similar materials and construction at locations other than at this drainage structure shall not be included under this Item. Sub-Item numbering is presented for information only in coordination with MassDOT Standard Nomenclature.

5 ADDENDUM NO. 5, AUGUST 27, 2020**ITEM 358.****GATE BOX ADJUSTED**

10+55 LT	32+02 RT
10+61 LT	39+67 RT
11+43 LT	41+50 RT
11+93 LT	42+80 RT (3 at this location)
11+96 LT	46+43 RT
12+05 LT	46+45 RT
15+60 LT	46+56 RT
19+30 LT	48+25 RT
24+95 LT	50+25 RT
24+98 LT	53+83 RT
24+98 RT	53+85 RT
25+23 RT	53+87 RT
27+46 LT	54+21 RT
30+62 LT	54+52 RT
30+99 LT	55+53 RT
31+02 LT	55+56 RT
31+24 RT	58+80 RT
63+76 RT	88+43 RT
63+79 RT	93+70 LT
63+82 RT	93+74 LT
66+23 RT	93+77 LT
70+09 LT	93+84 LT
70+52 RT	95+60 LT
70+55 RT	96+58 LT
70+57 RT	
73+89 RT	97+60 LT
76+17 RT	99+48 LT
78+67 RT	99+50 RT
82+39 RT	99+95 LT
82+42 RT	100+00 LT
83+89 RT	100+93 LT
83+91 RT	100+96 LT
88+38 RT	

ITEM 376.2**HYDRANT - REMOVED AND RESET**

11+43 LT	54+52 RT
27+46 LT	66+23 RT
36+00 RT	73+90 LT
41+51 RT	78+68 LT
46+56 RT	82+41 LT
50+25 RT	96+58 LT
78+68 LT	

ITEM 381.3 **SERVICE BOX ADJUSTED**

38+13 RT 54+90 RT
 57+47RT

ITEM 482.5 **SAWCUTTING ASPHALT PAVEMENT
FOR BOX WIDENING**

10+00 to 12+40 RT

ITEM 506. **GRANITE CURB TYPE VB – STRAIGHT**

10+49.7	to	10+49.7	LT	97+93.0	to	99+60.0	LT
10+85.9	to	10+85.9	LT	100+15.8	to	100+39.5	LT
11+17.1	to	16+43	LT	100+73.0	to	100+96.7	LT
23+02	to	23+94	RT	10+00.0	to	23+30.5	RT
16+89.0	to	23+30	LT	24+12.1	to	24+27.9	RT
23+09.1	to	24+01.1	LT & RT	300+53.4	to	300+80.8	LT
23+33.0	to	23+88.0	LT	300+69.6	to	300+81.0	LT
21+63.9	to	23+88.3	LT	300+81.0	to	300+81.0	LT & RT
24+01.3	to	24+01.3	LT & RT	300+91.1	to	300+91.1	LT & RT
24+11.0	to	24+11.0	LT & RT	300+92.1	to	301+23.6	LT
24+11.6	to	24+21.4	LT	301+60.7	to	301+80.0	LT
298+67.9	to	299+00.0	RT	300+91.9	to	301+27.0	RT
298+67.9	to	299+08.5	RT	301+62.4	to	301+35.4	RT
299+19.9	to	299+35.1	RT	25+61.5	to	25+76.5	RT
299+09.4	to	299+09.4	LT & RT	25+88.9	to	26+50.4	RT
299+19.4	to	299+19.4	LT & RT	25+96.1	to	27+34.0	RT
298+67.9	to	299+08.0	LT	28+51.0	to	30+38.7	RT
299+19.9	to	299+30.8	LT	30+57.1	to	30+70.8	RT
298+67.9	to	299+00.0	LT	400+61.9	to	401+00.0	RT
299+28.9	to	299+80.2	LT	32+11.0	to	33+01.8	RT
25+58.3	to	25+77.6	LT	33+70.3	to	37+98.1	RT
25+78.7	to	25+78.7	LT	38+53.6	to	38+91.6	RT
25+87.5	to	25+87.5	LT	39+38.3	to	39+43.7	RT
25+89.1	to	26+49.8	LT	39+94.1	to	40+71.8	RT
26+00.0	to	26+58.4	LT	41+23.5	to	41+48.0	RT
26+62.6	to	29+69.2	LT	41+87.6	to	43+96.1	RT
30+33.2	to	30+45.8	LT	44+30.5	to	44+65.0	RT
30+45.8	to	30+45.8	LT	44+91.8	to	45+09.8	RT
30+37.5	to	30+45.8	LT	45+64.4	to	45+75.0	RT
30+41.9	to	30+61.2	LT	46+02.5	to	46+09.5	RT

Client Name		New England Boring Contractors PO Box 165 Derry, NH 03038				Sheet 1 of 1		Boring No. BC-2	
Green International Affiliates						NHB JOB NUMBER: 31041			
City/Town: Ashland, MA								PROJECT NAME: Route 126 Reconstruction	
Location: Pond Street/Rt. 126						Date & Time Started		Date & Time Completed	
Ground Water: Not encountered						12/3/2014		12/17/2014	
DRILLER: Jerry Voight						HELPER: Albert Sabo			
Ground Elevation: 181 feet				Inspector's Name (Print): Mehmet				Inspector's Company: Green Int. Affiliates	
Sample Number	Depth Range (Feet)	Blow Counts per 6 Inches				Recovery (inches)	Field Description	Strata Changes	
		0-6	6-12	12-18	18-24				
S-1	0' - 9"	82	100/3"			8"	**Dry, very dense, grey, GRAVEL, fine to coarse sand, silt.		
S-2	2' - 2'9"	43	100/3"			8"	Dry, dense, frey, GRAVEL, fine to coarse sand, silt, color change from grey to light brown sand.	2'	
S-3	3.5' - 4'	100/6"				5"	Dry, very dense, light brown, GRAVEL, fine to coarse sand, silt.	4'	
							Bottom of Exploration		
Remarks: **10" depth asphalt core. Not to scale							AUGER SIZE: 3.25" H.S.A.		
Penetration Resistance (N) Guide							CASING SIZE: N/A		
Cohesionless Soils (Sands, Gravels)				Cohesive Soils (Silts, Clays)			SPLIT SPOON SIZE: 2"		
Relative Density	Penetration Resistance		Consistency		Penetration Resistance		DRILL RIG TYPE: B-53		
Very Loose	0 - 4		Very Soft		0 - 2				
Loose	4 - 10		Soft		2 - 4				
Medium Dense	10 - 30		Medium Stiff		4 - 8				
Dense	30 - 50		Stiff		8 - 15				
Very Dense	Over 50		Very Stiff		15 - 30				
			Hard		Over 30				
N = Sum of Second and Third 6" Blow Counts				Terms Used for Second Entry of Descriptions: and = 40-50%, some = 10-40%, trace = 10% or less					

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Client Name Green International Affiliates		New England Boring Contractors PO Box 165 Derry, NH 03038						Sheet 1 of 1		Boring No. BC-4		
							NHB JOB NUMBER: 31041					
City/Town: Ashland, MA							PROJECT NAME: Route 126 Reconstruction					
Location: Pond Street/Rt. 126									Date & Time Started		Date & Time Completed	Total Hours Worked
Ground Water: Not encountered									12/3/2014		12/17/2014	8
DRILLER: Jerry Voight									HELPER: Albert Sabo			
Ground Elevation: 181 feet					Inspector's Name (Print): Mehmet				Inspector's Company: Green Int. Affiliates			
Sample Number	Depth Range (Feet)	Blow Counts per 6 Inches				Recovery (inches)	Field Description				Strata Changes	
		0-6	6-12	12-18	18-24							
S-1	0' - 2'	46	35	44	20	18"	**Dry, very dense, brown/grey, GRAVEL, coarse to fine sand, silt. Dry, medium dense, brown, FINE SAND, trace of silt. Dry, medium dense, light tan, FINE SAND, trace of silt.				6'	
S-2	2' - 4'	10	22	16	17	16"						
S-3	4' - 6'	7	11	13	15	17"						
							Bottom of Exploration					
Remarks: **10" depth asphalt core.												AUGER SIZE: 3.25" H.S.A.
Not to scale												
Penetration Resistance (N) Guide												
Cohesionless Soils (Sands, Gravels)						Cohesive Soils (Silts, Clays)						
Relative Density		Penetration Resistance				Consistency		Penetration Resistance				
Very Loose		0 - 4				Very Soft		0 - 2				
Loose		4 - 10				Soft		2 - 4				
Medium Dense		10 - 30				Medium Stiff		4 - 8				
Dense		30 - 50				Stiff		8 - 15				
Very Dense		Over 50				Very Stiff		15 - 30				
						Hard		Over 30				
N = Sum of Second and Third 6" Blow Counts						Terms Used for Second Entry of Descriptions: and = 40-50%, some = 10-40%, trace = 10% or less						

Client Name Green International Affiliates		New England Boring Contractors PO Box 165 Derry, NH 03038				Sheet 1 of 1		Boring No.		PC-1	
						NHB JOB NUMBER: 31041					
City/Town: Ashland, MA						PROJECT NAME: Route 126 Reconstruction					
Location: Pond Street/Rt. 126						Date & Time Started		Date & Time Completed		Total Hours Worked	
Ground Water: Not encountered						12/3/2014		12/17/2014		8	
DRILLER: Tim Sabo						HELPER:					
Ground Elevation: 181 feet				Inspector's Name (Print): Mehmet				Inspector's Company: Green Int. Affiliates			
Sample Number	Depth Range (Feet)	Blow Counts per 6 Inches				Recovery (inches)	Field Description				Strata Changes
		0-6	6-12	12-18	18-24						
S-1	0' - 2'	36	24	31	21	8"	**Dry, very dense, brown, FINE SAND, trace of coarse sand, trace of gravel, little silt.				
S-2	2' - 4'	19	18	19	17	0"	No recovery.				
S-3	4' - 6'	17	18	17	13	14"	Dry, dense, light brown, FINE SAND, trace of silt.				6'
							Bottom of Exploration				
Remarks: **12" depth asphalt core. Not to scale											
Penetration Resistance (N) Guide											
Cohesionless Soils (Sands, Gravels)				Cohesive Soils (Silts, Clays)							
Relative Density	Penetration Resistance		Consistency		Penetration Resistance						
Very Loose	0 - 4		Very Soft		0 - 2						
Loose	4 - 10		Soft		2 - 4						
Medium Dense	10 - 30		Medium Stiff		4 - 8						
Dense	30 - 50		Stiff		8 - 15						
Very Dense	Over 50		Very Stiff		15 - 30						
			Hard		Over 30						
N = Sum of Second and Third 6" Blow Counts				Terms Used for Second Entry of Descriptions: and = 40-50%, some = 10-40%, trace = 10% or less							

Client Name		New England Boring Contractors PO Box 165 Derry, NH 03038					Sheet 1 of 1		Boring No.		PC-5	
Green International Affiliates							NHB JOB NUMBER: 31041					
City/Town: Ashland, MA							PROJECT NAME: Route 126 Reconstruction					
Location: Pond Street/Rt. 126							Date & Time Started		Date & Time Completed		Total Hours Worked	
Ground Water: Not encountered							12/3/2014		12/17/2014		8	
DRILLER: Tim Sabo							HELPER:					
Ground Elevation: 181 feet			Inspector's Name (Print): Mehmet				Inspector's Company: Green Int. Affiliates					
Sample Number	Depth Range (Feet)	Blow Counts per 6 Inches				Recovery (inches)	Field Description					Strata Changes
		0-6	6-12	12-18	18-24							
S-1	0' - 2'	21	17	22	21	10"	**Dry, dense, brown, FINE SAND, trace of medium to coarse sand, trace of fine gravel, little silt.					
S-2	2' - 4'	21	14	12	13	11"	Dry, dense, brown, FINE SAND, trace of medium to coarse sand, trace of fine gravel, little silt, traces of fine cobble.					
S-3	4' - 6'	21	29	17	15	14"	Dry, dense, brown, FINE SAND, trace of medium to coarse sand, trace of fine gravel, silt, trace of fine cobble, 9" layer of black material.					6'
							Bottom of Exploration					
Remarks: **4" depth asphalt core. Not to scale												
Penetration Resistance (N) Guide												
Cohesionless Soils (Sands, Gravels)				Cohesive Soils (Silts, Clays)								
Relative Density	Penetration Resistance		Consistency		Penetration Resistance							
Very Loose	0 - 4		Very Soft		0 - 2							
Loose	4 - 10		Soft		2 - 4							
Medium Dense	10 - 30		Medium Stiff		4 - 8							
Dense	30 - 50		Stiff		8 - 15							
Very Dense	Over 50		Very Stiff		15 - 30							
			Hard		Over 30							
N = Sum of Second and Third 6" Blow Counts				Terms Used for Second Entry of Descriptions: and = 40-50%, some = 10-40%, trace = 10% or less								

Client Name Green International Affiliates		New England Boring Contractors PO Box 165 Derry, NH 03038				Sheet 1 of 1	Boring No. PC-6	
City/Town: Ashland, MA						NHB JOB NUMBER: 31041		
Location: Pond Street/Rt. 126		Date & Time Started				Date & Time Completed		Total Hours Worked
Ground Water: Not encountered		12/3/2014				12/17/2014		8
DRILLER: Tim Sabo				HELPER:				
Ground Elevation: 181 feet		Inspector's Name (Print): Mehmet				Inspector's Company: Green Int. Affiliates		
Sample Number	Depth Range (Feet)	Blow Counts per 6 Inches				Recovery (inches)	Field Description	Strata Changes
		0-6	6-12	12-18	18-24			
S-1	0' - 2'	10	13	14	18	12"	**Dry, medium dense, brown, FINE SAND, trace of medium to coarse sand, little silt, trace of fine gravel.	
S-2	2' - 4'	11	10	16	14	16"		
S-3	4' - 6'	20	24	21	26	14"	Dry, medium dense, brown, FINE TO COARSE SAND, trace of silt, trace of fine gravel.	
							Dry, dense, brown, FINE SAND, some silt, bottom 2" very fine sand and silt.	6'
							Bottom of Exploration	
Remarks: **14" depth asphalt core. Not to scale							AUGER SIZE: N/A CASING SIZE: 4" I.D. SPLIT SPOON SIZE: 2" DRILL RIG TYPE: B-53	
Penetration Resistance (N) Guide								
Cohesionless Soils (Sands, Gravels)				Cohesive Soils (Silts, Clays)				
Relative Density	Penetration Resistance		Consistency	Penetration Resistance				
Very Loose	0 - 4		Very Soft	0 - 2				
Loose	4 - 10		Soft	2 - 4				
Medium Dense	10 - 30		Medium Stiff	4 - 8				
Dense	30 - 50		Stiff	8 - 15				
Very Dense	Over 50		Very Stiff	15 - 30				
			Hard	Over 30				
N = Sum of Second and Third 6" Blow Counts				Terms Used for Second Entry of Descriptions: and = 40-50%, some = 10-40%, trace = 10% or less				

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
146.	42	DRAINAGE STRUCTURE REMOVED AT _____ EACH		
150.1	640	SPECIAL BORROW AT _____ PER CUBIC YARD		
151.	16,500	GRAVEL BORROW AT _____ PER CUBIC YARD		
151.1	325	GRAVEL BORROW FOR BRIDGE FOUNDATION AT _____ PER CUBIC YARD		
151.2	5,100	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES AT _____ PER CUBIC YARD		
154.	10	SAND BORROW AT _____ PER CUBIC YARD		
156.	1,750	CRUSHED STONE AT _____ PER TON		
156.1	100	CRUSHED STONE FOR BRIDGE FOUNDATIONS AT _____ PER TON		
170.	56,700	FINE GRADING AND COMPACTING - SUBGRADE AREA AT _____ PER SQUARE YARD		

5 ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
180.01	1	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM AT _____ LUMP SUM		
180.02	400	PERSONAL PROTECTION LEVEL C UPGRADE AT _____ PER HOUR		
180.03	400	LICENSED SITE PROFESSIONAL SERVICES AT _____ PER HOUR		
181.11	50	DISPOSAL OF UNREGULATED SOIL AT _____ PER TON		
181.12	100	DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY AT _____ PER TON		
181.13	100	DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY AT _____ PER TON		
181.14	20	DISPOSAL OF HAZARDOUS WASTE AT _____ PER TON		
182.21	1	ASBESTOS REMOVAL PERMITS AT _____ LUMP SUM		
182.22	515	REMOVAL OF ASBESTOS PIPE AT _____ PER FOOT		

5

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
183.1	5,000	TREATMENT OF CONTAMINATED GROUNDWATER AT _____ PER GALLON		
183.2	500	DISPOSAL OF GRANULAR ACTIVATED CARBON AT _____ PER POUND		
184.1	5	DISPOSAL OF TREATED WOOD PRODUCTS AT _____ PER TON		
201.3	118	SPECIAL CATCH BASIN AT _____ EACH		
202.	82	MANHOLE AT _____ EACH		
202.11	1	SPECIAL MANHOLE (10 FT X 8 FT) AT _____ LUMP SUM		
202.2	4	MANHOLE (9 TO 14 FOOT DEPTH) AT _____ EACH		
202.5	10	MANHOLE (5 FT DIAMETER) AT _____ EACH		
202.6	6	MANHOLE (6 FT DIAMETER) AT _____ EACH		

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
202.8	4	MANHOLE (8 FT DIAMETER) AT _____ EACH		
202.9	17	DEEP SUMP MANHOLE AT _____ EACH		
204.11	17	GUTTER INLET - SPECIAL AT _____ EACH		
205.	6	LEACHING BASIN AT _____ EACH		
209.1	2	DROP INLET, TYPE DF AT _____ EACH		
220.	285	DRAINAGE STRUCTURE ADJUSTED AT _____ EACH		
220.3	6	DRAINAGE STRUCTURE CHANGE IN TYPE AT _____ EACH		
220.5	3	DRAINAGE STRUCTURE REMODELED AT _____ EACH		
220.7	35	SANITARY STRUCTURE ADJUSTED AT _____ EACH		

5 ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
244.15	500	15 INCH REINFORCED CONCRETE PIPE CLASS V AT _____ PER FOOT		
244.18	1,750	18 INCH REINFORCED CONCRETE PIPE CLASS V AT _____ PER FOOT		
244.24	1,170	24 INCH REINFORCED CONCRETE PIPE CLASS V AT _____ PER FOOT		
258.	110	STONE FOR PIPE ENDS AT _____ PER SQUARE YARD		
303.06	460	6 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
303.08	20	8 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
303.12	420	12 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
309.	2,600	DUCTILE IRON FITTINGS FOR WATER PIPE AT _____ PER POUND		
347.075	70	3/4 INCH COPPER TUBING TYPE K AT _____ PER FOOT		

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
347.1	70	1 INCH COPPER TUBING TYPE K AT _____ PER FOOT		
347.125	70	1-1/4 INCH COPPER TUBING TYPE K AT _____ PER FOOT		
347.15	70	1-1/2 INCH COPPER TUBING TYPE K AT _____ PER FOOT		
347.2	70	2 INCH COPPER TUBING TYPE K AT _____ PER FOOT		
349.06	4	6 INCH GATE VALVE AT _____ EACH		
349.12	1	12 INCH GATE VALVE AT _____ EACH		
357.06	11	6 INCH GATE BOX AT _____ EACH		
358.	132	GATE BOX ADJUSTED AT _____ EACH		
363.075	5	3/4 INCH CORPORATION COCK AT _____ EACH		

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
363.1	5	1 INCH CORPORATION COCK AT _____ EACH		
363.125	5	1-1/4 INCH CORPORATION COCK AT _____ EACH		
363.15	5	1-1/2 INCH CORPORATION COCK AT _____ EACH		
363.175	5	1-3/4 INCH CORPORATION COCK AT _____ EACH		
363.2	5	2 INCH CORPORATION COCK AT _____ EACH		
367.12	2	12 INCH CAST IRON PLUG AT _____ EACH		
371.06	24	6 INCH COUPLING AT _____ EACH		
371.08	3	8 INCH COUPLING AT _____ EACH		
371.12	7	12 INCH COUPLING AT _____ EACH		

⑤ ITEM 370.1 - DELETED

5 ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
373.	1,325	WATER PIPE INSULATION BOARD AT _____ PER FOOT		
375.06	6	6 INCH INSERTION VALVE AND BOX AT _____ EACH		
375.08	1	8 INCH INSERTION VALVE AND BOX AT _____ EACH		
375.12	2	12 INCH INSERTION VALVE AND BOX AT _____ EACH		
376.2	13	HYDRANT - REMOVED AND RESET AT _____ EACH		
376.5	1	HYDRANT - ADJUSTED AT _____ EACH		
381.	9	SERVICE BOX AT _____ EACH		
381.3	44	SERVICE BOX ADJUSTED AT _____ EACH		
402.	4,800	DENSE GRADED CRUSHED STONE FOR SUB-BASE AT _____ PER CUBIC YARD		

