2017 WATERMAIN REPLACEMENT & ROADWAY IMPROVEMENT PR
VILLAGE OF WHEELING, ILLINOIS
ENGINEERING IMPROVEMENT PLANS

SECTIONS 11 TOWNSHIP 42 NORTH RANGE 11 EAST
COOK COUNTY

NOT FOR BIDDING

VILLAGE OF WHEELING - VILLAGE HALL:
2 Community Boulevard
Wheeling, IL 60090
Tel: 847-459-2600
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VILLAGE OF WHEELING - PUBLIC WORKS:
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Wheeling, IL 60090
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PREPARED BY:
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BENCHMARKS:

VILLAGE OF WHEELING BM-22

2.5" Aluminum Disk Stamped 'Village of Wheeling - Survey Marker' on the south side of Hintz Rd. Bridge, approximately 500' west of Wheeling Rd.

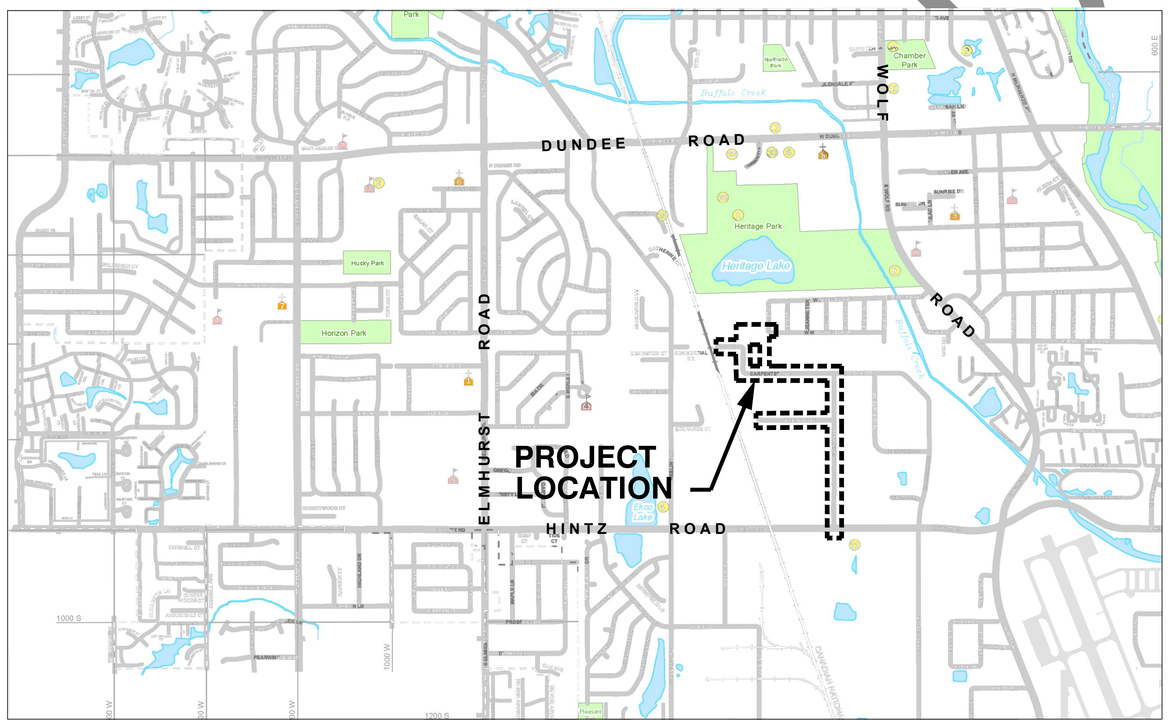
Elevation = 649.119 (NAVD 88)

VILLAGE OF WHEELING BM-15

2.5" Aluminum Disk Stamped 'Village of Wheeling - Survey Marker' at sanitary lift station at southeast corner of Dundee Road & Milwaukee Ave.

Elevation = 646.315 (NAVD 88)

See Sheet 3 for Site Benchmarks



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811
Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