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
415.3	3,380	PAVEMENT MICRO MILLING AT _____ PER SQUARE YARD		
440.	195,000	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL AT _____ PER POUND		
443.	220	WATER FOR ROADWAY DUST CONTROL AT _____ PER 1000 GALLONS		
450.23	4,620	SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) AT _____ PER TON		
450.32	6,175	SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) AT _____ PER TON		
450.42	11,000	SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) AT _____ PER TON		
451.	135	HMA FOR PATCHING AT _____ PER TON		
452.	7,500	ASPHALT EMULSION FOR TACK COAT AT _____ PER GALLON		
453.	11,000	HMA JOINT SEALANT AT _____ PER FOOT		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
472.	1,600	ASPHALT MIXTURES FOR TEMPORARY WORK AT _____ PER TON		
482.5	140	SAWCUTTING ASPHALT PAVEMENT FOR BOX WIDENING AT _____ PER FOOT		
506.	16,250	GRANITE CURB TYPE VB - STRAIGHT AT _____ PER FOOT		
506.1	1,200	GRANITE CURB TYPE VB - CURVED AT _____ PER FOOT		
507.	310	TYPE T100 GRANITE CURB AT _____ PER FOOT		
509.	1,215	GRANITE TRANSITION CURB FOR WHEELCHAIR RAMPS - STRAIGHT AT _____ PER FOOT		
509.1	625	GRANITE TRANSITION CURB FOR WHEELCHAIR RAMPS - CURVED AT _____ PER FOOT		
514.	95	GRANITE CURB INLET - STRAIGHT AT _____ EACH		
515.	20	GRANITE CURB INLET - CURVED AT _____ EACH		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
531.	45	TIMBER CURB AT _____ PER FOOT		
580.	70	CURB REMOVED AND RESET AT _____ PER FOOT		
594.	7,200	CURB REMOVED AND DISCARDED AT _____ PER FOOT		
620.12	3,565	GUARDRAIL, TL-2 (SINGLE FACED) AT _____ PER FOOT		
620.32	270	GUARDRAIL - CURVED, TL-2 (SINGLE FACED) AT _____ PER FOOT		
627.1	12	TRAILING ANCHORAGE AT _____ EACH		
627.82	6	GUARDRAIL TANGENT END TREATMENT, TL-2 AT _____ EACH		
627.92	2	GUARDRAIL FLARED END TREATMENT, TL-2 AT _____ EACH		
630.	75	HIGHWAY GUARD REMOVED AND RESET AT _____ PER FOOT		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
630.2	3,000	HIGHWAY GUARD REMOVED AND DISCARDED AT _____ PER FOOT		
655.3	875	WOOD RAIL FENCE AT _____ PER FOOT		
669.	750	FENCE REMOVED AND STACKED AT _____ PER FOOT		
697.1	182	SILT SACK AT _____ EACH		
698.3	1,400	GEOTEXTILE FABRIC FOR SEPARATION AT _____ PER SQUARE YARD		
701.	7,200	CEMENT CONCRETE SIDEWALK AT _____ PER SQUARE YARD		
701.1	1,250	CEMENT CONCRETE SIDEWALK AT DRIVEWAYS AT _____ PER SQUARE YARD		
701.2	1,000	CEMENT CONCRETE WHEELCHAIR RAMP AT _____ PER SQUARE YARD		
701.31	425	STAMPED CEMENT CONCRETE PAVEMENT AT _____ PER SQUARE YARD		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
702.	900	HOT MIX ASPHALT WALK SURFACE AT _____ PER TON		
703.9	12,750	IMPRINT CROSSWALK SYSTEM AT _____ PER SQUARE FOOT		
704.2	45	GRAVEL FOR DRIVEWAYS AT _____ PER SQUARE YARD		
705.1	1	FLAGSTONE WALK REMOVED AND RESET AT _____ PER SQUARE YARD		
711.	5	BOUND REMOVED AND RESET AT _____ EACH		
712.	9	BOUND REMOVED AND STACKED AT _____ EACH		
715.	18	RURAL MAIL BOX REMOVED AND RESET AT _____ EACH		
720.	15	BOULDERS REMOVED AND RESET AT _____ EACH		
740.	38	ENGINEERS FIELD OFFICE AND EQUIPMENT (TYPE A) AT _____ PER MONTH		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
748.	1	MOBILIZATION AT _____ LUMP SUM		
751.	2,125	LOAM BORROW AT _____ PER CUBIC YARD		
751.2	250	PLANTING TRENCH SOIL AT _____ PER CUBIC YARD		
751.7	935	COMPOST TOPSOIL AT _____ PER SQUARE YARD		
755.35	1	INLAND WETLAND REPLICATION AREA AT _____ LUMP SUM		
755.75	40	WETLAND SPECIALIST AT _____ PER HOUR		
755.76	1	WETLAND MONITORING AT _____ LUMP SUM		
756.	1	NPDES STORMWATER POLLUTION PREVENTION PLAN AT _____ LUMP SUM		
765.	15,300	SEEDING AT _____ PER SQUARE YARD		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
765.422	935	SEEDING-MID-HEIGHT UPLAND NATIVE MIX - FULL SUN AT _____ PER SQUARE YARD		
767.121	13,300	SEDIMENT CONTROL BARRIER AT _____ PER FOOT		
767.6	10	AGED PINE BARK MULCH AT _____ PER CUBIC YARD		
767.77	935	COMPOSTED MULCH OVER MODIFIED ROCK AT _____ PER SQUARE YARD		
767.9	3,400	MATting FOR EROSION CONTROL AT _____ PER SQUARE YARD		
769.	3,800	PAVEMENT MILLING MULCH UNDER GUARD RAIL AT _____ PER FOOT		
775.027	4	ELM - 'PRINCETON' 2-2.5 INCH CAL AT _____ EACH		
775.035	3	HOPHORNBEAM - AMERICAN 2-2.5 INCH CALIPER AT _____ EACH		
775.431	10	LOCUST - HONEY - 'SHADEMASTER' 2-2.5 INCH CALIPER AT _____ EACH		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
776.523	5	MAPLE - RED - 'ARMSTRONG' 2-2.5 INCH CALIPER AT _____ EACH		
776.529	2	MAPLE – RED- 'KARPICK' 2-2.5 INCH CAL AT _____ EACH		
777.679	3	SWEETGUM-'HAPDELL' 2-2.5 INCH CAL AT _____ EACH		
778.025	14	GINGKO-AUTUMN GOLD 2-2.5 INCH CAL AT _____ EACH		
778.167	3	BIRCH – RIVER 'HERITAGE' SINGLE STEM AT _____ EACH		
778.409	11	CRABAPPLE-ADIRONDACK 2.5-3 INCH CAL AT _____ EACH		
780.181	1	DOGWOOD-'CONSTELLATION' 1.5 INCH CAL AT _____ EACH		
782.423	9	PEAR - CALLERY - 'CHANTICLEER' 2-2.5 INCH CALIPER AT _____ EACH		
785.587	4	HOLLY - JAPANESE - 'HETZ' 24-30 INCH AT _____ EACH		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
786.031	62	JUNIPER - ANDORRA 18-24 INCH AT _____ EACH		
786.083	18	JUNIPER-'BAR HARBOR' 18-24 INCH SPREAD AT _____ EACH		
786.099	96	JUNIPER-'BLUE STAR' 12-18 INCH SPREAD AT _____ EACH		
786.473	9	JUNIPER-'SEA GREEN' 24-30 INCH SPREAD AT _____ EACH		
794.337	92	SUMAC-FRAGRANT-'GRO-LOW' 18-24 INCH SPREAD AT _____ EACH		
794.805	33	SWEETFERN 2 GALLON AT _____ EACH		
796.433	124	FOUNTAIN GRASS-'KARLEY ROSE' 1 GALLON AT _____ EACH		
796.457	131	SWITCH GRASS-HEAVY METAL' 1 GALLON AT _____ EACH		
796.459	71	SWITCH GRASS-'SHENENDOAH' 1 GALLON AT _____ EACH		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
796.727	255	CATMINT-'WALKERS LOW' 1 GALLON AT _____ EACH		
796.753	48	DAYLILLY-'HAPPY RETURNS' 1 GALLON AT _____ EACH		
796.757	90	DAYLILLY-'PURPLE RETURNS' 1 GALLON AT _____ EACH		
796.761	57	DAYLILLY-'RED HOT RETURNS' 1 GALLON AT _____ EACH		
804.3	13,050	3 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC -(UL) AT _____ PER FOOT		
811.27	104	ELECTRIC HANDHOLE - (MUNICIPAL STANDARD) AT _____ EACH		
811.31	35	PULL BOX 12 X 12 INCHES - SD2.031 AT _____ EACH		
812.16	82	LIGHT FOUNDATION - CONCRETE AT _____ EACH		
812.17	17	DEEP LIGHT FOUNDATION - CONCRETE AT _____ EACH		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
812.20	2	LIGHTING LOAD CENTER FOUNDATION AT _____ EACH		
813.30	45,500	WIRE TYPE 7 NO. 10 GENERAL PURPOSE AT _____ PER FOOT		
813.33	16,500	WIRE TYPE 7 NO. 4 GENERAL PURPOSE AT _____ PER FOOT		
813.34	86,900	WIRE TYPE 7 NO. 2 GENERAL PURPOSE AT _____ PER FOOT		
813.35	600	WIRE TYPE 7 NO. 1 GENERAL PURPOSE AT _____ PER FOOT		
813.399	99	SPLICE AND EXTENSION FROM HANDHOLE TO LIGHTING FIXTURES AT _____ EACH		
813.81	1	SERVICE CONNECTION (UNDERGROUND) AT _____ LUMP SUM		
815.1	1	TRAFFIC CONTROL SIGNAL LOCATION NO. 1 AT _____ LUMP SUM		
815.2	1	TRAFFIC CONTROL SIGNAL LOCATION NO. 2 AT _____ LUMP SUM		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
815.3	1	TRAFFIC CONTROL SIGNAL LOCATION NO. 3 AT _____ LUMP SUM		
816.80	1	TRAFFIC CONTROL SIGNAL REMOVED AND STACKED AT _____ LUMP SUM		
816.801	1	TRAFFIC CONTROL SIGNAL REMOVED AND STACKED AT _____ LUMP SUM		
821.50	71	LIGHT POLE AND SINGLE PENDANT LUMINAIRE W/ 8' ARM AND BANNER ARM AT _____ EACH		
821.51	13	LIGHT POLE AND SINGLE PENDANT LUMINAIRE W/ 12' ARM AND BANNER ARM AT _____ EACH		
821.52	11	LIGHT POLE ARM AND SINGLE PENDANT LUMINAIRE W/ 4' ARM AND BANNER ARM AT _____ EACH		
821.53	4	LIGHT POLE AND DOUBLE PENDANT LUMINAIRE AND BANNER ARM AT _____ EACH		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
823.61	1	HIGHWAY LIGHTING LOAD CENTER NO.1 AT _____ LUMP SUM		
823.62	1	HIGHWAY LIGHTING LOAD CENTER NO.2 AT _____ LUMP SUM		
824.211	1	RECTANGULAR RAPID FLASHING BEACON (AC POWERED) AT _____ LUMP SUM		
824.221	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR), LOC. NO. 1 AT _____ LUMP SUM		
824.222	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR), LOC. NO. 2 AT _____ LUMP SUM		
824.223	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR), LOC. NO. 3 AT _____ LUMP SUM		
824.224	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR), LOC. NO. 4 AT _____ LUMP SUM		
824.225	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR), LOC. NO. 5 AT _____ LUMP SUM		
824.226	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR), LOC. NO. 6 AT _____ LUMP SUM		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
824.227	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR), LOC. NO. 7 AT _____ LUMP SUM		
832.	640	WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A) AT _____ PER SQUARE FOOT		
833.5	90	DEMOUNTABLE REFLECTORIZED DELINEATOR - GUARD RAIL AT _____ EACH		
833.7	21	DELINEATION FOR GUARD RAIL TERMINI AT _____ EACH		
847.1	103	SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL AT _____ EACH		
850.41	840	ROADWAY FLAGGER AT _____ PER HOUR		
851.1	510	TRAFFIC CONES FOR TRAFFIC MANAGEMENT AT _____ PER DAY		
852.	866	SAFETY SIGNING FOR TRAFFIC MANAGEMENT AT _____ PER SQUARE FOOT		
852.11	1,500	TEMPORARY PEDESTRIAN BARRICADE AT _____ PER FOOT		

5 ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
852.12	16	TEMPORARY PEDESTRIAN CURB RAMP AT _____ EACH		
853.1	10	PORTABLE BREAKAWAY BARRICADE TYPE III AT _____ EACH		
853.2	1,800	TEMPORARY BARRIER (TL-2) AT _____ PER FOOT		
853.21	1,800	TEMPORARY BARRIER REMOVED AND RESET AT _____ PER FOOT		
853.501	11	TEMPORARY IMPACT ATTENUATOR REMOVED AND RESET AT _____ EACH		
853.63	7	TEMPORARY IMPACT ATTENUATOR UNIDIRECTIONAL, REDIRECTIVE (TL-3) AT _____ EACH		
853.8	80	TEMPORARY ILLUMINATION FOR WORK ZONE AT _____ PER DAY		
854.016	53,650	TEMPORARY PAVING MARKINGS - 6 INCH (PAINTED) AT _____ PER FOOT		
854.1	4,000	PAVEMENT MARKING REMOVAL AT _____ PER SQUARE FOOT		

ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
856.	1,600	ARROW BOARD AT _____ PER DAY		
856.12	3,100	PORTABLE CHANGEABLE MESSAGE SIGN AT _____ PER DAY		
859.	48,000	REFLECTORIZED DRUM AT _____ PER DAY		
864.04	2,065	PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) AT _____ PER SQUARE FOOT		
864.35	40	SLOTTED PAVEMENT MARKER TWO-WAY YELLOW/YELLOW AT _____ EACH		
866.106	22,000	6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) AT _____ PER FOOT		
866.112	4,000	12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) AT _____ PER FOOT		
867.106	27,000	6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) AT _____ PER FOOT		
867.112	4,500	12 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) AT _____ PER FOOT		

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
874.	8	STREET NAME SIGN AT _____ EACH		
874.1	4	STREET SIGN REMOVED AND RESET AT _____ EACH		
874.2	9	TRAFFIC SIGN REMOVED AND RESET AT _____ EACH		
874.41	45	TRAFFIC SIGN REMOVED AND DISCARDED AT _____ EACH		
901.	15	4000 PSI, 1.5 INCH, 565 CEMENT CONCRETE AT _____ PER CUBIC YARD		
903.	15	3000 PSI, 1.5 INCH, 470 CEMENT CONCRETE AT _____ PER CUBIC YARD		
910.	250	STEEL REINFORCEMENT FOR STRUCTURES AT _____ PER POUND		
945.011	2	30 INCH UTILITY POLE CAISSON AT _____ EACH		
945.102	55	DRILLED SHAFT EXCAVATION 3.5 FOOT DIAMETER AT _____ PER FOOT		

⑤ ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
945.202	15	ROCK SOCKET EXCAVATION 3.5 FOOT DIAMETER AT _____ PER FOOT		
945.502	60	DRILLED SHAFT 3.5 FOOT DIAMETER AT _____ PER FOOT		
953.31	1	EXCAVATION SUPPORT SYSTEM SPECIAL DRAINAGE STRUCTURE NO. 1 AT _____ LUMP SUM		
953.32	1	EXCAVATION SUPPORT SYSTEM SPECIAL DRAINAGE STRUCTURE NO. 2 AT _____ LUMP SUM		
953.33	1	EXCAVATION SUPPORT SYSTEM SPECIAL DRAINAGE STRUCTURE NO. 3 AT _____ LUMP SUM		
953.34	1	EXCAVATION SUPPORT SYSTEM SPECIAL DRAINAGE STRUCTURE NO. 4 AT _____ LUMP SUM		
986.1	935	MODIFIED ROCKFILL AT _____ PER SQUARE YARD		
991.11	1	CONTROL OF WATER - SPECIAL DRAINAGE STRUCTURE NO. 1 AT _____ LUMP SUM		
991.12	1	CONTROL OF WATER - SPECIAL DRAINAGE STRUCTURE NO. 2 AT _____ LUMP SUM		

⑤

ITEM 983.1 - DELETED

CMS104 - Report Run Date: 8/25/2020 3:44 PM

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5 ADDENDUM NO. 5, AUGUST 27, 2020

Project # 604123		Contract # 111717		
Location : ASHLAND				
Description : Roadway Reconstruction and Related Work along Route 126 (Pond Street).				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
991.13	1	CONTROL OF WATER - SPECIAL DRAINAGE STRUCTURE NO. 3 AT _____ LUMP SUM		
991.14	1	CONTROL OF WATER - SPECIAL DRAINAGE STRUCTURE NO. 4 AT _____ LUMP SUM		
992.33	1	COORDINATION AND SUPPORT OF GAS MAINS AT CULVERTS AT _____ LUMP SUM		
996.01	1	WALL STRUCTURE, WALL NO. 1 AT _____ LUMP SUM		
996.02	1	WALL STRUCTURE, WALL NO. 2 AT _____ LUMP SUM		
997.1	1	SPECIAL DRAINAGE STRUCTURE NO. 1 AT _____ LUMP SUM		
997.2	1	SPECIAL DRAINAGE STRUCTURE NO. 2 AT _____ LUMP SUM		
997.3	1	SPECIAL DRAINAGE STRUCTURE NO. 3 AT _____ LUMP SUM		
997.4	1	SPECIAL DRAINAGE STRUCTURE NO. 4 AT _____ LUMP SUM		
Total Qty:		841,362		

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ROUTE 126 (POND STREET)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-0035(390)	19	331
PROJECT FILE NO. 604123		CONSTRUCTION PLANS (4 OF 17)	

TRAFFIC SIGNAL CONDUIT
SEE SHEET NO. 134

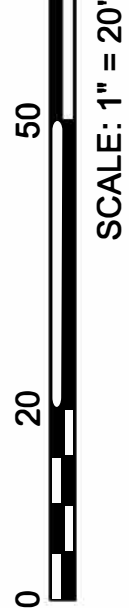
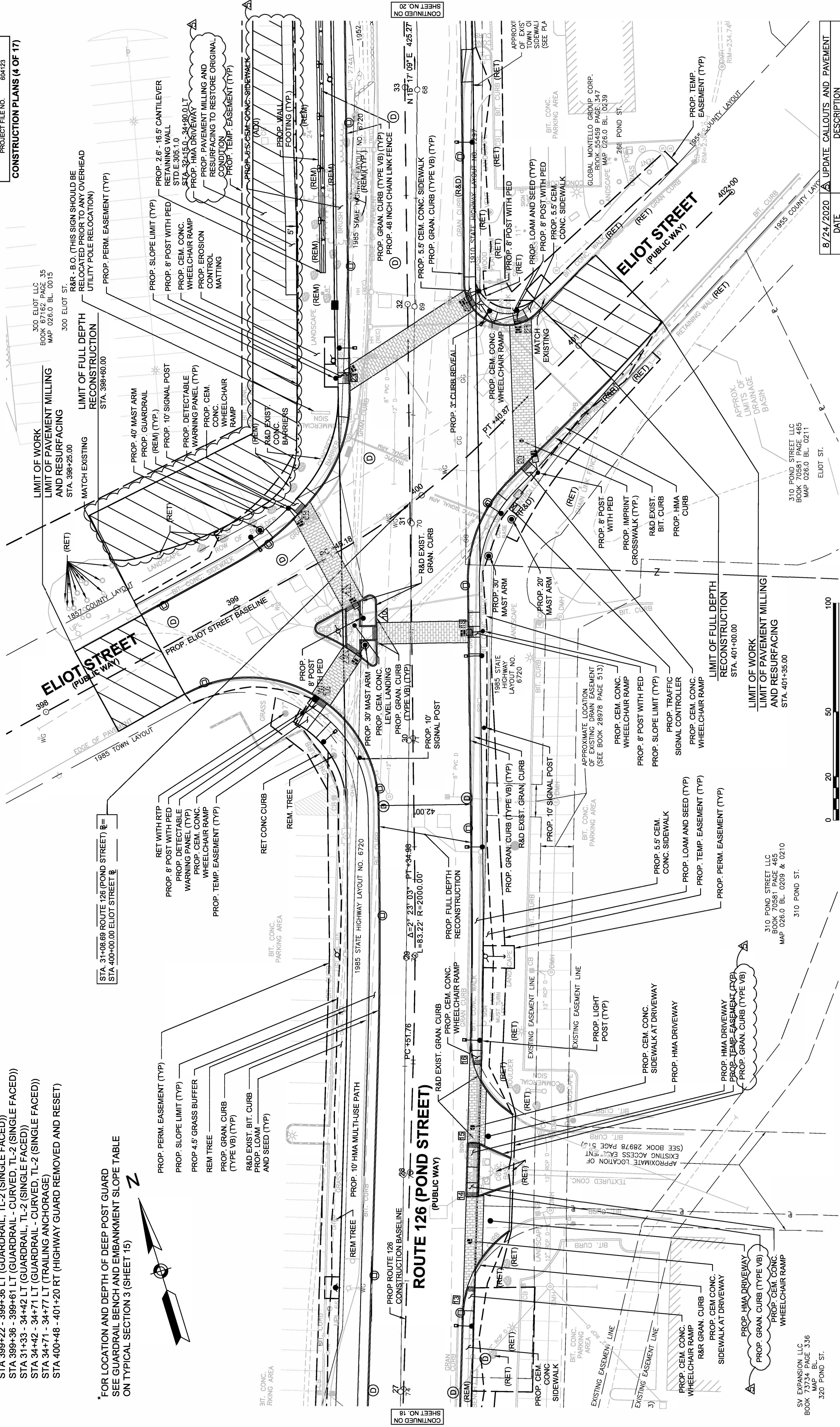
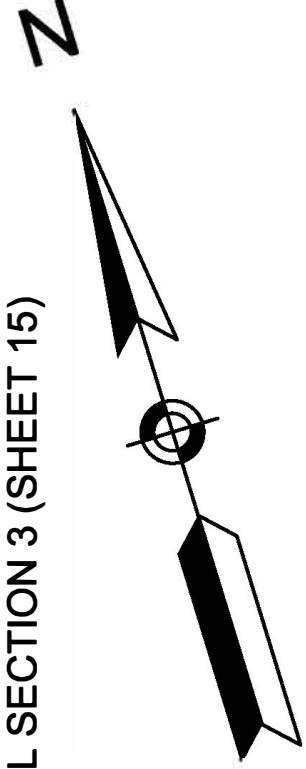
WATER SUPPLY ALTERATIONS
SEE SHEET NO. 97

DRAINAGE DETAILS
SEE SHEET NO. 97

* HIGHWAY GUARD DETAILS

STA 399+13 - 399+22 LT (TRAILING ANCHORAGE)
STA 399+22 - 399+36 LT (GUARDRAIL, TL-2 (SINGLE FACED))
STA 399+36 - 399+61 LT (GUARDRAIL - CURVED, TL-2 (SINGLE FACED))
STA 31+33 - 34+42 LT (GUARDRAIL, TL-2 (SINGLE FACED))
STA 34+42 - 34+71 LT (GUARDRAIL - CURVED, TL-2 (SINGLE FACED))
STA 34+71 - 34+77 LT (TRAILING ANCHORAGE)
STA 400+48 - 401+20 RT (HIGHWAY GUARD REMOVED AND RESET)

* FOR LOCATION AND DEPTH OF DEEP POST GUARD
SEE GUARDRAIL BENCH AND EMBANKMENT SLOPE TABLE
ON TYPICAL SECTION 3 (SHEET 15)



DATE	DESCRIPTION
8/24/2020	UPDATE CALLOUTS AND PAVEMENT
USE ONLY PRINTS OF LATEST DATE	

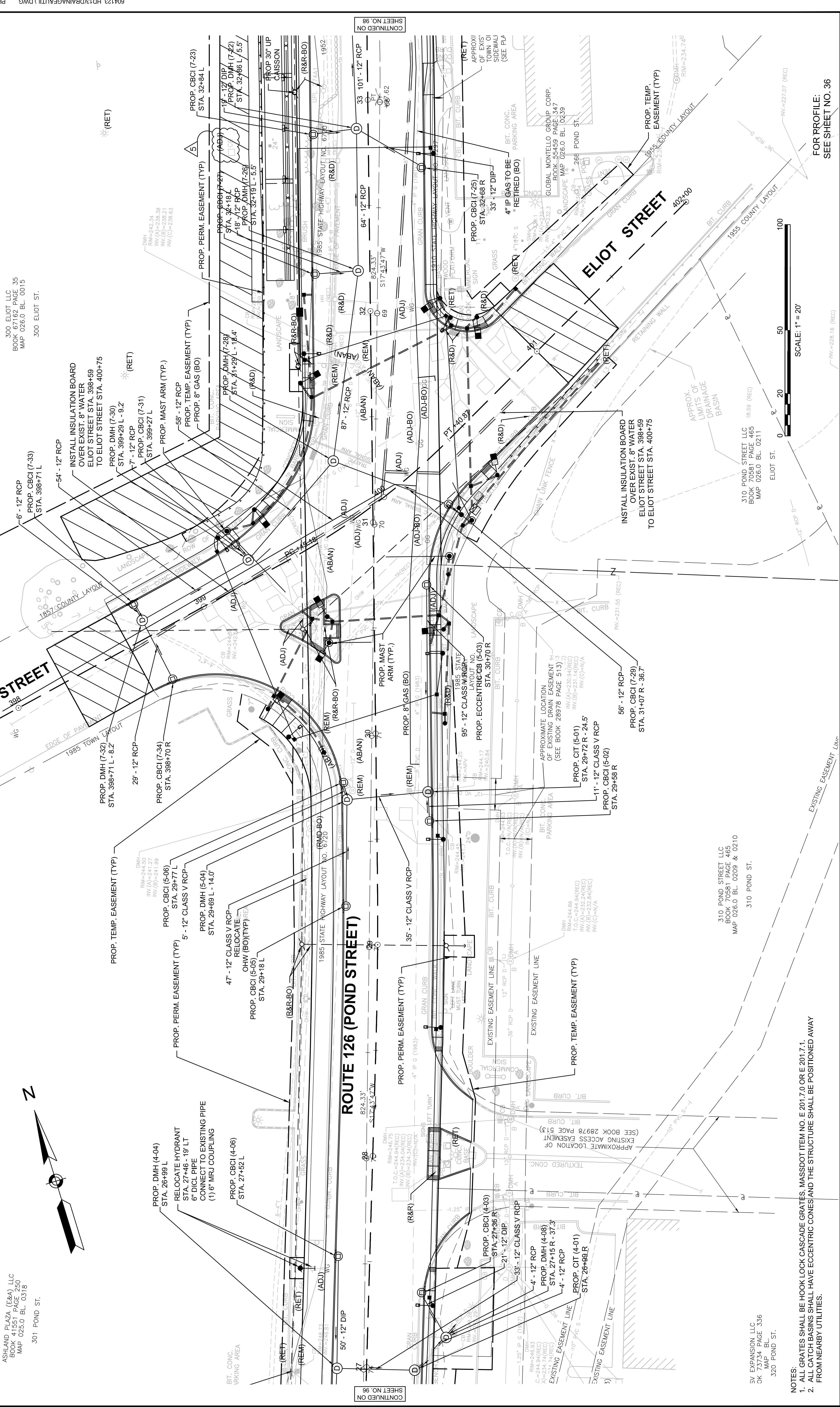
FOR PROFILE:
SEE SHEET NO. 36 & 51

ASHLAND, MA

ROUTE 126 (POND STREET)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQTA/STP-003S(990)	97	331
PROJECT FILE NO.		604123	

DRAINAGE AND UTILITY PLANS (4 OF 17)

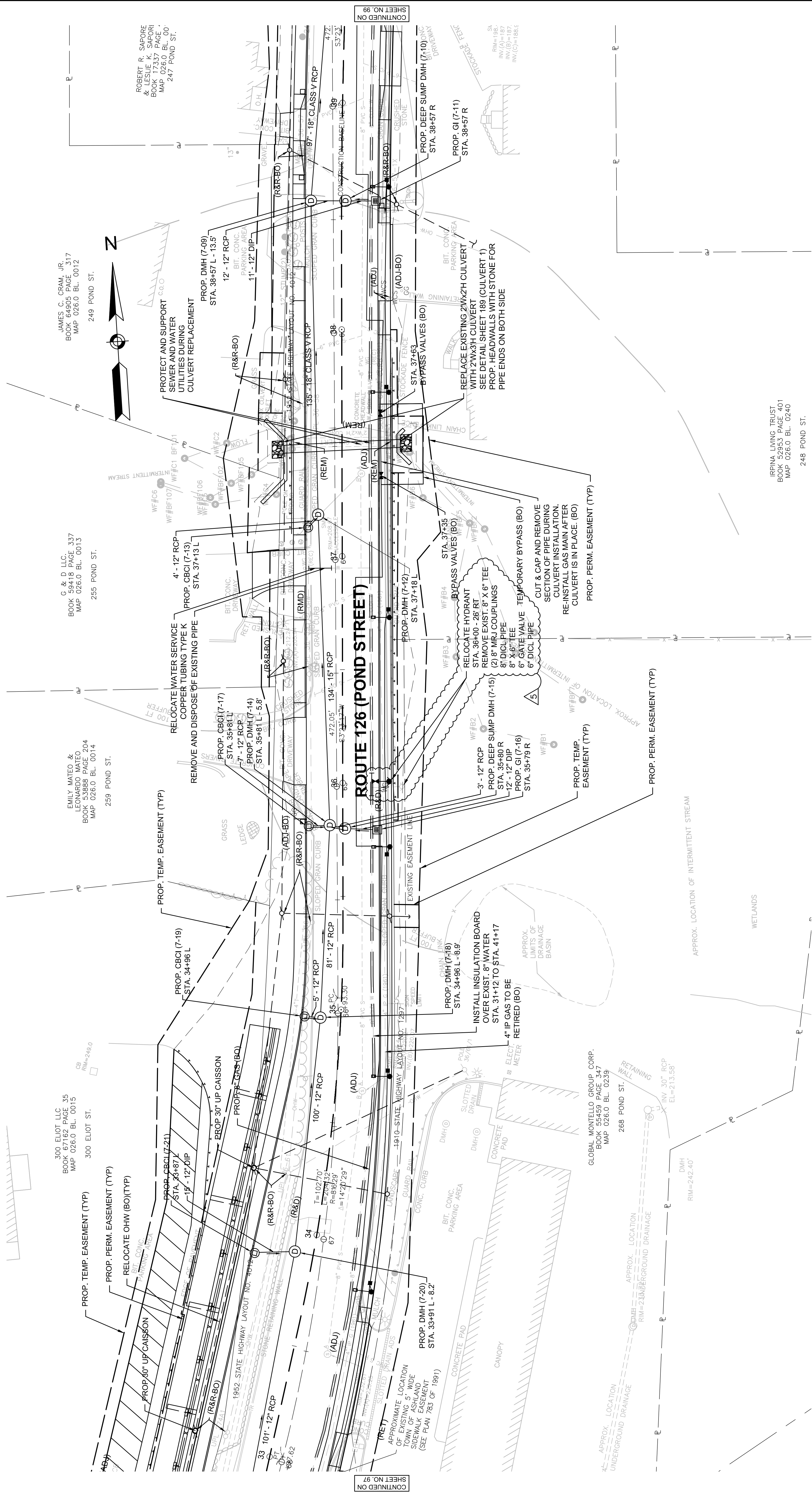


- NOTES:
1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES. MASSDOT ITEM NO. E 201.7.0 OR E 201.7.1.
 2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.

FOR PROFILE:
SEE SHEET NO. 36

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(390)	98	331
PROJECT FILE NO.			604123

DRAINAGE AND UTILITY PLANS (5 OF 17)



- NOTES:
1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES, MASSDOT ITEM NO. E 201.7.0 OR E 201.7.1.
 2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.

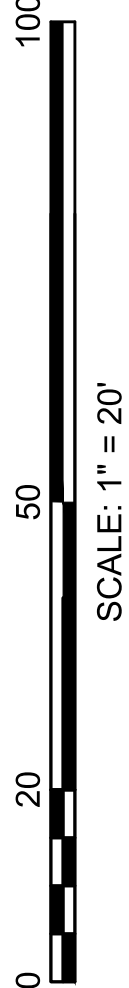
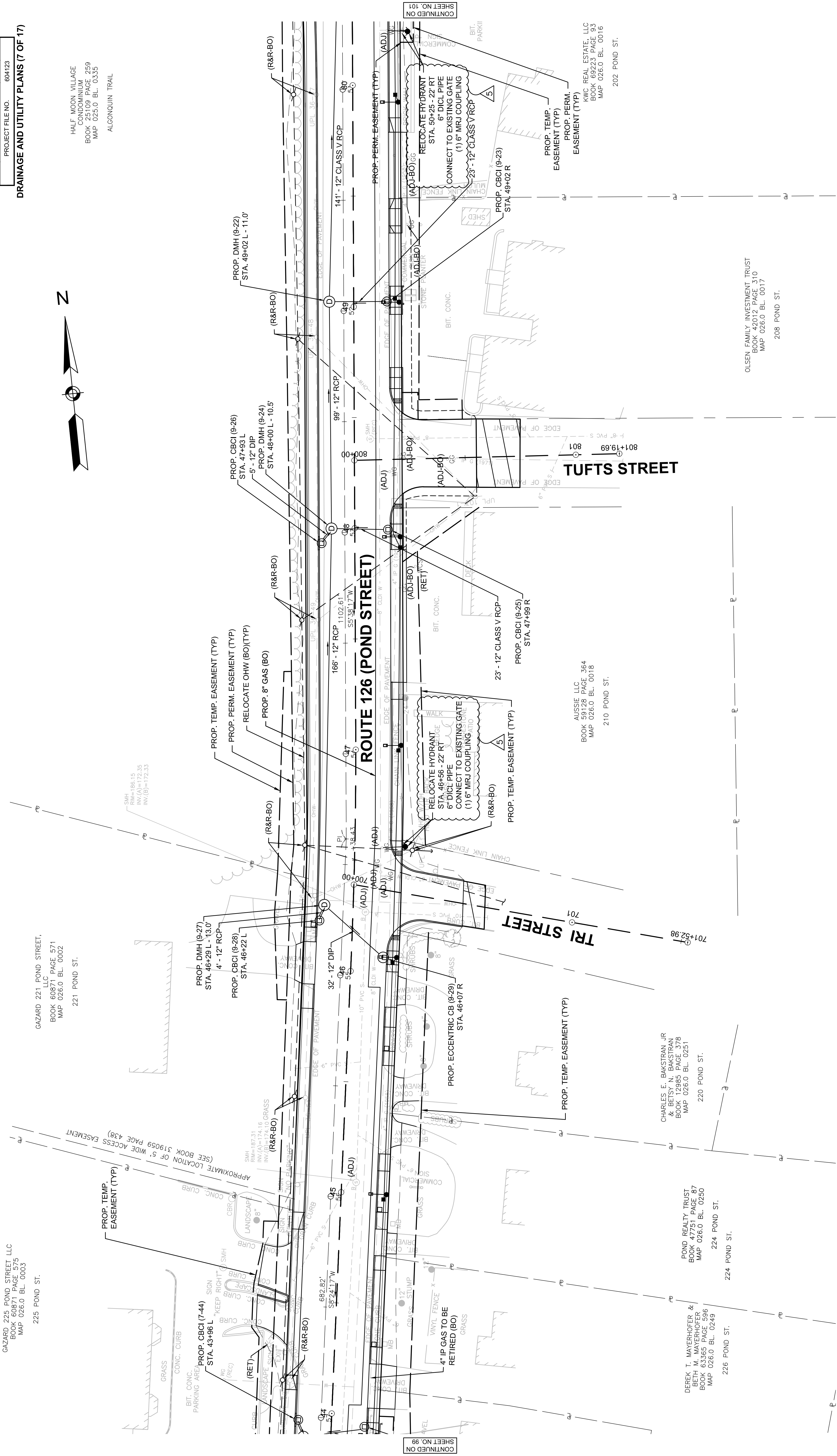
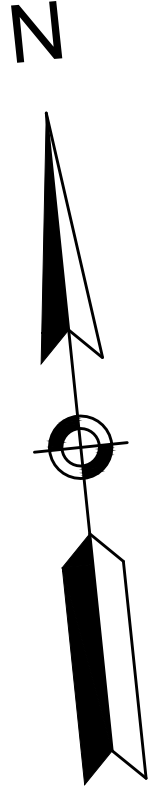
FOR PROFILE:
SEE SHEET NO. 37

ASHLAND, MA
ROUTE 126 (POND STREET)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(990)	100	331
PROJECT FILE NO.		604123	

DRAINAGE AND UTILITY PLANS (7 OF 17)

HALF MOON VILLAGE
CONDOMINIUM
BOOK 25109 PAGE 259
MAP 025.0 BL. 0335
ALCONQUIN TRAIL



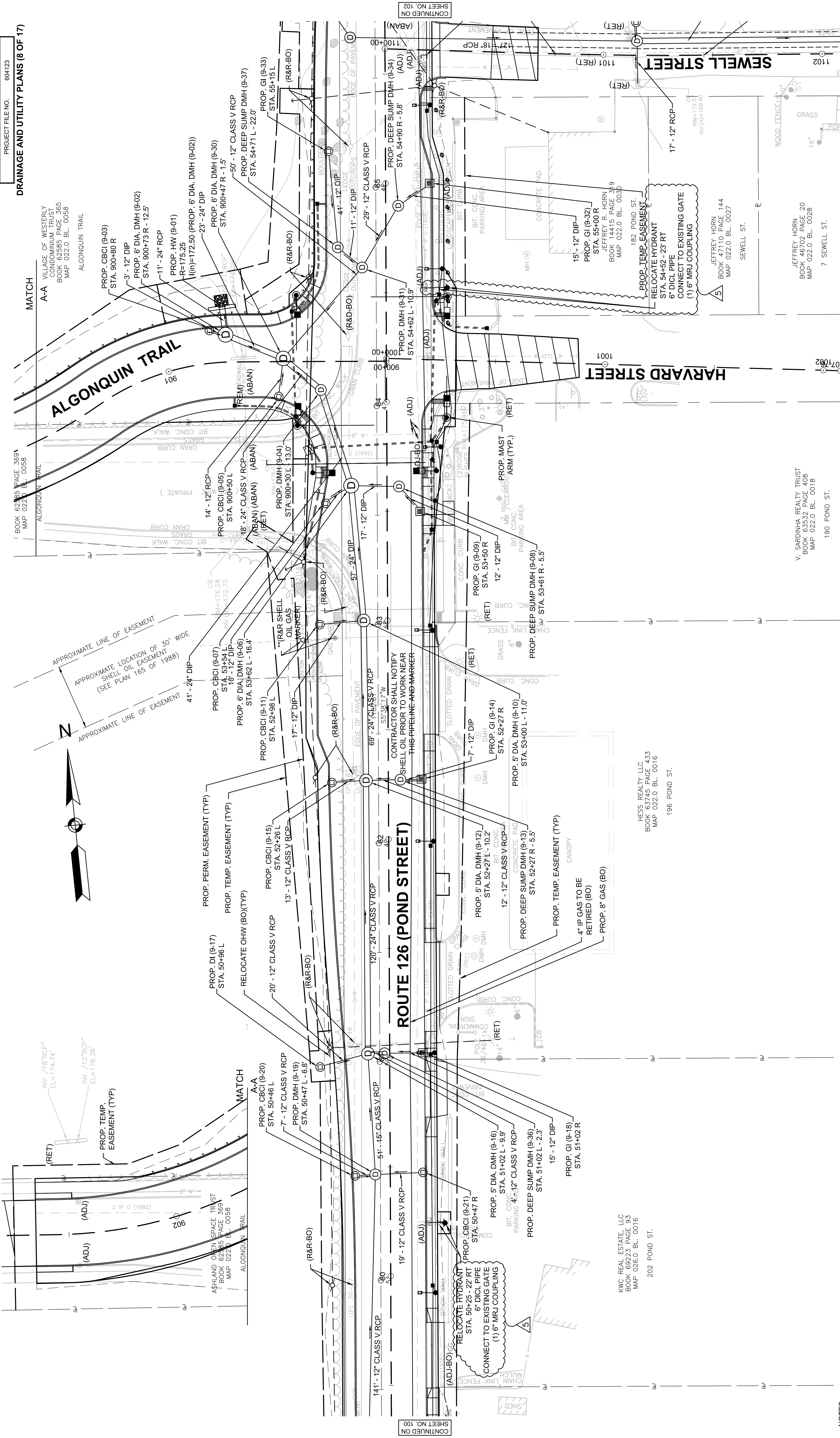
- NOTES:
1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES, MASSDOT ITEM NO. E 201.7.0 OR E 201.7.1.
 2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.

FOR PROFILE:
SEE SHEET NO. 39

ASHLAND, MA
ROUTE 126 (POND STREET)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(390)	101	331
PROJECT FILE NO. 604123			

DRAINAGE AND UTILITY PLANS (8 OF 17)



NOTES:

1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES, MASSDOT ITEM NO. E 2017.0 OR E 2017.1.
2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.
3. CONTRACTOR SHALL CONTACT AND COORDINATE WITH SHELL OIL PRIOR TO PERFORMING WORK WITHIN THE LOCATION OF THESE FACILITIES.

FOR PROFILE:
SEE SHEET NO. 40

ASHLAND, MA
ROUTE 126 (POND STREET)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/ISTP-003S(390)	103	331
PROJECT FILE NO.		604123	

DRAINAGE AND UTILITY PLANS (10 OF 17)

ENGELO NASIOS &
EVAGELIA NASIOS
BOOK 9254 PAGE 418
MAP 022.0 BL. 0014

137 POND ST.

V & P REALTY TRUST
BOOK 16583 PAGE 408
MAP 022.0 BL. 0013

37 JAMES RD.

VILLAGE OF WESTERLY
CONDOMINIUM TRUST
BOOK 62585 PAGE 365
MAP 022.0 BL. 0058

ALGONQUIN TRAIL

RELOCATE OHW (BO)(TYP)

PROP. PERM. EASEMENT (TYP)
PROP. 8" GAS (BO)

PROP. DMH (12-44)
STA. 62+38 L - 9.4'

186' - 12" RCP

106' - 12" RCP

73' - 15" RCP

78' - 15" CLASS V RCP

76' - 15" CLASS V RCP

18' - 12" CLASS V RCP

386' 74' - 15" CLASS V RCP

1074.60'

367' 76' - 18" RCP

19140 STATE HIGHWAY LAYOUT NO. 1247

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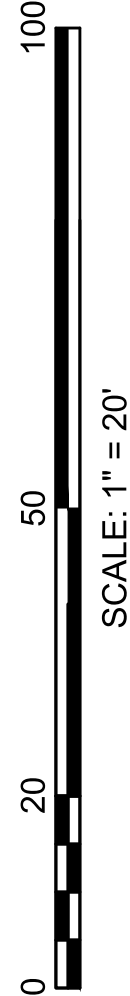
19140 STATE HIGHWAY LAYOUT NO. 1247

19140 STATE HIGHWAY LAYOUT NO. 1247

19140 STATE HIGHWAY LAYOUT NO. 1247

- NOTES:
1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES, MASSDOT ITEM NO. E 201.7.0 OR E 201.7.1.
 2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.

FOR PROFILE:
SEE SHEET NO. 42



158 POND STREET REALTY TRUST
BOOK 65560 PAGE 336
MAP 022.0 BL. 0037

158 POND ST.

INSTAR GAS COMPANY
BOOK 12120 PAGE 408
BOOK 44110 PAGE 93
MAP 022.0 BL. 0038

146 POND ST.

ALL WORK WITHIN 50' OF
EVERSOURCE STATION
REQUIRES EVERSOURCE
REPRESENTATIVE ON SITE.
CONTRACTOR SHALL NOTIFY EVERSOURCE
PRIOR TO WORK NEAR THESE GAS LINES

4" IP GAS TO BE
RETIRED (BO)

25' - 12" CLASS V RCP
PROP. CBGI (12-37)
STA. 63+41 R

ALGONQUIN GAS
TRANSMISSION COMPANY
BOOK 8420 PAGE 357
MAP 022.0 BL. 0040

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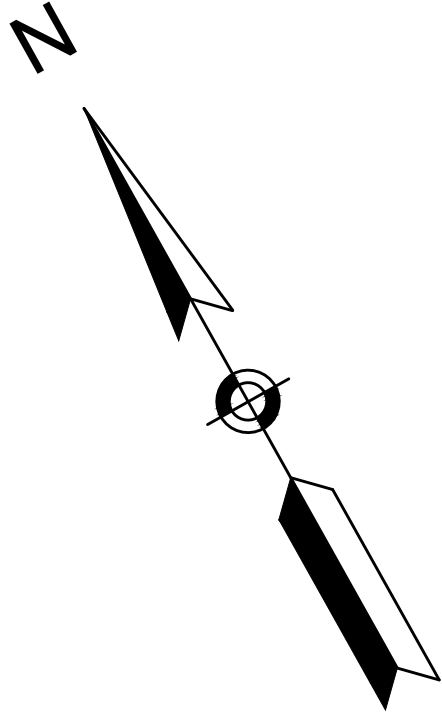
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ASHLAND, MA
ROUTE 126 (POND STREET)

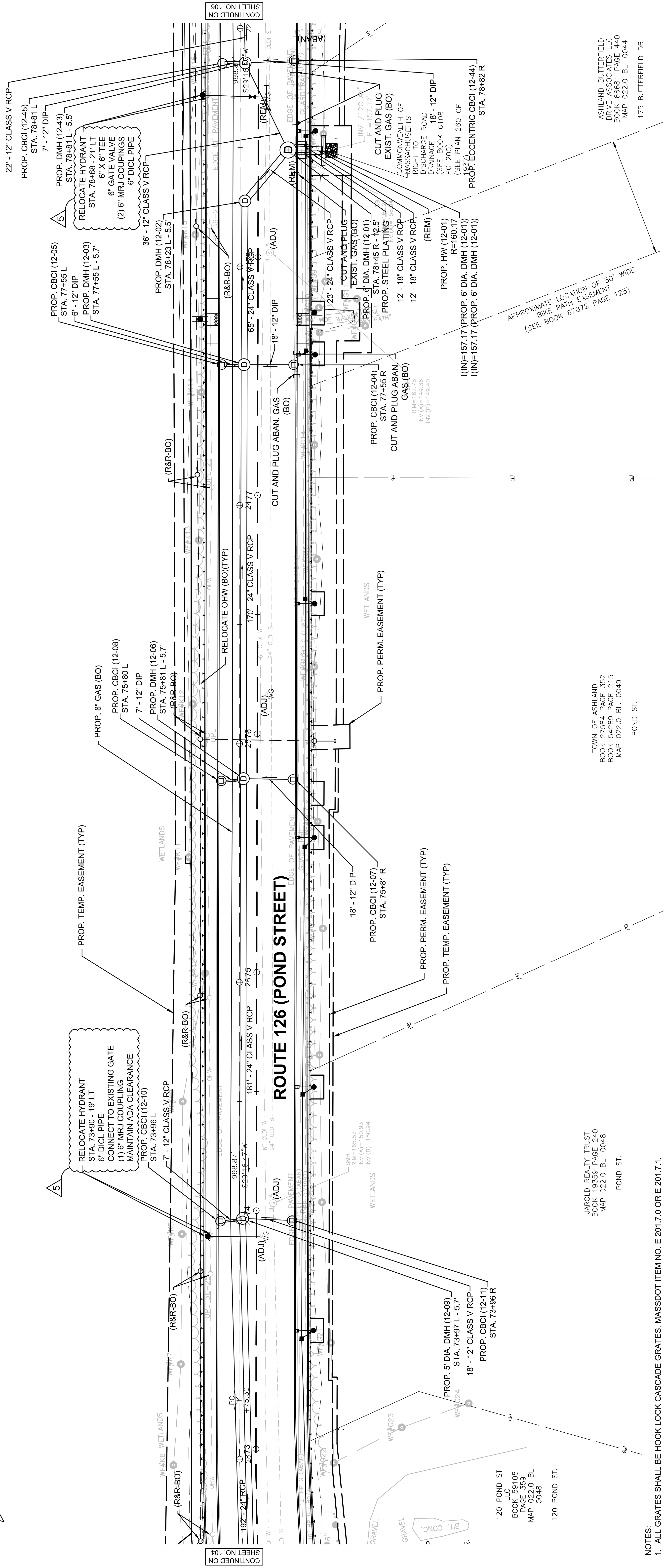
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(390)	105	331
PROJECT FILE NO.		604123	

DRAINAGE AND UTILITY PLANS (12 OF 17)



COVENEY REALTY TRUST, II
BOOK 19576 PAGE 339
MAP 022.0 BL. 0006

POND ST.