VILLAGE OF WHEELING NOTES

GENERAL NOTES

1. Underground construction shall comply with the applicable ordinances and requirements of the Village of Wheeling and the Illinois Department of Transportation "Specifications for Road and Bridge Construction", latest edition, and the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, published by the Illinois Environmental Protection Agency (I.E.P.A.) except for conflicts with the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.) Sewer Permit and Manual of Procedures Ordinances. In case of a conflict the Village standards and requirements shall govern.
2. All paving and excavation work shall comply with the applicable ordinances of the Village of Wheeling and the Illinois Department of Transportation "Specifications for Road and Bridge Construction", latest edition. In case of a conflict, the Village standards and requirements shall govern.
3. The contractor shall field check and verify all existing utility locations, dimensions, and elevations in the field prior to the commencement of construction of the improvements or proposed work. All existing utility locations on the plans have been shown based on best available information. Notify the engineer immediately if discrepancies are found.
4. All elevations are based upon NAVD 88 Datum.
5. The contractor shall notify the Village of Wheeling Engineering (847) 229-4600 and Plumbing Inspector (847) 459-2620 two (2) business days prior to the start of construction. The Contractor shall also contact J.U.L.I.E. (800) 892-0123 at least 48 hours prior to starting work. All other agencies shall also be notified as required.
6. The contractor shall restore all disturbed off-site areas to at least a condition that existed prior to construction.
7. All existing field drainage tiles encountered or damaged during construction are to be restored to their original condition, properly rerouted, and/or connected to the storm sewer system.
8. The contractor and engineer shall maintain records for "as built" drawings which shall be submitted to the Village Engineer at the completion of this project.
9. The contractor shall provide video tape(s) or still pictures as required by the Village Engineer prior to beginning work.
10. One set of stamped approved plans shall be on site at all times during construction of the project.
11. It shall be the responsibility of the Contractor to call at least 48 hours in advance and set up the necessary and proper inspection(s) for all work to be performed.
12. All unpaved areas of right-of-way are to be sodded. Restore right-of-way with six (6) inches of topsoil and sod.
13. Storm and sanitary sewer lines shall be cleaned of all construction debris and silt prior to Village inspection.
14. The contractor shall maintain and keep at the job site, an up to date set of "Record Drawings" showing all changes from the original plans. The location of all service connections for sanitary sewer, storm sewer and water shall be shown from the closest manhole or valve vault. All B-boxes and cleanouts must be shown with tied dimensions. The elevation of all rims and inverts shall be verified by the contractor and shown on the "Record Drawings". The contractor shall deliver the "Record Drawings" to the Engineer at the conclusion of the project, prior to any final inspections. The Engineer will transfer the information to the original plans by incorporating the Village of Wheeling As-Built requirement list and furnish the Village three (3) sets of complete "Record Drawings," and, if required, one (1) set of reproducible mylars.
15. It shall be the responsibility of the Developer (Owner) and the Contractor to abide by, adhere to, and perform all work in accordance with the requirements, specifications, standards, practices, policies, and codes of the Village of Wheeling, which includes but is not limited to labor, materials, procedures, and safety.
16. Any changes, revisions, or substitutions to the plans, specifications, materials, requirements, or work shall be submitted to the Village Engineer, in writing, with written approval by the Village Engineer received prior to beginning said work. All materials and construction, whether implicitly or explicitly stated or covered within the requirements, codes, or specifications, shall be approved by the Village Engineer, prior to commencing the installation and construction.
17. All obstructions that are not approved by the Village and which currently exist in the right-of-way shall be removed, which include all rocks and boulders.
18. OSHA rules, regulations, and requirements shall be strictly adhered to during the execution of all work to be performed under the approved drawings.
19. Contractor shall pay special attention to the existing street light electrical conduit. If electrical conduit is damaged, repairing only damaged portion of conduit is not allowed; the entire section of electrical conduit between the nearest poles shall be replaced.