JABOLD, REALTY TRUST
BOOK 19359 PAGE 240
MAP 022.0 BL. 0048

POND ST.

- NOTES:
1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES. MASSDOT ITEM NO. E 201.7.0 OR E 201.7.1.
 2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.
 3. CONTRACTOR TO COORDINATE WITH EVERSOURCE FOR CUTTING AND CAPPING OF ABANDONED 12\"/>
 4. THE 16\"/>

TOWN OF ASHLAND
BOOK 27584 PAGE 352
BOOK 54289 PAGE 215
MAP 022.0 BL. 0049

POND ST.

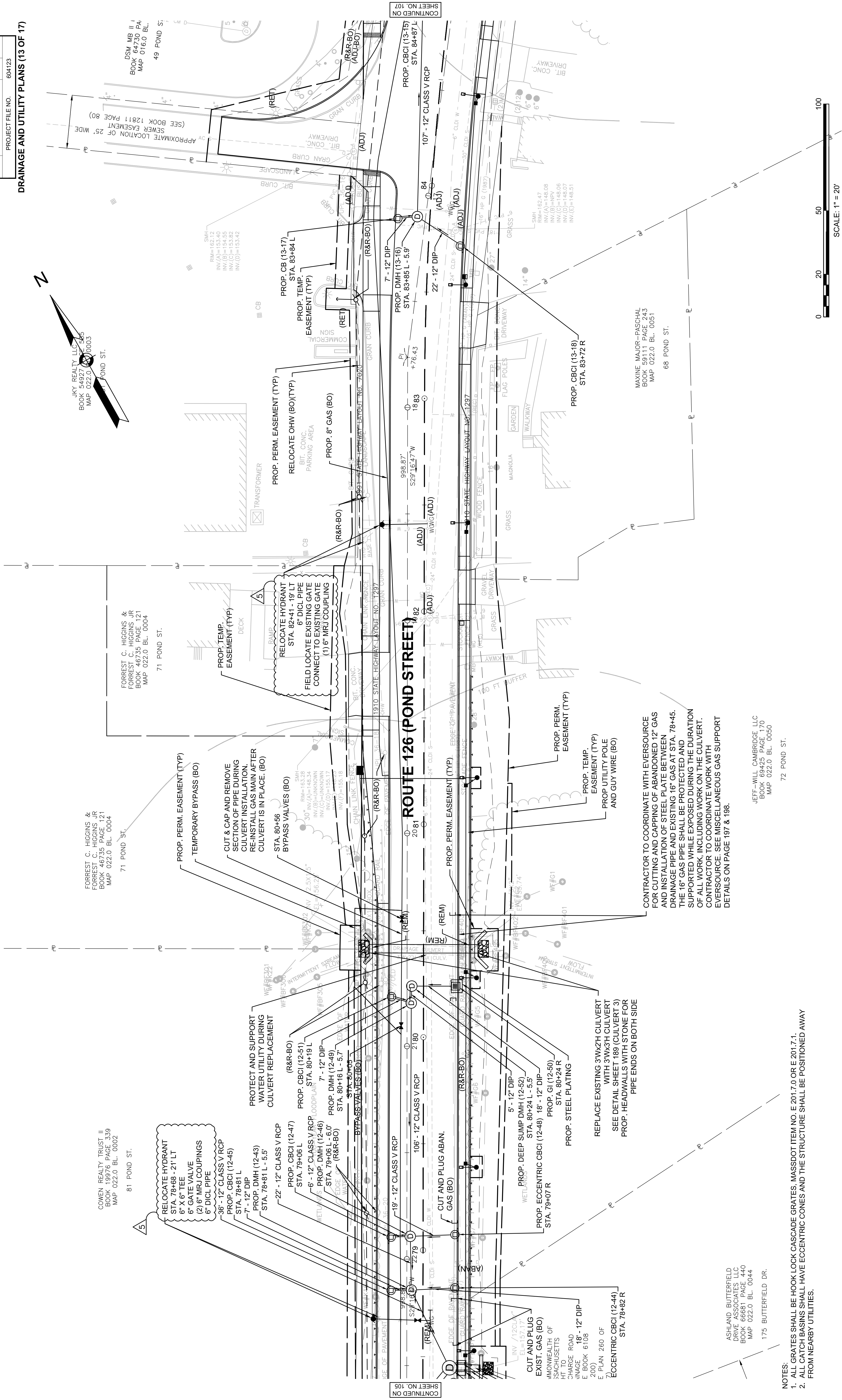


SCALE: 1" = 20'

FOR PROFILE:
SEE SHEET NO. 44

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(390)	106	331
PROJECT FILE NO.			604123

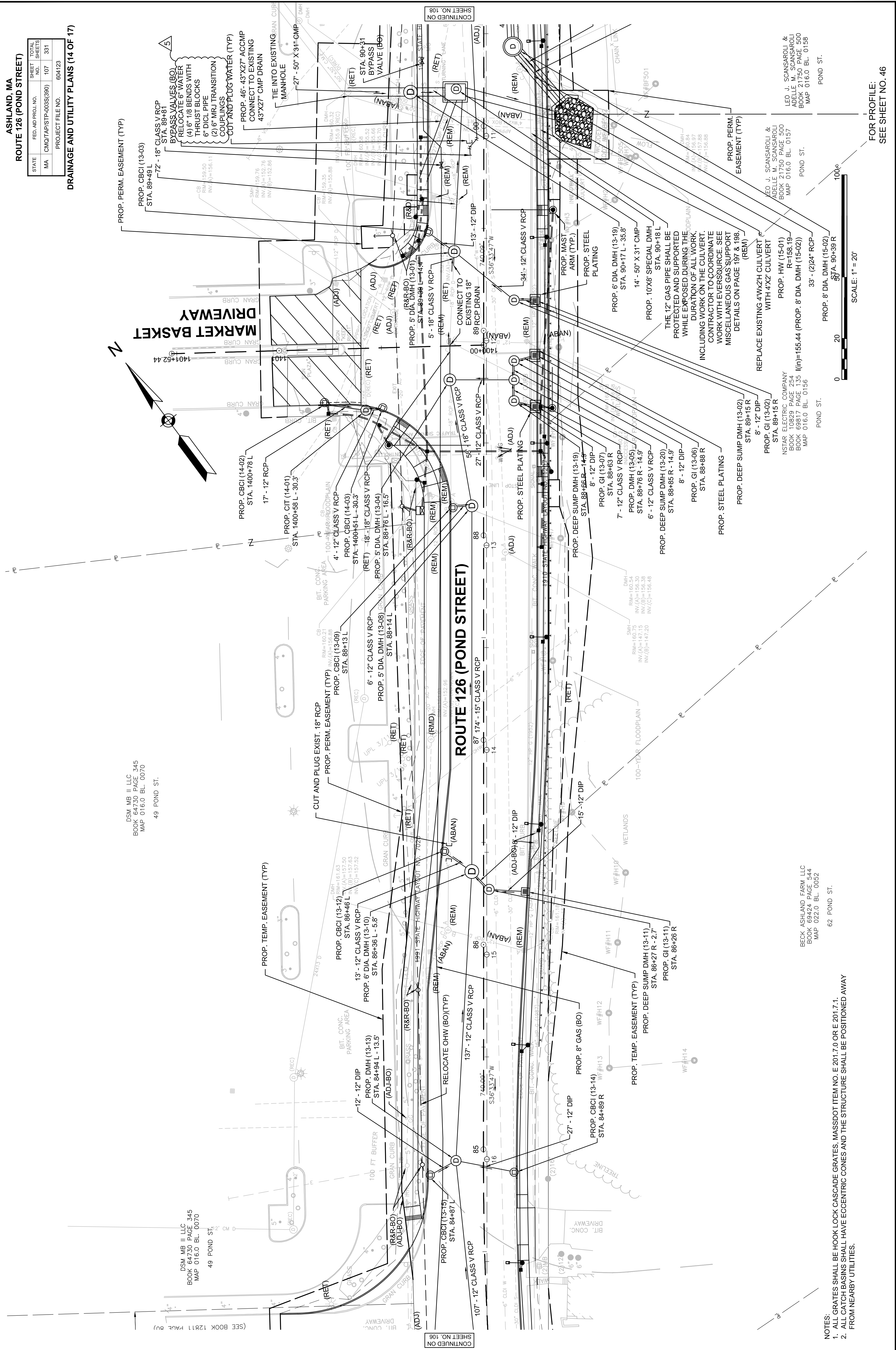
DRAINAGE AND UTILITY PLANS (13 OF 17)



NOTES:

1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES, MASSDOT ITEM NO. E 2017.0 OR E 2017.1.
2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.

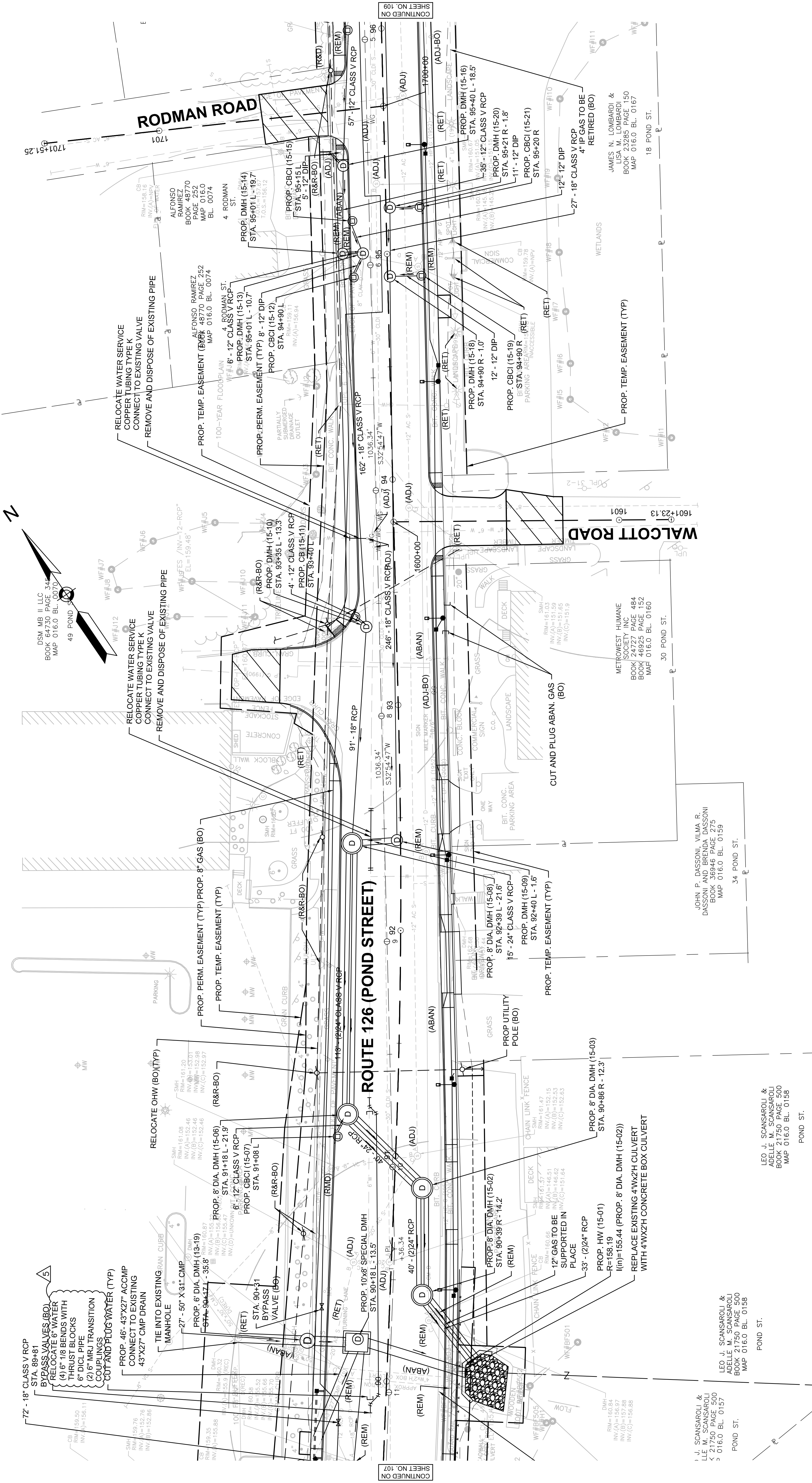
FOR PROFILE:
SEE SHEET NO. 45



ASHLAND, MA
ROUTE 126 (POND STREET)

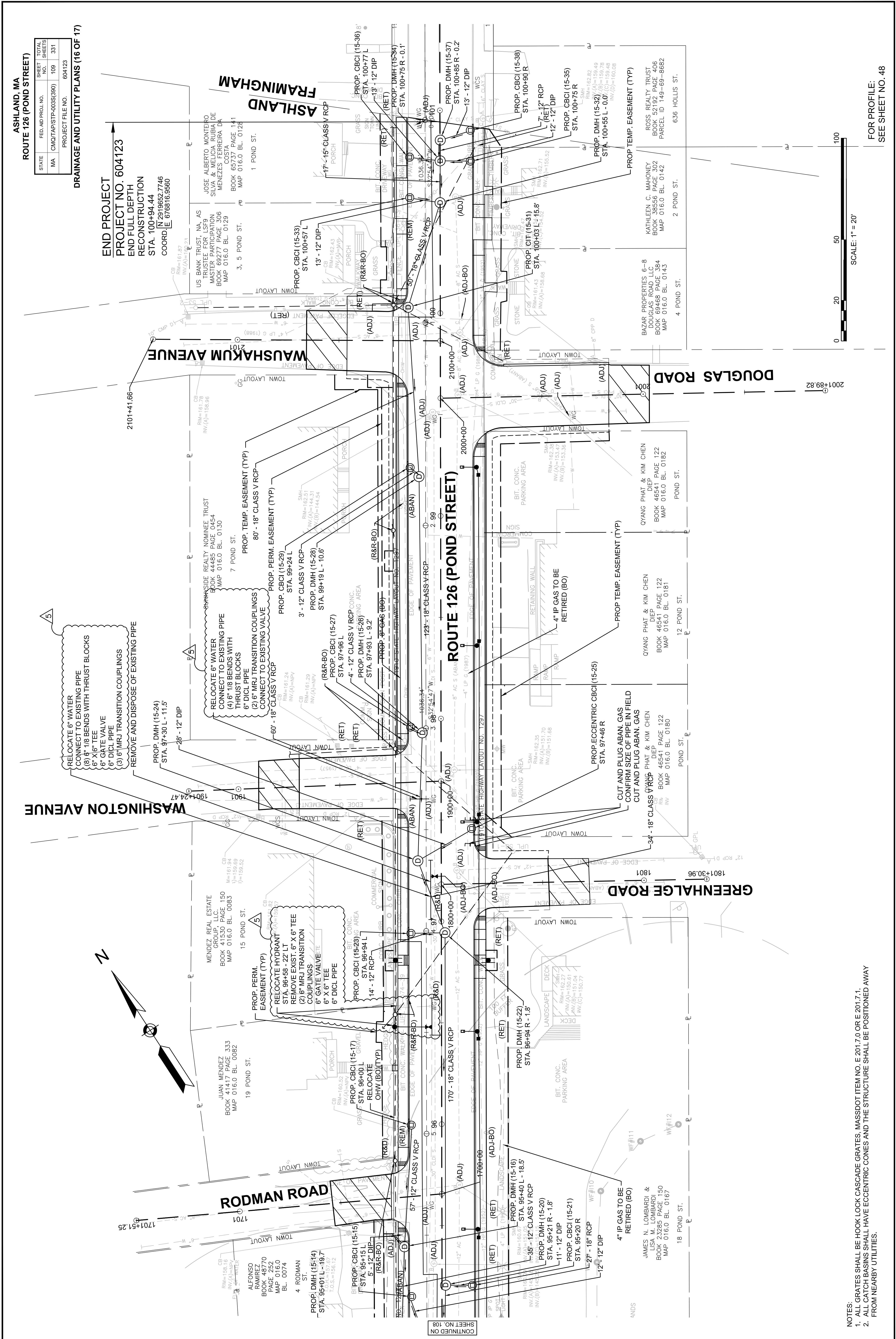
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMO/TAP/STP-003S(390)	108	331
PROJECT FILE NO.		604123	

DRAINAGE AND UTILITY PLANS (15 OF 17)



- NOTES:
1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES. MASSDOT ITEM NO. E 201.7.0 OR E 201.7.1.
 2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.

SCALE: 1" = 20'



NOTES:

1. ALL GRATES SHALL BE HOOK LOCK CASCADE GRATES, MASSDOT ITEM NO. E 201.7.0 OR E 201.7.1.
2. ALL CATCH BASINS SHALL HAVE ECCENTRIC CONES AND THE STRUCTURE SHALL BE POSITIONED AWAY FROM NEARBY UTILITIES.

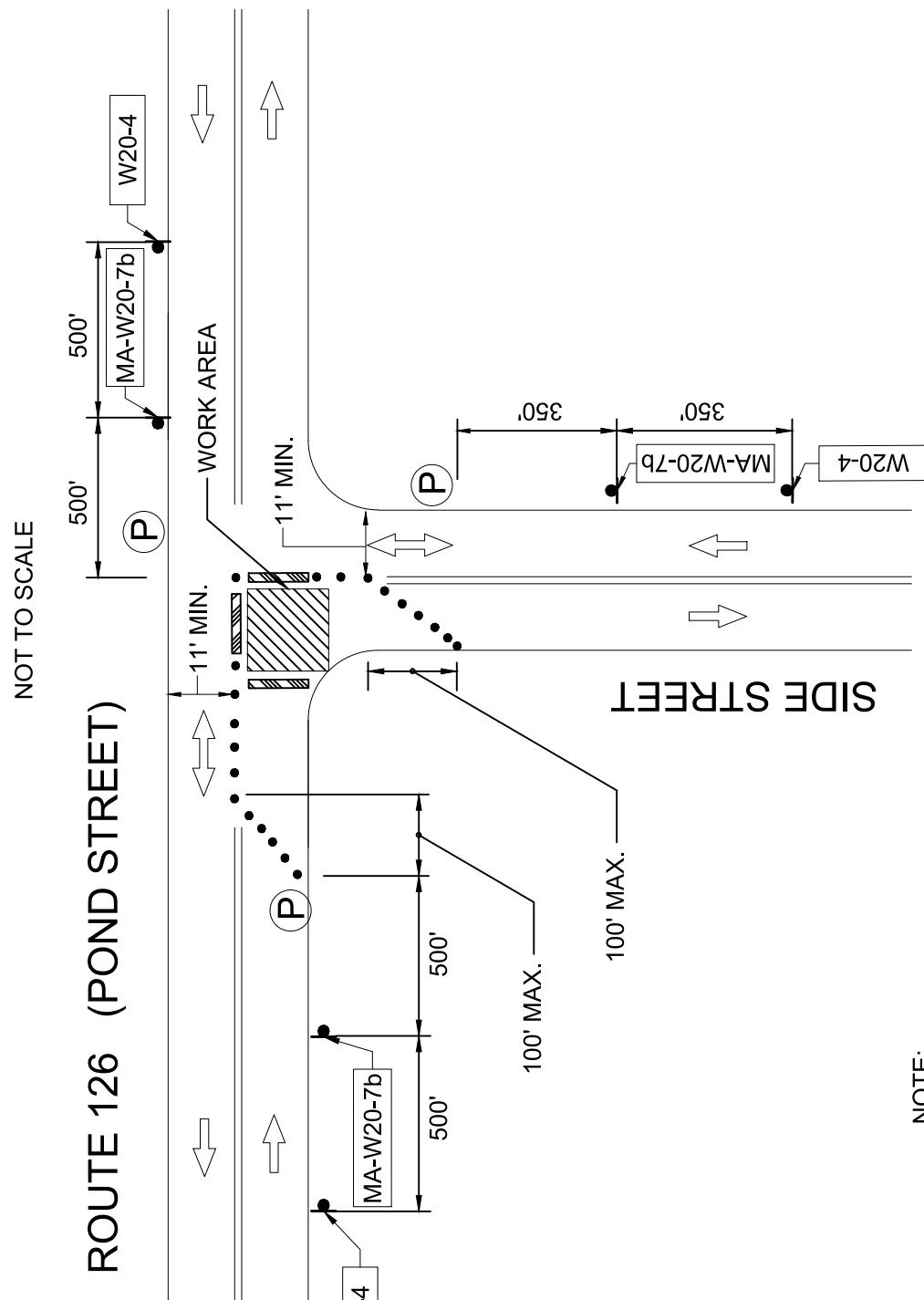
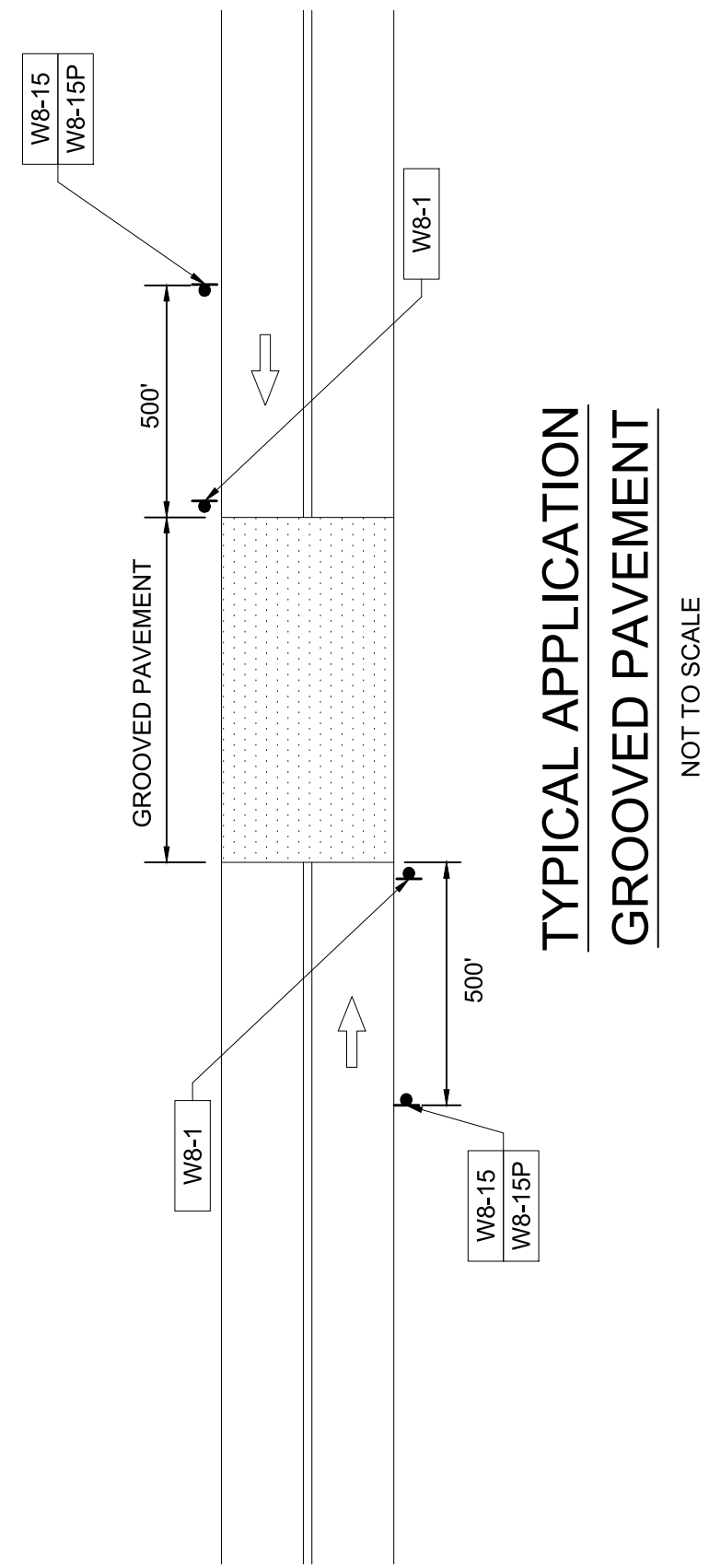
FOR PROFILE:
SEE SHEET NO. 48

ASHLAND, MA

ROUTE 126 (POND STREET)

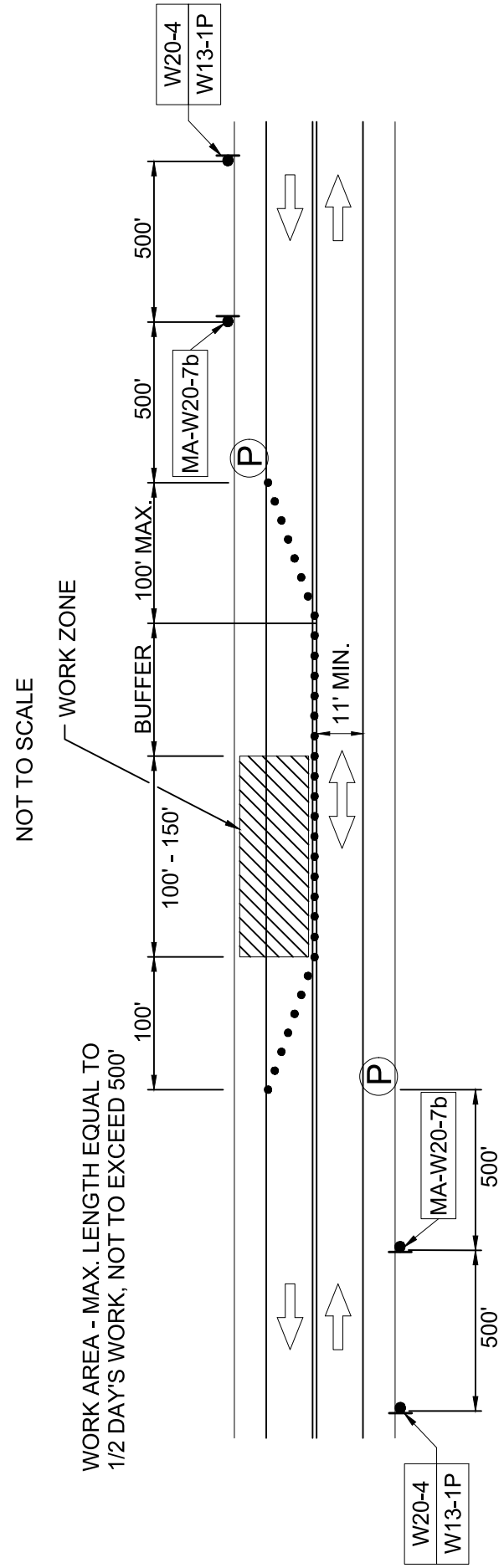
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMDOT/APSTP-0035(900)	147	331
PROJECT FILE NO.		604123	

TEMPORARY TRAFFIC CONTROL PLANS
TYPICAL APPLICATIONS 1



**TYPICAL APPLICATION - SINGLE LANE
APPROACH ONE QUADRANT CLOSURE AT T-INTERSECTION**

NOTE: USE SIMILAR TRAFFIC SETUP FOR WORK AT OPPOSITE SIDE OF INTERSECTION.



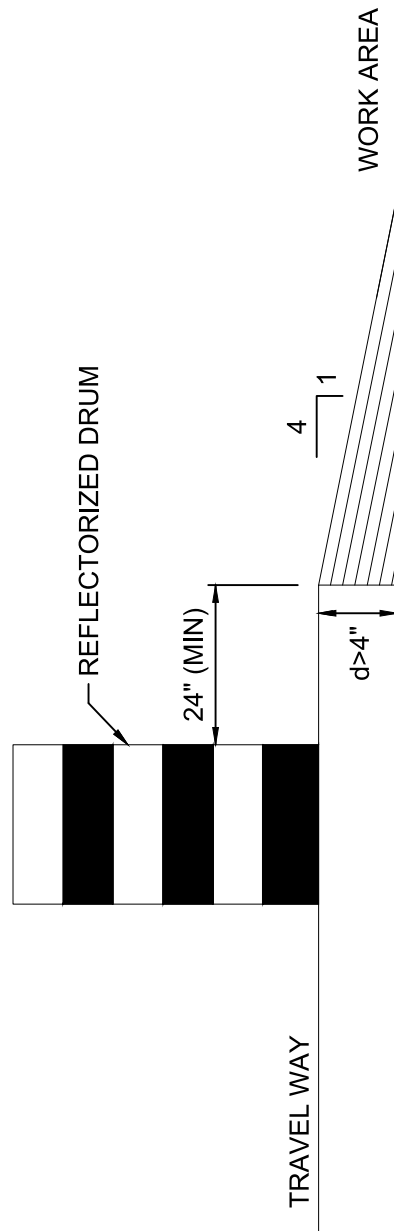
**TYPICAL APPLICATION - TWO LANE ROAD
ONE LANE ALTERNATING TRAFFIC**

NOTES:

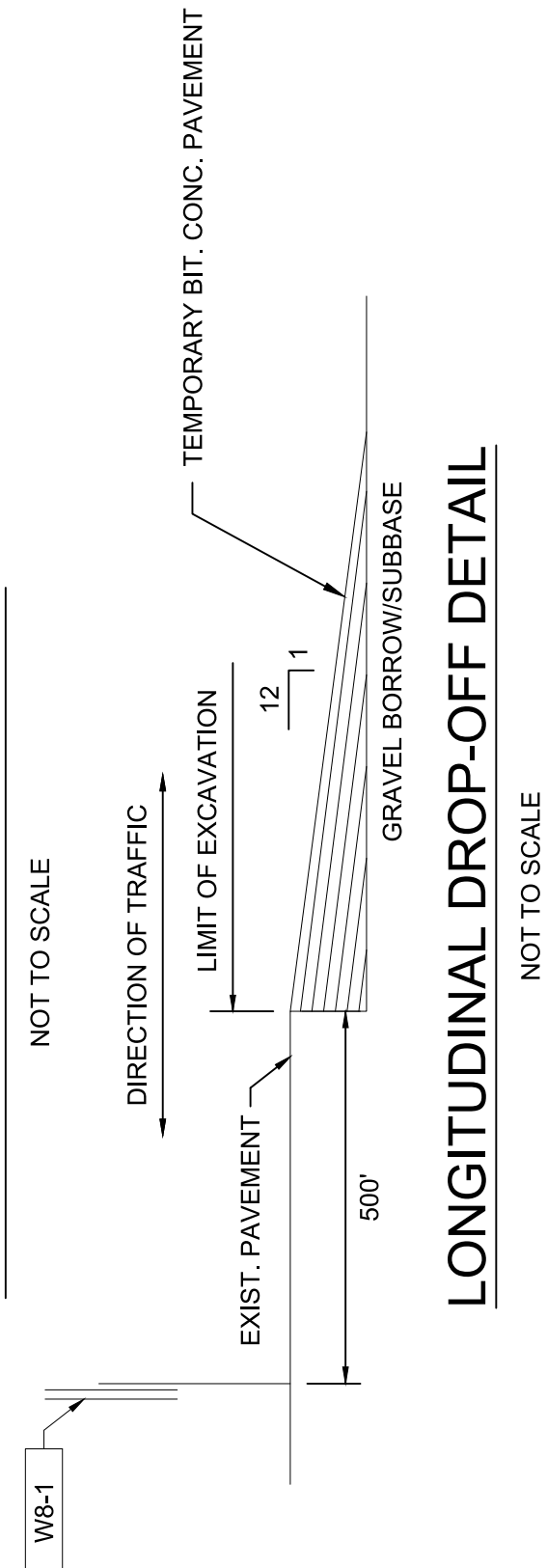
1. THIS TYPICAL TRAFFIC SETUP MAY BE USED FOR CONSTRUCTION OF DRAINAGE CULVERTS AT FOLLOWING STATIONS:

- STATION 37+48,
- STATION 41+98,
- STATION 80+41, AND
- STATION 80+14

2. IF THE TRAFFIC CONTROL SETUP IS USED FOR CULVERT INSTALLATION AT THE END OF EACH WORK DAY, STEEL PLATING SHALL BE USED TO COVER THE TRENCH TO ALLOW FOR SAFE PASSAGE OF TRAFFIC AND RESTORATION OF NORMAL TRAFFIC OPERATIONS

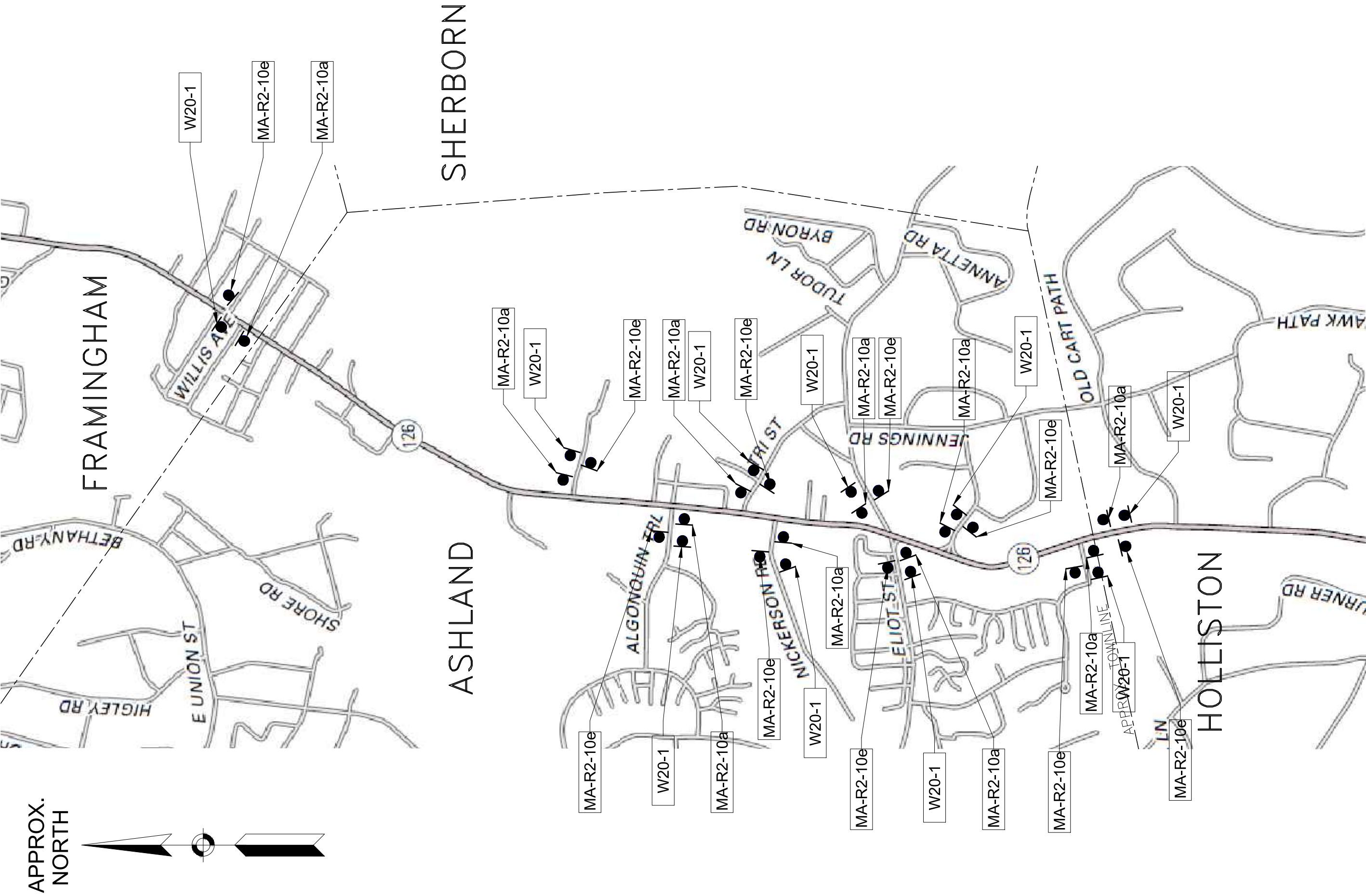


LATERAL DROP-OFF DETAIL

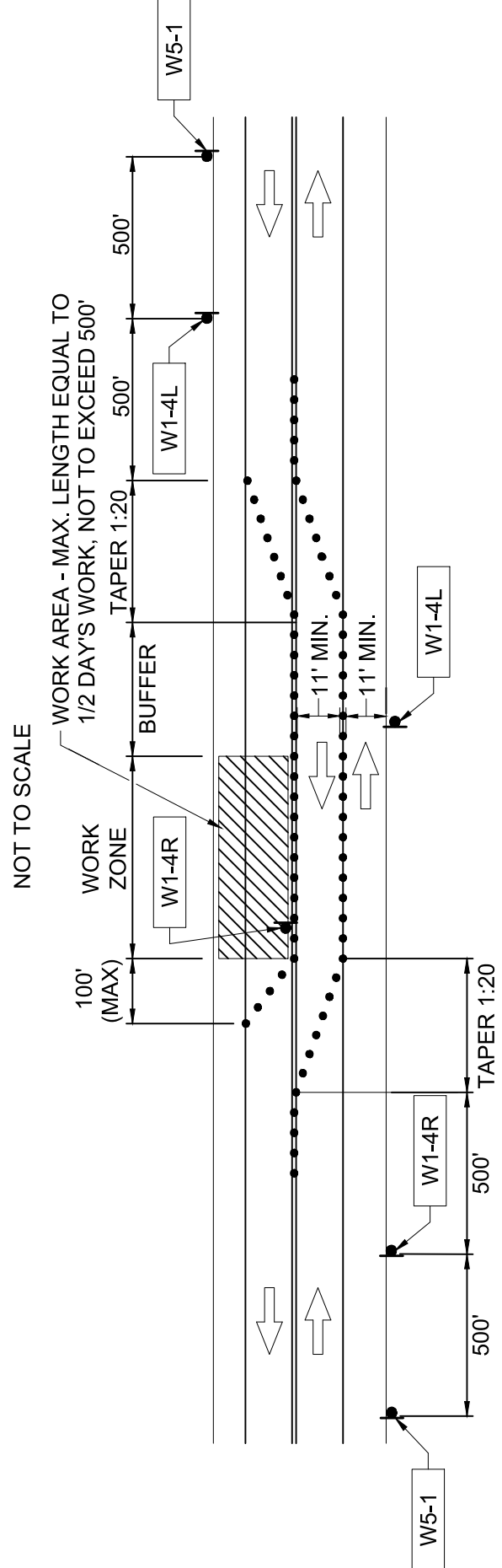


LONGITUDINAL DROP-OFF DETAIL

NOT TO SCALE



**TYPICAL APPLICATION - TWO LANE ROAD
SHOULDER AND TRAVEL LANE CLOSURE**



NOTES:

1. THIS TYPICAL TRAFFIC SETUP MAY BE USED FOR CONSTRUCTION OF DRAINAGE CULVERTS AT FOLLOWING STATIONS:

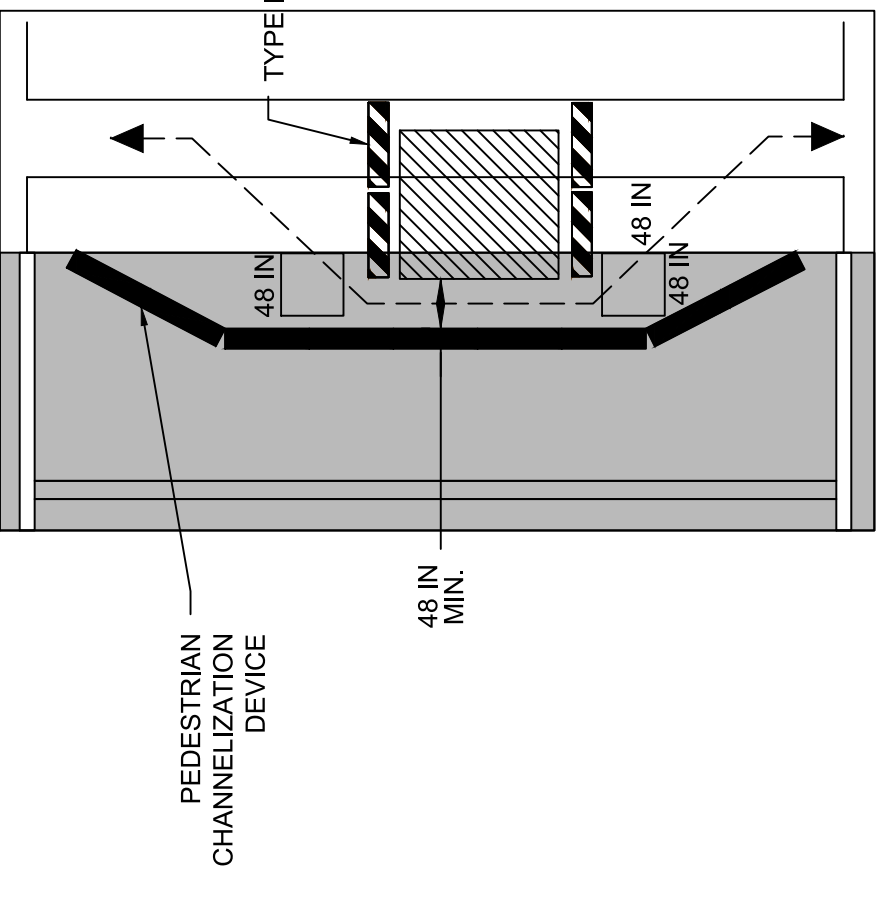
- STATION 37+48,
- STATION 41+98,
- STATION 80+41, AND
- STATION 80+14

2. IF THE TRAFFIC CONTROL SETUP IS USED FOR CULVERT INSTALLATION AT THE END OF EACH WORK DAY, STEEL PLATING SHALL BE USED TO COVER THE TRENCH TO ALLOW FOR SAFE PASSAGE OF TRAFFIC AND RESTORATION OF NORMAL TRAFFIC OPERATIONS

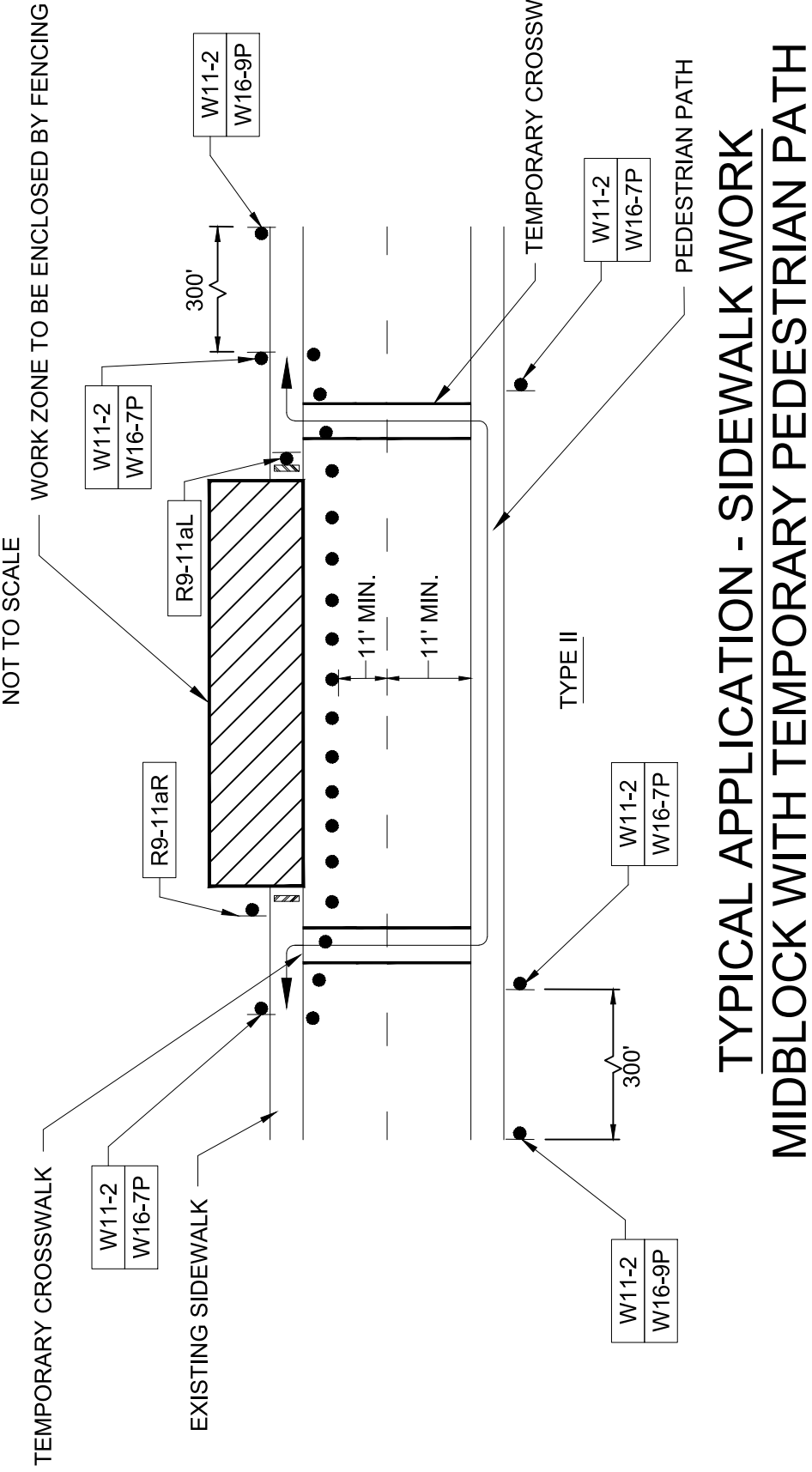
**TYPICAL APPLICATION - SINGLE LANE
APPROACH ONE QUADRANT CLOSURE**

NOTE: USE SIMILAR TRAFFIC SETUP FOR WORK AT OPPOSITE SIDE OF INTERSECTION.

NOT TO SCALE



PEDESTRIAN BYPASS



**TYPICAL APPLICATION - SIDEWALK WORK
MIDBLOCK WITH TEMPORARY PEDESTRIAN PATH**

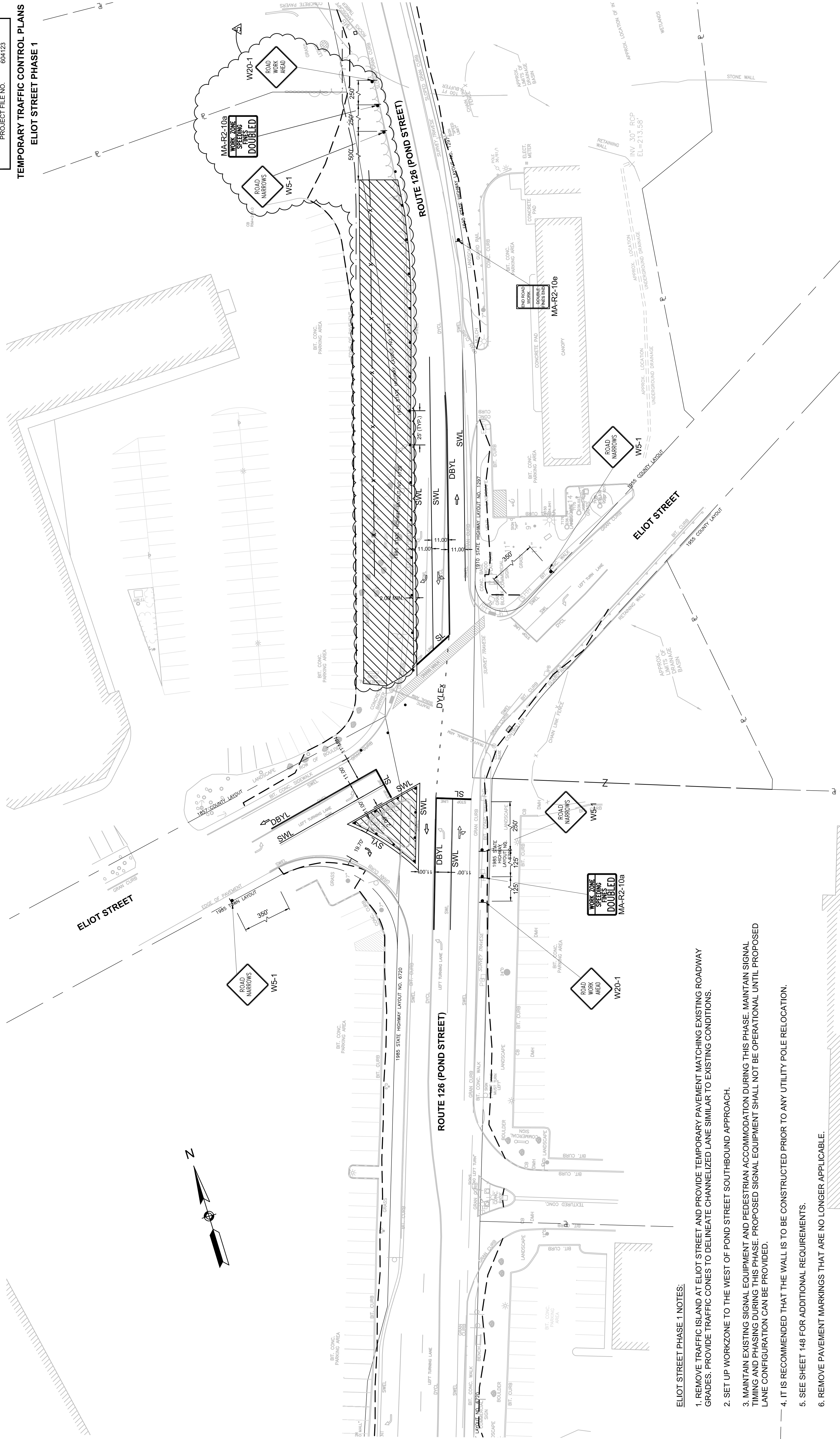
NOT TO SCALE

DATE	DESCRIPTION	REVISION
8/24/2020	USE ONLY PRINTS OF LATEST DATE	

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(390)	155	331
PROJECT FILE NO.			604123

TEMPORARY TRAFFIC CONTROL PLANS

ELIOT STREET PHASE 1



0 30 60 100

SCALE: 1" = 30'

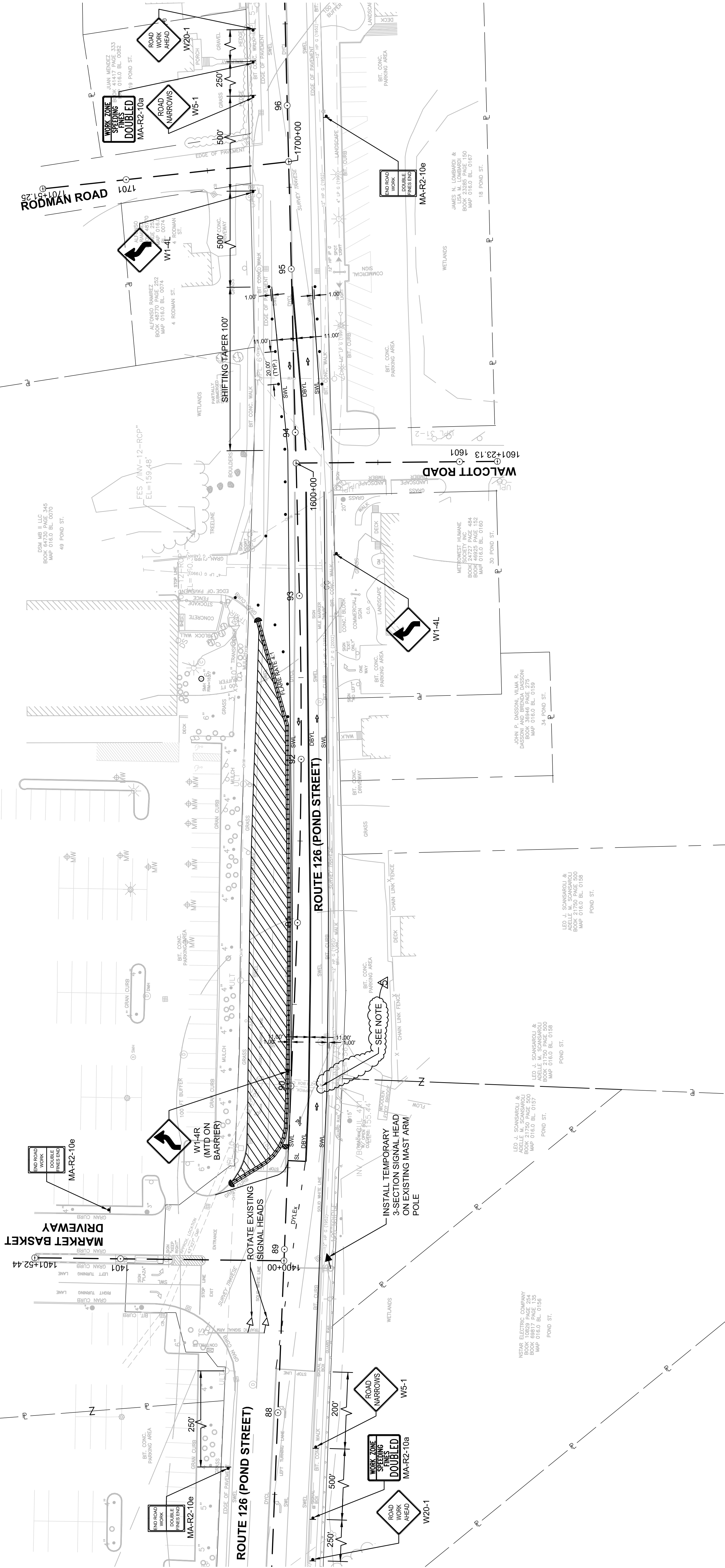
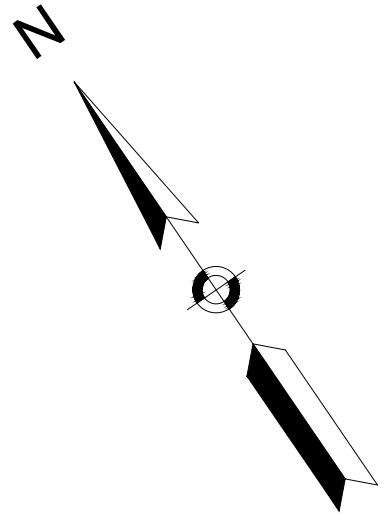
ELIOT STREET PHASE 1 NOTES:

1. REMOVE TRAFFIC ISLAND AT ELIOT STREET AND PROVIDE TEMPORARY PAVEMENT MATCHING EXISTING ROADWAY GRADES. PROVIDE TRAFFIC CONES TO DELINEATE CHANNELIZED LANE SIMILAR TO EXISTING CONDITIONS.
2. SET UP WORKZONE TO THE WEST OF POND STREET SOUTHBOUND APPROACH.
3. MAINTAIN EXISTING SIGNAL EQUIPMENT AND PEDESTRIAN ACCOMMODATION DURING THIS PHASE. MAINTAIN SIGNAL TIMING AND PHASING DURING THIS PHASE. PROPOSED SIGNAL EQUIPMENT SHALL NOT BE OPERATIONAL UNTIL PROPOSED LANE CONFIGURATION CAN BE PROVIDED.
4. IT IS RECOMMENDED THAT THE WALL IS TO BE CONSTRUCTED PRIOR TO ANY UTILITY POLE RELOCATION.
5. SEE SHEET 148 FOR ADDITIONAL REQUIREMENTS.
6. REMOVE PAVEMENT MARKINGS THAT ARE NO LONGER APPLICABLE.

8/24/2020	UPDATE WORK ZONE
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(390)	159	331
PROJECT FILE NO.			604123

TEMPORARY TRAFFIC CONTROL PLANS



NOTE:

FOR DRAINAGE PIPE INSTALLATION OUTSIDE OF THE LONG-TERM WORKZONES COVERED BY STAGE 1 AND 2 SHOWN ON THIS SHEET AND ON SHEET 160, RESPECTIVELY, TYPICAL TRAFFIC MANAGEMENT SETUPS SHOWN ON SHEET 147 MAY BE USED TO FACILITATE CONSTRUCTION.

8/24/2020	ADD NOTE
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	



WETLAND REPLICATION AREA SEDIMENTATION AND EROSION CONTROL NOTES:

- PRIOR TO STARTING ANY WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION & SEDIMENTATION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN ALL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
- PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE THAT THE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT LEAVING THE LIMIT OF WORK. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
- ALL POINTS OF CONSTRUCTION INGRESS OR EGRESS WILL BE PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS.
- AFTER ANY SIGNIFICANT RAINFALL, SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
- ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE SWEEPED AT THE END OF EACH WORKING DAY.
- ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFF-SITE.
- AN EROSION CONTROL BARRIER SHALL BE INSTALLED AS SHOWN ON THE PLANS.
- MEANS OF EROSION AND SEDIMENT PROTECTION AS NOTED ON THE DRAWINGS INDICATE THE MINIMUM PROVISIONS NECESSARY. ADDITIONAL MEANS OF PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR CONTINUED OR UNFORESEEN EROSION PROBLEMS, AT NO ADDITIONAL EXPENSE TO THE OWNER.

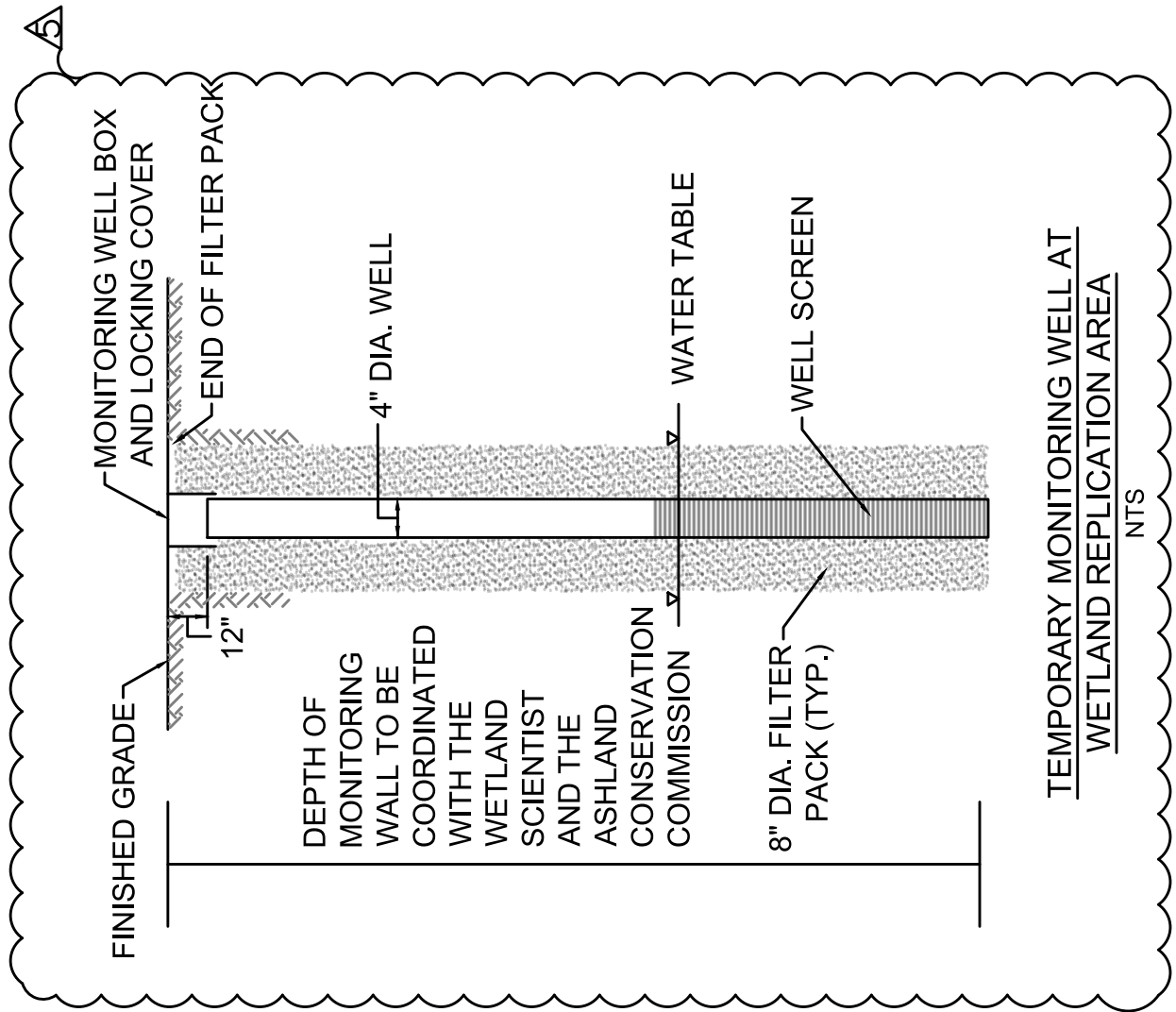
WETLAND REPLICATION AREA PLANTING NOTES AND CONSTRUCTION SEQUENCE:

- CONTRACTOR SHALL COORDINATE WITH THE TOWN OF ASHLAND REGARDING ACCESS.
- EROSION CONTROLS WILL BE INSTALLED ALONG THE EXISTING WETLAND BOUNDARY. THIS WILL ALLOW THE SITE CONTRACTOR TO PROPERLY TIE - IN PROPOSED CONTOURS AT THE EDGE OF THE EXISTING WETLAND.
- UNDER THE DIRECTION OF THE WETLAND SPECIALIST, THE CONTRACTOR SHALL PROVIDE ROUGH GRADING (+/- 3 INCHES) WITHIN THE REPLICATION WETLAND. WETLAND MITIGATION GRADING IS SUBJECT TO MODIFICATION BASED ON ACTUAL SITE CONDITIONS. THE WETLAND SPECIALIST WILL INSPECT THE SUB-GRADE OF THE REPLICATION AREA TO ENSURE THAT THE PROPER HYDROLOGY AND MICROTOPOGRAPHY HAS BEEN ESTABLISHED.
- PRIOR TO SOIL ADDITIONS AND/OR PLANTINGS, PROJECT SURVEYORS SHOULD VERIFY THAT GRADES HAVE BEEN ACHIEVED AS SHOWN ON THIS DRAWING.
- PRIOR TO PLANTING, THE MITIGATION AREA SHOULD BE EXCAVATED APPROXIMATELY 1 FOOT BELOW THE FINISHED GRADE OF THE WETLAND MITIGATION AREA. FOLLOWING EXCAVATION OF THE MITIGATION AREA, A SOIL MIXTURE (NATURAL OR MANMADE) CONSISTING OF EQUAL VOLUMES OF ORGANIC (COMPOST) MATERIAL AND MINERAL SOIL MATERIAL SUCH AS A RICH LOAMY SAND (WITH A LOOSE FRIABLE CONSISTENCY) SHALL BE USED TO BRING THE EXCAVATED WETLAND MITIGATION AREA TO FINISHED GRADE. PRIOR TO USE, THE SOIL MIXTURE WILL BE ANALYZED BY A SOIL TESTING LABORATORY FOR TEXTURE AND NUTRIENTS. THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR THIS COORDINATION. SEE SPECIAL PROVISION.
- ESTIMATES OF SEASONAL HIGH GROUNDWATER (SHGW) SHALL BE DETERMINED IN THE FIELD AT THE TIME OF REPLICATION GRADING. THE FINISH GRADE OF THE WETLAND MITIGATION AREA SHALL BE SET SO THAT GROUNDWATER IS WITHIN 12" OF THE SURFACE FOR AT LEAST 14 CONSECUTIVE DAYS DURING THE GROWING SEASON.
- PENDING SITE AND WEATHER CONDITIONS ALL PLANTINGS WILL TAKE PLACE IN SPRING (MAY 15-JUNE 15) OR FALL (SEPTEMBER 1 - NOVEMBER 1).
- TREES PLANTED IN THE REPLICATION AREA SHALL BE LOCATED ON AREAS OF HIGHER ELEVATION (I.E., GRADED MOUNDS). TREES SHALL BE LOCATED IN THE FIELD BY THE WETLAND SPECIALIST.
- 4" OF LOAM (WEED-FREE, FINE SANDY LOAM) AND A CONSERVATION/WILDLIFE SEED MIX WILL BE SPREAD THROUGHOUT THE GRADED 3:1 UPLAND SLOPES AND IN ALL OTHER AREAS DISTURBED BY THE CONTRACTOR AS SPECIFIED. LOAM, SEED MIXTURE AND SOURCE SHALL BE APPROVED BY THE WETLAND SPECIALIST.

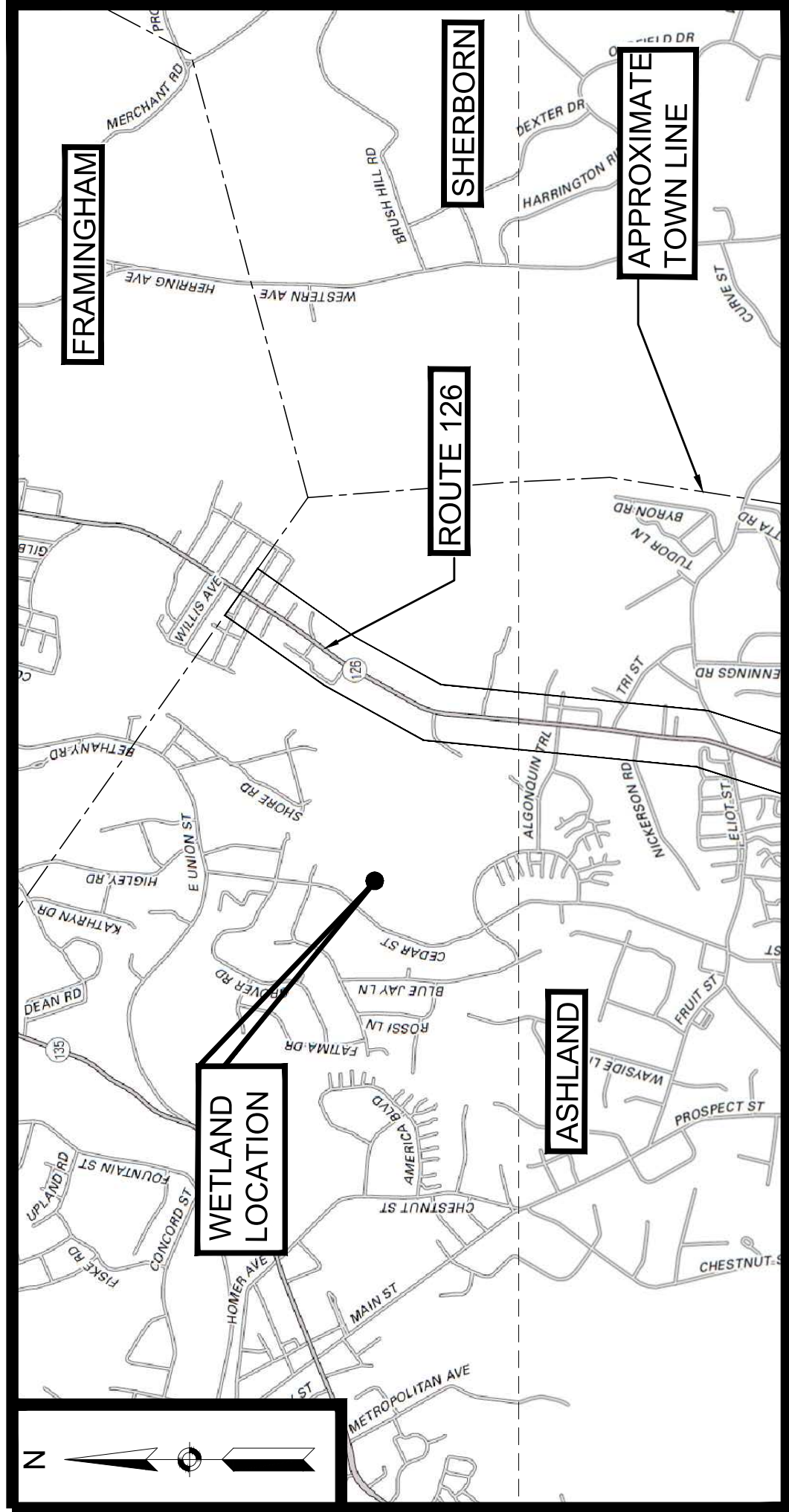
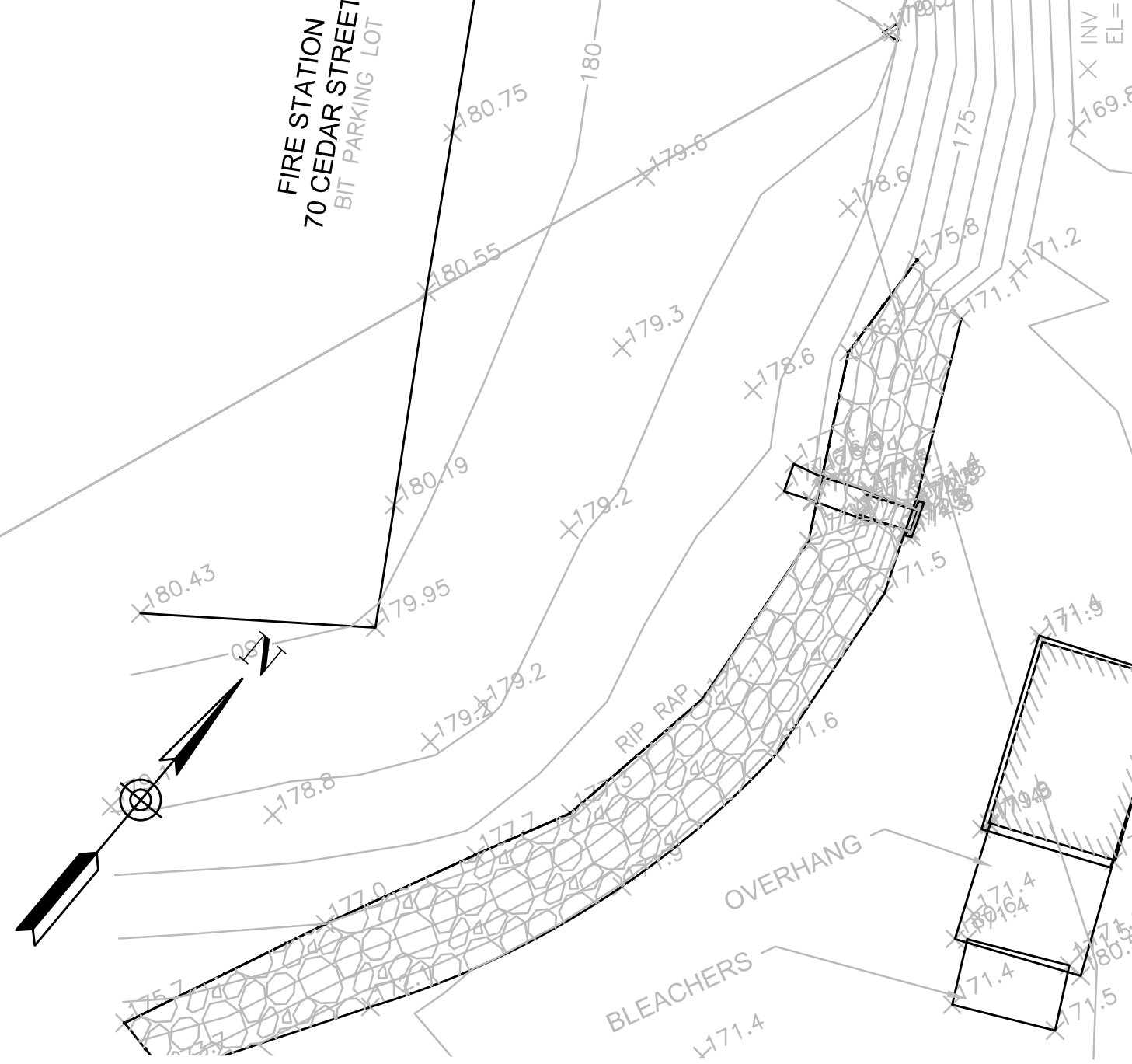
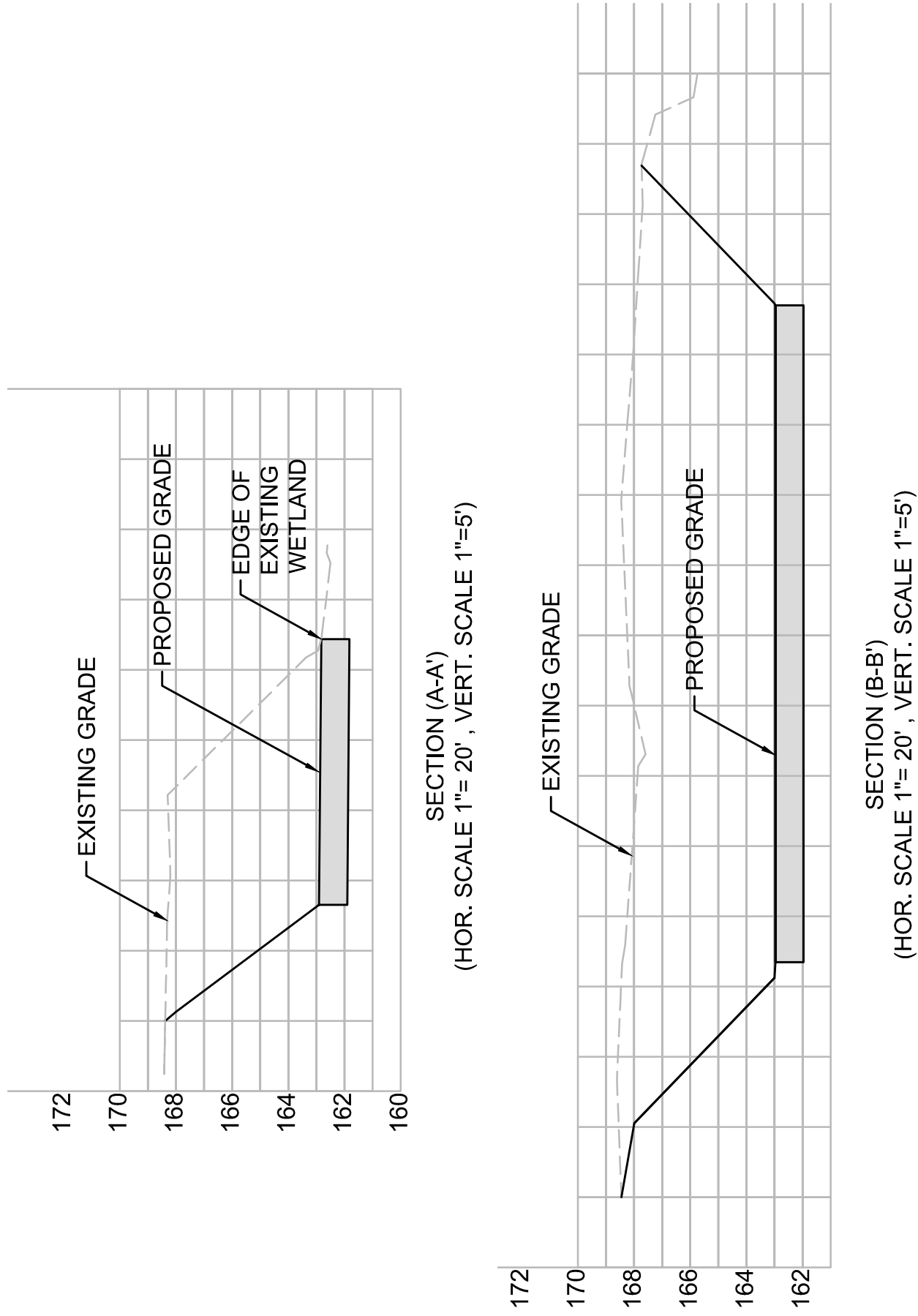
ASHLAND, MA
ROUTE 126 (POND STREET)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMO/TAP/ISTP-003S(390)	191	331
PROJECT FILE NO.		604123	

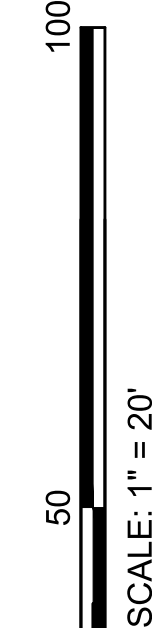
WETLAND REPLICATION PLAN
SHEET 1 OF 1



NOTE: ENTIRE LIMIT OF WORK IS LOCATED WITHIN 200' RIVERFRONT AREA ASSOCIATED WITH TRIBUTARY TO WAUSHAKUM POND.



LOCUS PLAN



SCALE: 1" = 20'

0 20 50 100

SEEDING WITH A WETLAND SEED MIX

PLANTED ON MICROTOPOGRAPHY MOUNDS

APPROXIMATE LOCATION OF TEMPORARY MONITORING WELL (TYP.)

WETLAND REPLICATION AREA (4,110 SF)

SEEDING WITH A WETLAND SEED MIX

PLANTED ON MICROTOPOGRAPHY MOUNDS

APPROXIMATE LOCATION OF TEMPORARY MONITORING WELL (TYP.)

WETLAND REPLICATION AREA (4,110 SF)

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WETLAND REPLICATION AREA (4,110 SF)

SEEDING WITH A WETLAND SEED MIX

PLANTED ON MICROTOPOGRAPHY MOUNDS

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WETLAND REPLICATION AREA (4,110 SF)

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PLANTED ON MICROTOPOGRAPHY MOUNDS

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WETLAND REPLICATION AREA (4,110 SF)

SEEDING WITH A WETLAND SEED MIX

PLANTED ON MICROTOPOGRAPHY MOUNDS

APPROXIMATE LOCATION OF TEMPORARY MONITORING WELL (TYP.)

WETLAND REPLICATION AREA (4,110 SF)

SEEDING WITH A WETLAND SEED MIX

PLANTED ON MICROTOPOGRAPHY MOUNDS

APPROXIMATE LOCATION OF TEMPORARY MONITORING WELL (TYP.)

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WETLAND REPLICATION AREA (4,110 SF)

SEEDING WITH A WETLAND SEED MIX

PLANTED ON MICROTOPOGRAPHY MOUNDS

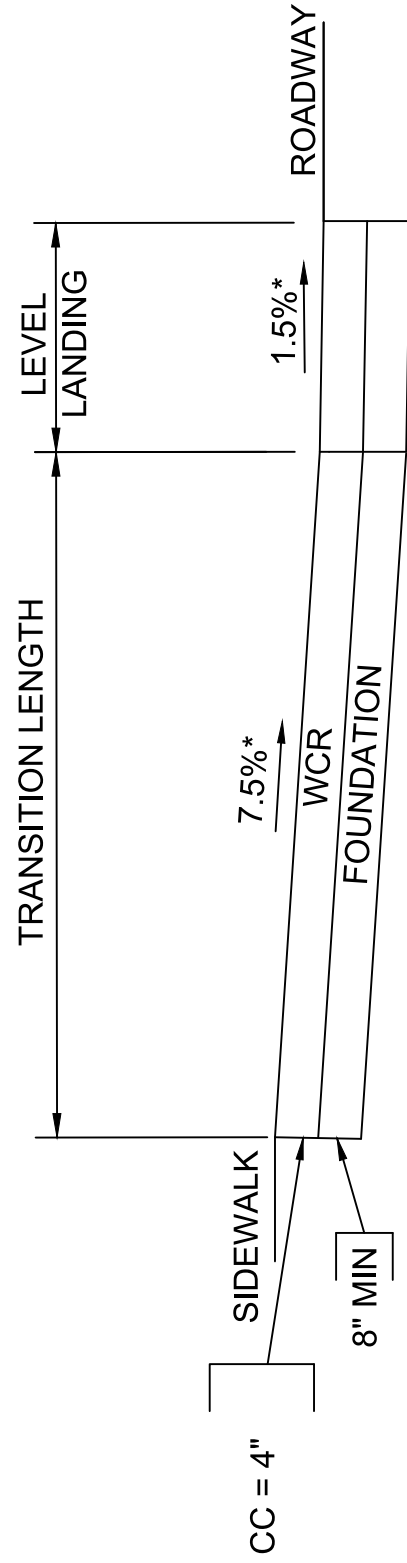
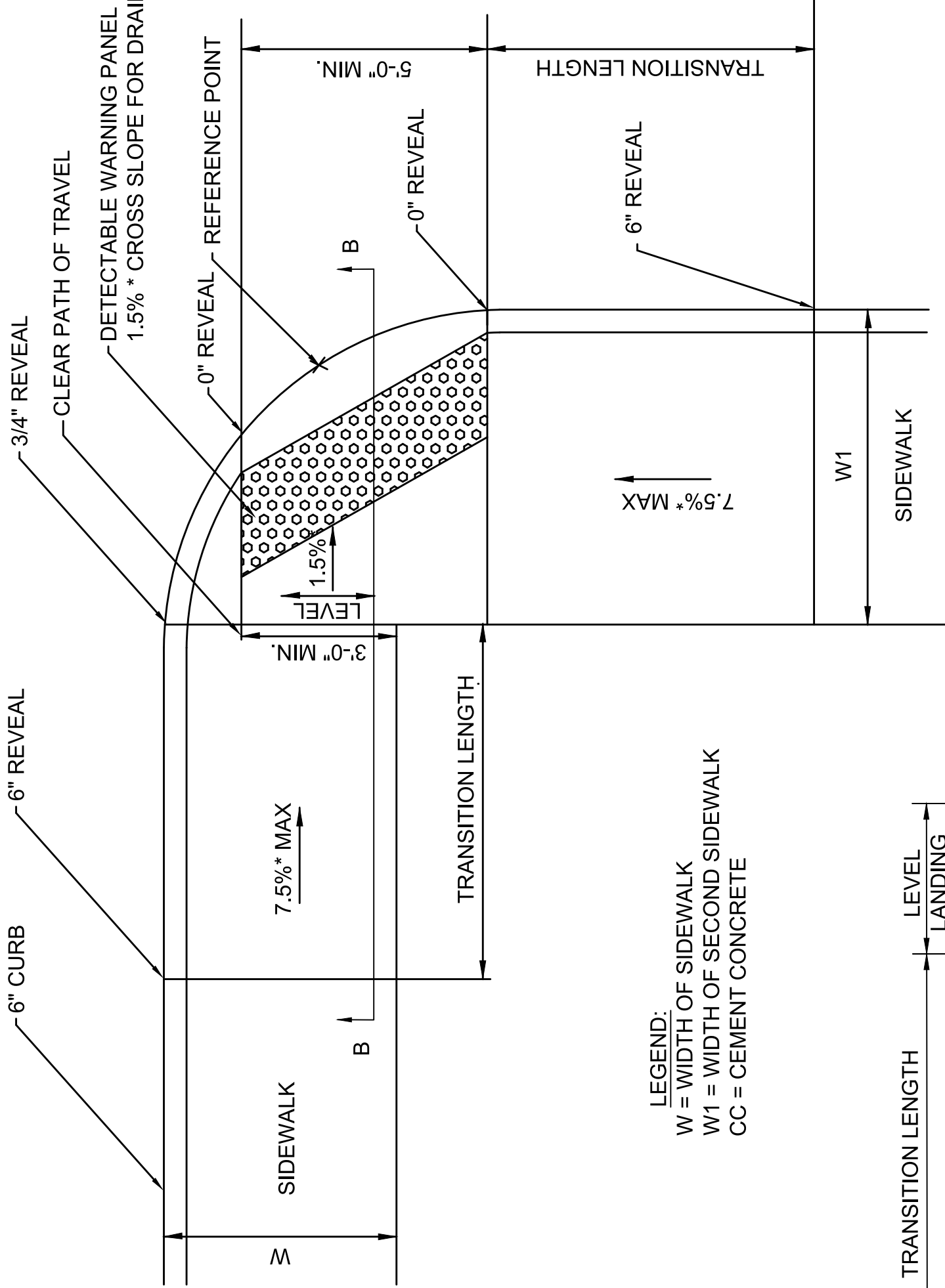
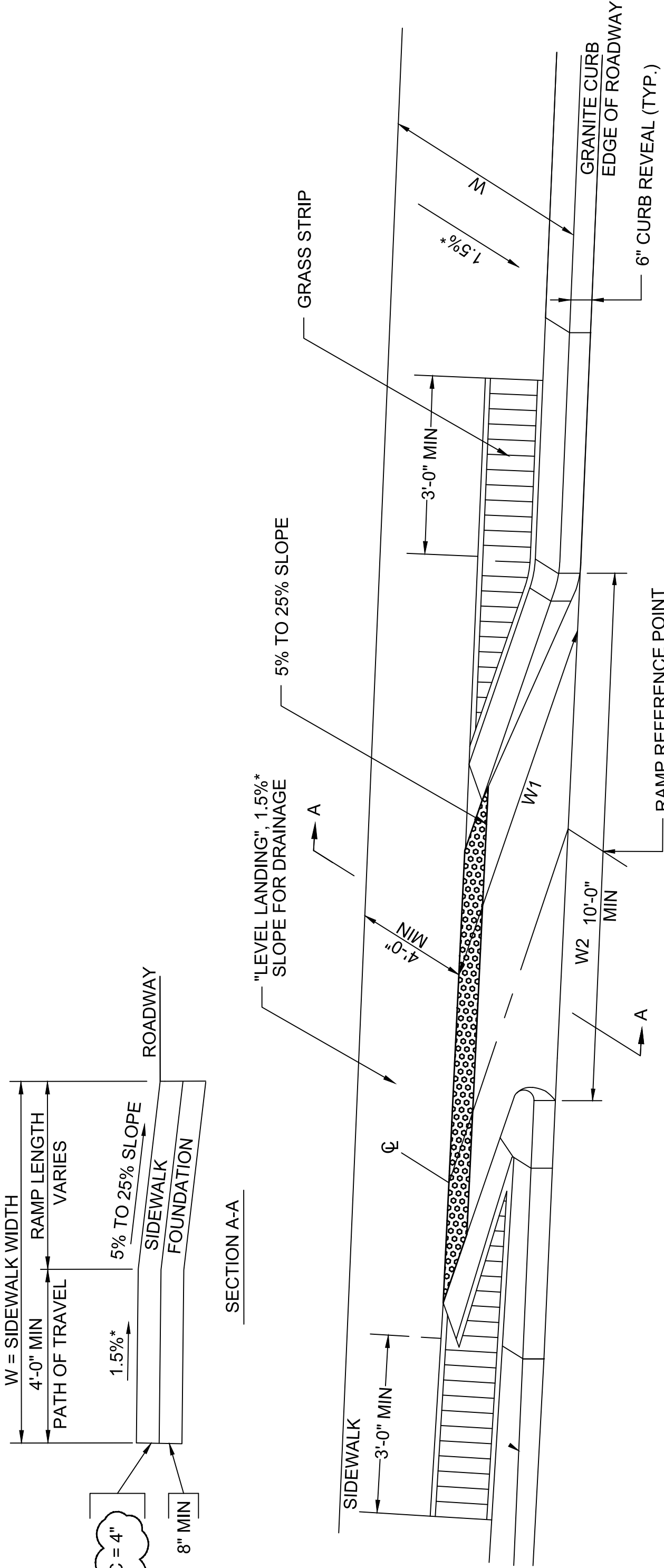
APPROXIMATE LOCATION OF TEMPORARY MONITORING WELL (TYP.)

WETLAND REPLICATION AREA (4,110 SF)

**ASHLAND
ROUTE 126 (POND STREET)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-003S(390)	201	331
PROJECT FILE NO.			604123

WHEELCHAIR RAMP DETAILS 3



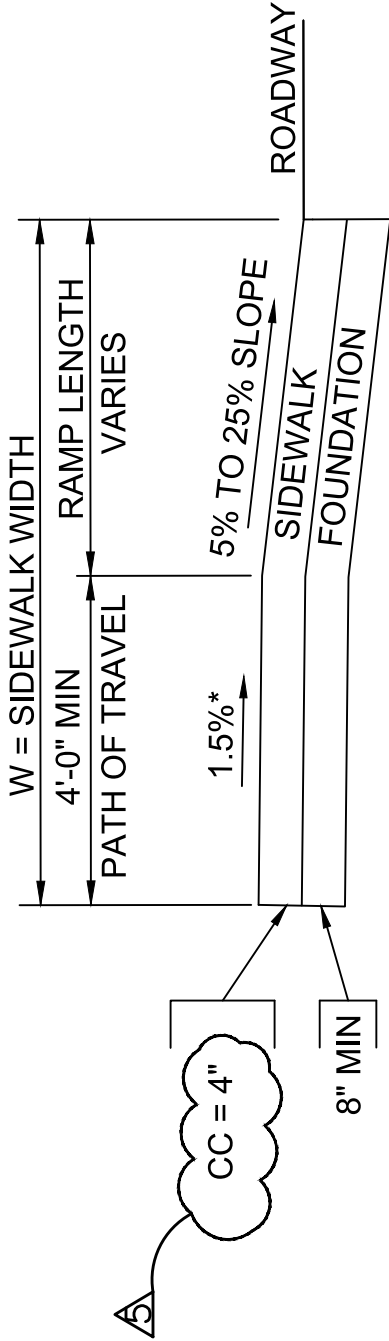
CURB CUT RAMP DETAIL
(“T” INTERSECTION WHEELCHAIR RAMP)

[illegible]

NOTES:

- * CONSTRUCTION TOLERANCE \pm 0.5%
- SEE CONSTRUCTION STANDARD E 107.6.0
- ** SEE CONSTRUCTION STANDARD E 107.9.0
- DETECTABLE WARNING PANELS SHALL BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STD E 107.6.5
- CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR CONSTRUCTING RAMPS COMPLIANT WITH ADA/AAAB RULES, REGULATIONS AND STANDARDS. CONTRACTOR SHALL VERIFY RAMPS ARE ADA/AAAB COMPLIANT BEFORE POURING CEMENT CONCRETE.
- *** 3" CURB REVEAL

8/24/2020	UPDATE DIMENSION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	



BIKE RAMP #	STATION	OFFSET	WIDTH OF SIDEWALK (W) (INCLUDING GRASS STRIP)	PATH OF RAMP (W1)	WIDTH OF RAMP ENTRANCE (W2)
1	23+05.27	18.26 R	18.74	20.57	15.91
2	23+26.78	22.00 L	13.50	13.01	14.20
3	301+36.74	20.00 R	15.00	10.80	14.20
4	301+22.14	20.00 L	15.00	11.83	14.20
5	26+25.45	26.00 R	15.00	11.89	14.20
6	26+65.46	16.00 L	15.00	11.83	14.20

BICYCLE RAMP INTO SIDEWALK

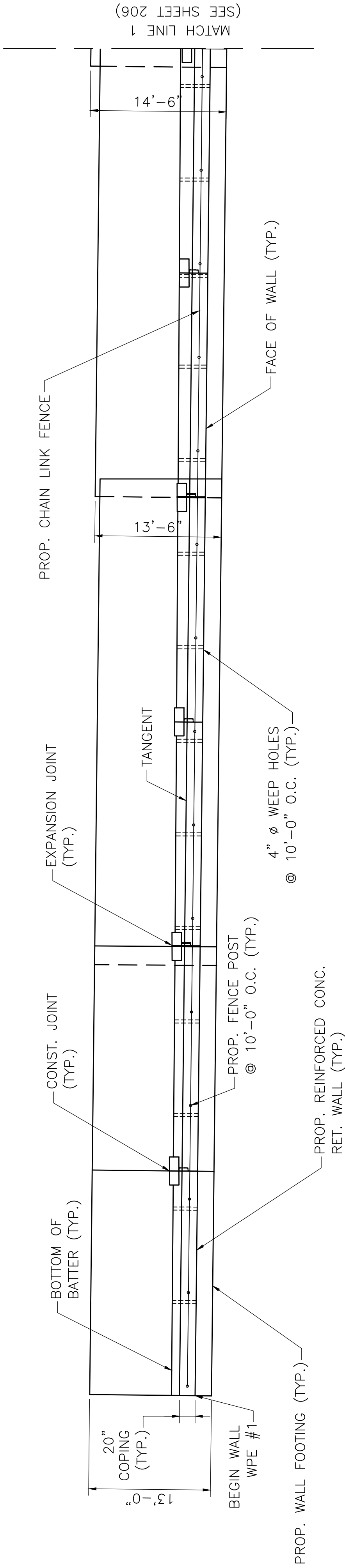
WCR NO.	STATION	OFFSET	WIDTH OF OPENING
1	24+05.71	6.14 R	14.00
2	24+05.80	5.25 L	13.80
3	24+87.54	86.83 R	14.00
4	25+07.51	84.33 R	13.60
5	24+73.32	84.52 L	14.00
6	24+91.52	86.44 L	14.30
7	25+83.43	3.70 L	10.67
8	25+82.15	9.03 R	10.50
9	30+39.86	26.96 L	7.30
10	30+48.73	16.00 L	6.00
11	30+62.41	27.03 L	6.80

NOTE: ALL CROSSWALK OPENINGS AT TRAFFIC ISLANDS SHALL CONFORM TO ADA/AAB REQUIREMENTS AND SHALL NOT HAVE SLOPES EXCEED 2% IN ANY DIRECTION.

CROSSWALK OPENINGS AT TRAFFIC ISLANDS

NOT TO SCALE

**ELIOT STREET RETAINING
WALL PLAN AND ELEVATION
SHEET 1 OF 2**



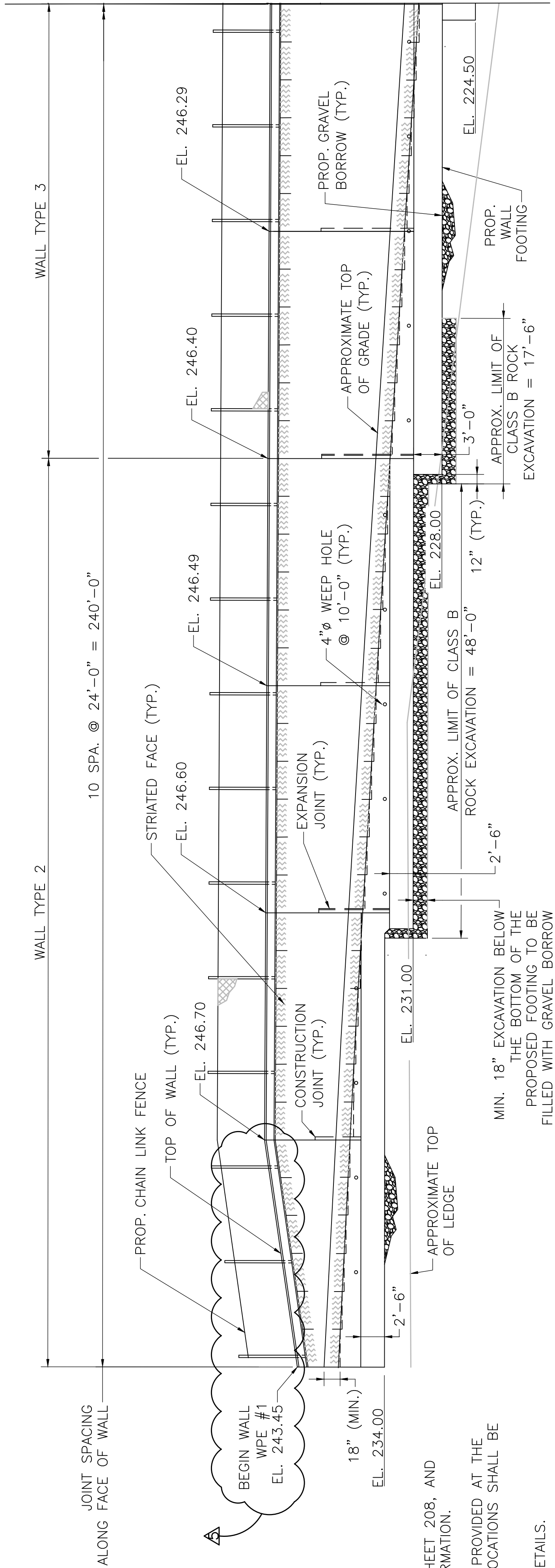
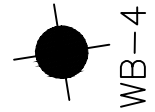
ELIOT RETAINING WALL WORKING POINT TABLE					
WORKING POINT	DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
WPE #1	BEGIN WALL	32+15.00	37.62'	2913275.07	674747.05
WPE #2	POINT OF CURVATURE	34+55.95	32.05'	2913502.30	674813.56
WPE #3	END WALL	34+90.00	28.11'	2913534.32	674822.22

1. ELIOT WORKING POINTS LABELED AS "WPE".

CURVE 1 DATA	
PC	= STA. 33+60.25
Δ	= 12°-40'-54"
R	= 805.00'
L	= 178.18'
PT	= STA. 35+38.43

TANGENT DATA	
PT	= STA. 29+34.98
L	= 425.27'
PC	= STA. 33+60.25

ELIOT STREET RETAINING WALL LAYOUT PLAN 1

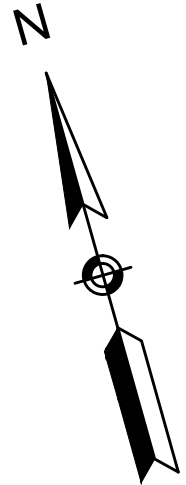
SCALE: $\frac{1''}{8'}$ = 1'-0"

- NOTES:
1. REFER TO TYPICAL WALL CROSS SECTIONS ON SHEET 208, AND HIGHWAY CROSS SECTIONS FOR ADDITIONAL INFORMATION.
 2. TEMPORARY SUPPORT OF EXCAVATION SHALL BE PROVIDED AT THE FRONT AND BACK OF THE WALL AS REQUIRED, LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
 3. SEE SHEET 19 FOR CONSTRUCTION ALIGNMENT DETAILS.
 4. RETAINING WALL LAID OUT BASED ON THE LINE WORK REPRESENTING THE FACE OF CURB (EXTERIOR EDGE OF SIDEWALK AS SPECIFIED ON THE HIGHWAY DESIGN DRAWINGS).

ELIOT STREET RETAINING WALL ELEVATION 1

SCALE: $1'' = 1'-0''$

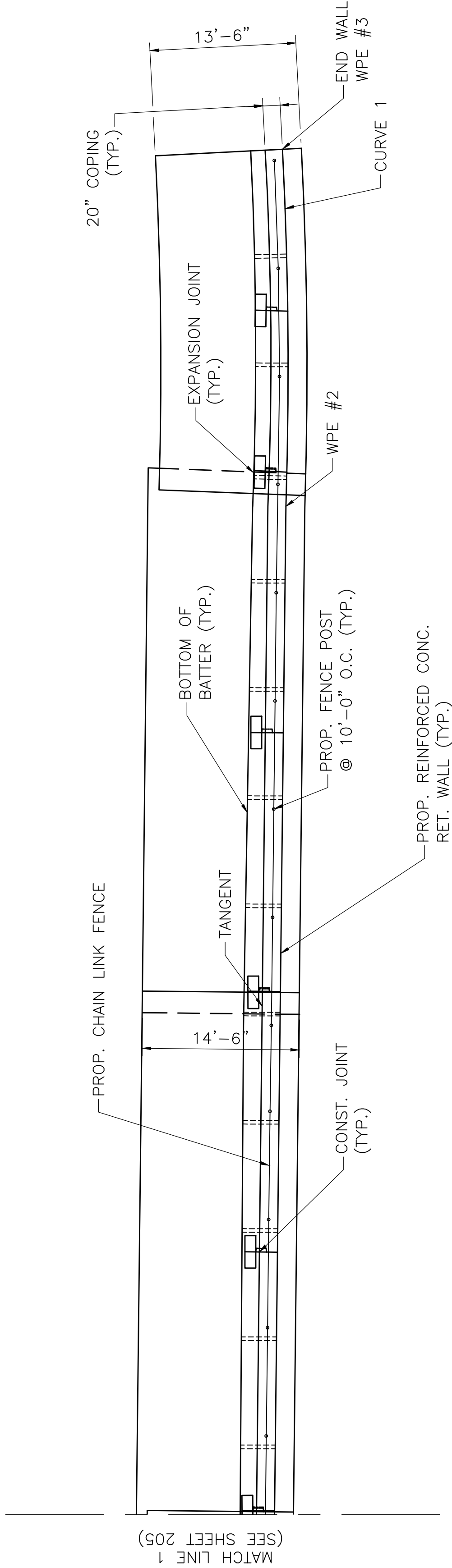
8/24/2020	<u>A</u> CHANGED TOP OF WALL ELEVATION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	



ASHLAND
ROUTE 126 (POND STREET)

STATE	FED.AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CHQ/TAP/STP-0035(390)	206	331
PROJECT FILE NO.		604123	

ELIOT STREET RETAINING WALL
PLAN AND ELEVATION
SHEET 2 OF 2

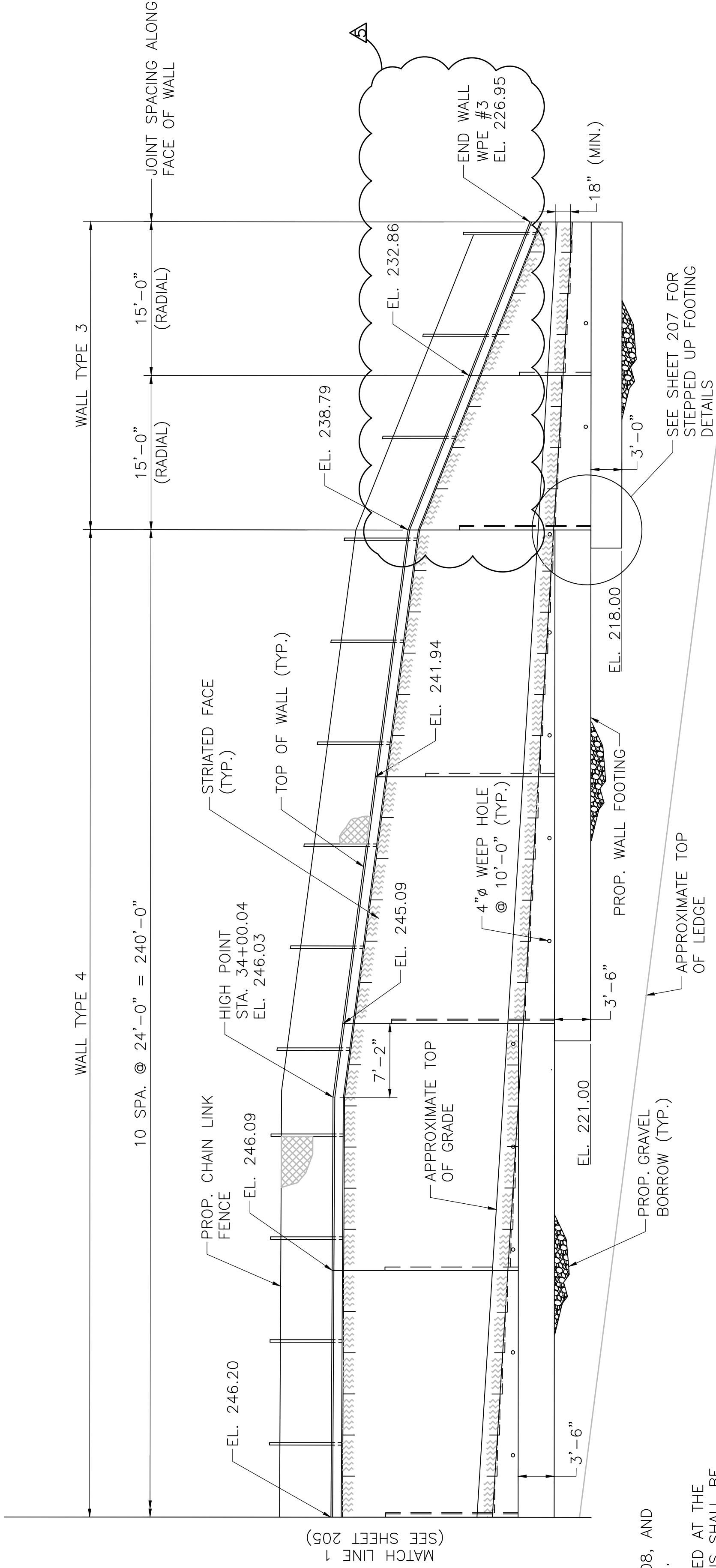


TANGENT DATA	
PT	= STA. 29+34.98
L	= 425.27'
PC	= STA. 33+60.25

CURVE 1 DATA	
PC	= STA. 33+60.25
Δ	= 12°-40'-54"
R	= 805.00'
L	= 178.18'
PT	= STA. 35+38.43

ELIOT STREET RETAINING WALL LAYOUT PLAN 2

SCALE: $\frac{1}{8}" = 1'-0"$



- NOTES:
1. REFER TO TYPICAL WALL CROSS SECTIONS ON SHEET 208, AND HIGHWAY CROSS SECTIONS FOR ADDITIONAL INFORMATION.
 2. TEMPORARY SUPPORT OF EXCAVATION SHALL BE PROVIDED AT THE FRONT AND BACK OF THE WALL AS REQUIRED; LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
 3. SEE SHEET 20 FOR CONSTRUCTION ALIGNMENT DETAILS.
 4. RETAINING WALL LAID OUT BASED ON THE LINE WORK REPRESENTING THE FACE OF CURB (EXTERIOR EDGE OF SIDEWALK AS SPECIFIED ON THE HIGHWAY DESIGN DRAWINGS).

ELIOT STREET RETAINING WALL ELEVATION 2

SCALE: $\frac{1}{8}" = 1'-0"$

8/24/2020	Δ	CHANGED TOP OF WALL ELEVATION
DATE		DESCRIPTION
USE ONLY PRINTS OF LATEST DATE		

ASHLAND, MA

ROUTE 126 (POND STREET)

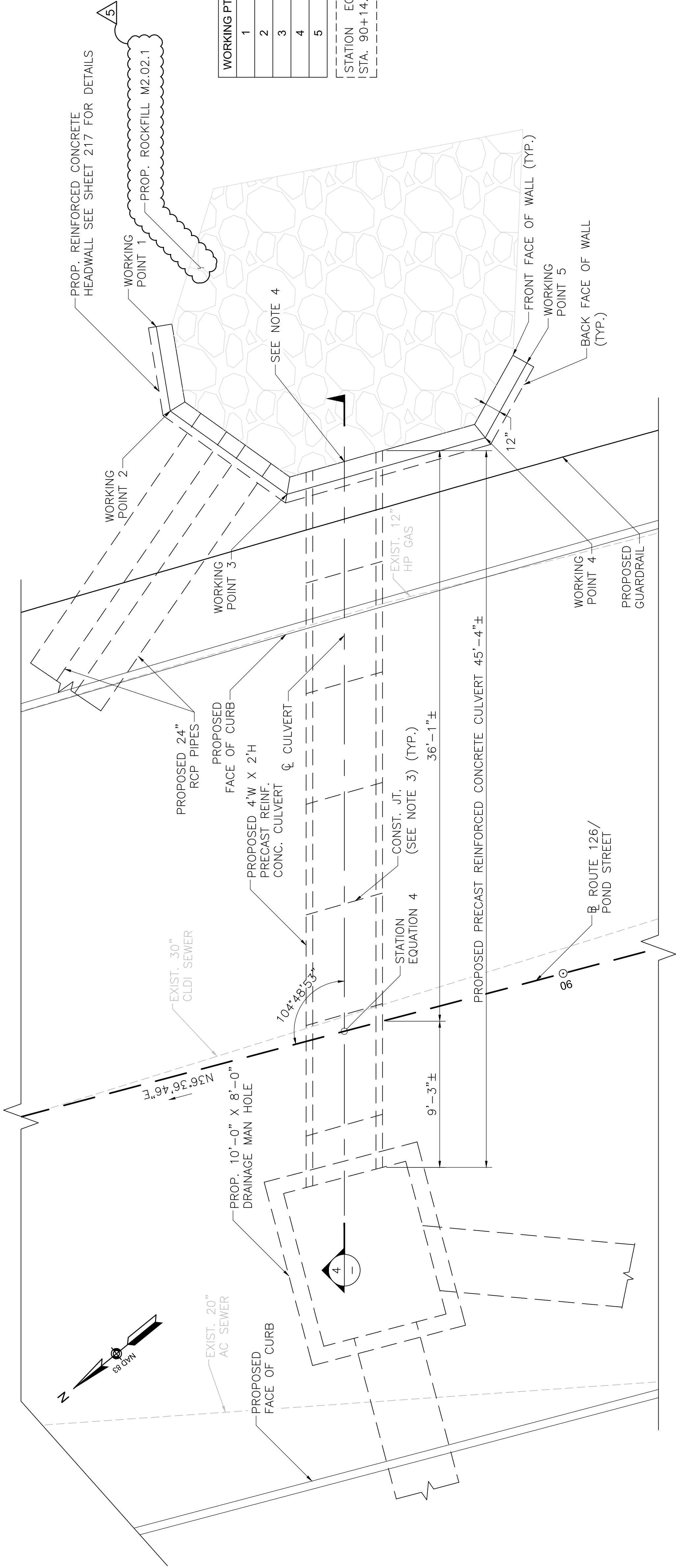
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ/TAP/STP-0035(390)	212	331

PROJECT FILE NO.
604123

SPECIAL DRAINAGE STRUCTURE NO.4

PLAN & SECTION

604123_BR01(CULVERT PLAN & EL).DWG
Plotted on 24-Aug-2020 8:33 AM



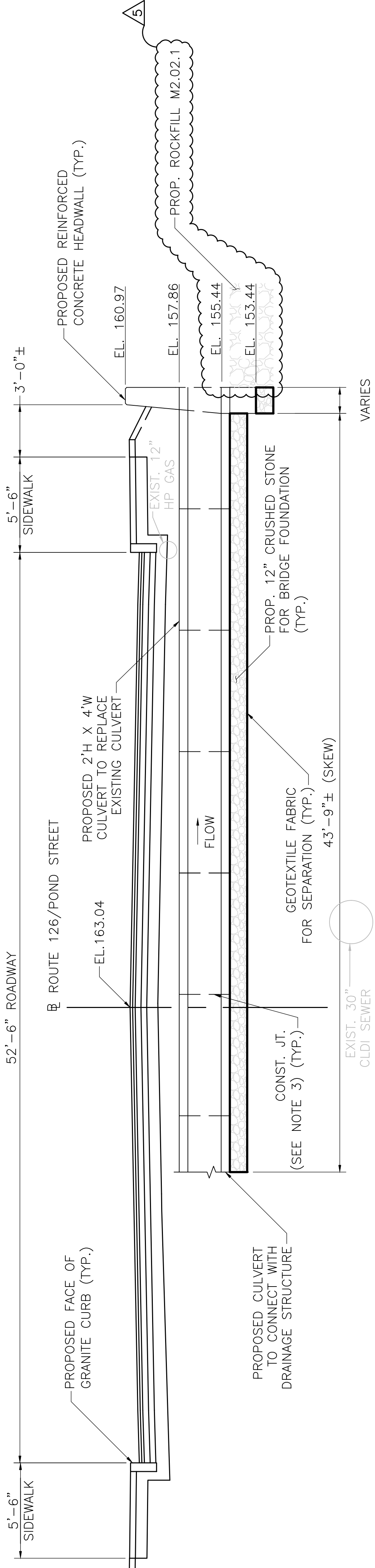
WORKING PT.	STA.	OFFSET R. FT	NORTHING	EASTING
1	90+14.42	46.16	2918725.01	676257.76
2	90+14.92	40.77	2918728.64	676253.74
3	90+09.14	33.78	2918728.16	676244.68
4	89+96.09	34.04	2918717.54	676237.11
5	89+92.34	37.94	2918712.20	676238.00

STATION EQUATION 4: ROUTE 126 (POND STREET) CONSTRUCTION

STA. 90+14.32 = CULVERT

SPECIAL DRAINAGE STRUCTURE NO.4 PLAN

SCALE: 1" = 1'-0"



SECTION 4 - STA. 90+14.32 CULVERT (UPSTATION)

SCALE: 1" = 1'-0"

- NOTES:
1. PROPOSED GUARDRAIL NOT SHOWN AT CULVERT SECTION SINCE ALL PROPOSED GUARDRAIL WILL SPAN OVER PROPOSED CULVERT SECTION.
 2. SEE SHEETS 13 - 15 FOR TYPICAL APPROACH/ROADWAY CROSS SECTION AT CULVERT LOCATION.
 3. PRECAST REINFORCED CONCRETE CULVERT CONSTRUCTION JOINT SPACING WILL VARY PER PRECASTER UP TO 7'-0" MAXIMUM SPACING.
 4. FACE OF PRECAST REINFORCED CONCRETE CULVERT TO BE SKEWED AND WILL REQUIRE SPECIAL FABRICATION FORM THE PRECASTER.
 5. ALL EXISTING UTILITY DEPTHS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED PRIOR TO WORK.