GENERAL UNDERGROUND UTILITIES

1. Trench backfill shall be provided under and within two feet (2') of all existing and proposed pavement.
2. All manholes and similar structures must be a minimum of 48" diameter, and valve vaults must be a minimum of 60" diameter, unless approved otherwise.
3. For modification or repair of all sewers and addition of or repair of sewer clean outs: non-shear couplings shall be used in connection of sewer pipes with prior approval from Village Engineering Department.
4. A minimum ten feet (10') horizontal separation shall be maintained between watermain and sewer or drain lines unless precluded by local conditions. When the watermain is located closer than ten feet (10') horizontally or the invert of the watermain is located closer than eighteen inches (18") vertically above the crown of any sewer or drain line, then: The sewer or drain line shall be constructed of pipe equivalent to watermain standards and shall be pressure tested to assure water tightness in accordance with the Illinois Environmental Protection Agency (I.E.P.A.) requirements.
5. When a watermain crossing over a sewer or drain line is closer than eighteen inches (18") vertically above the crown of that sewer or drain line, then that sewer or drain line shall be constructed according to the requirements listed in item 4) above.
6. If the watermain passes under a sewer or drain line, the following conditions shall be met: a vertical separation of eighteen inches (18") between the invert of the sewer or drain line and the crown of the watermain shall be maintained with support provided for the sewer or drain line(s) to prevent any moving or settling, rupture or breaking, and sewer or drain line shall be constructed as described in item 4) above.
7. The cost of all required testing of underground utilities shall be incidental to the construction cost of the same.
8. The contractor shall mark location of the ends, if necessary, of any sanitary, water, and storm services with buried 4" x 4" wood posts extending a minimum of three (3) feet out of the ground and painted red, blue, and green respectively, with appropriate signs attached stating "Caution: B-box - Do not remove until landscaping is complete."
9. When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, the sewer shall be circular saw-cut by proper tools ("sewer-tap" machine or similar) with proper installation of hub-wye saddle or hubtee saddle.
10. Sewer connections to an existing structure shall be machine cored.
11. A flexible rubber boot shall be used at all sanitary sewer manhole penetration connections.
12. Eccentric cone sections shall be used on all manholes, catch basins, vaults, etc. unless approved otherwise by the Village Engineer.
13. All sewer construction requires stone bedding 1/4" to 1" in size, (I.D.O.T. equivalent CA-11, CA·13) with a minimum thickness equal to 1/4 the outside diameter of the sewer pipe, but not less than four (4) inches, nor greater than eight (8) inches.
14. All sewer construction shall conform to the approved permit plans unless revisions have been approved by the Village, as well as any and all other necessary agencies.
15. Structures shall have a maximum of twelve inches (12") of adjustment with any combination up to a maximum of three (3) rings.
16. Protect and/or cover all pipes and underground structures until final grading, paving, and landscaping are complete.
17. Trench Backfill material for both paved areas and parkways shall be CA-6, Grade 8. For detail, see Trench Backfill Standard on Sheet 13. Density Test of compacted CA-6 will be performed by a consultant retained by the contractor. If the density requirement (95% modified proctor density) is not met, further trench backfilling will not be allowed until CA-6 is compacted to Village requirements. Contractor is responsible for providing modified proctor density data of CA-6 and the cost of this work shall be included in the cost of water main.
18. Throughout all phases of construction, including suspension of work, and until the final acceptance, the contractor shall keep the site clean and free from rubbish and debris. The contractor shall also abate dust nuisance by cleaning, sweeping and sprinkling with water or other means as necessary. Whenever requested by the Engineer, the contractor shall furnish and operate a self loading motor sweeper with spray nozzle at least once each working day for the purpose of keeping paved areas acceptably clean wherever construction, including restoration, is incomplete unless directed by the Engineer otherwise.
19. Curb and Gutter, Sidewalk, Driveway and Sodding Shall be restored within four weeks after all service lines are made to each street. If temperature is above 80 degrees farenheit, sodding should be delayed until temperature is under 80 degrees. Watering of new sod shall be performed per IDOT standard specifications for Road and Bridge Construction, article 252.08.
20. Contractor shall ensure that access by Mail Delivery, Garbage Removal School Buses and Emergency Vehicles on public streets is maintained at all times.

PAVING

1. Base course shall be aggregate base course, type B (crushed limestone, grade 8), conforming to the standard specifications (see plans for thickness).
2. Surface course and binder course shall be bituminous concrete, Class I hot mix (see plans for thickness).
3. Curb and gutter, barrier curb, and sidewalk shall be Portland Cement concrete with air entrainment of five (5) percent, plus or minus one (1) percent. A six (6) bag mix shall be used. Maximum allowable slump is three (3) inches. Curing compound shall be applied after finishing. Curb backfill shall be incidental to the construction of the curb. Locations of water and sewer service lines shall be clearly marked on all new curbs.
4. A 3/4 inch fiber expansion joint shall be installed when the curb abuts a sidewalk or existing curb.
5. Curb and gutter and barrier curb shall have sawed contraction joints at maximum intervals of twenty (20) feet and 3/4 inch fiber expansion joint at maximum intervals of sixty (60) feet.
6. Subgrade shall be finished to ± 0.1 feet of design subgrade elevations by the earthwork contractor. Fine grading for pavements and sidewalks shall be the responsibility of the paving contractor.
7. The base course shall be primed at the rate of 0.25 to 0.50 gallons per square yard with a liquid asphalt conforming to I.D.O.T. standards and shall be appropriate for prevailing weather conditions. Prime coat and cleaning of the existing surface shall be considered as incidental to the contract work.
8. Prior to placement of any pavement, including curbs, the subgrade shall be proof rolled with a fully loaded tandem axle dump truck (minimum 20 tons). Proof rolling shall be witnessed by the materials consultant and the Village Engineer. Proof rolling shall be required on the base material as well. The density of the subgrade base and base material, as well as the bituminous material, shall also be tested by the materials consultant. The test results shall be provided to the engineer for his use in determining the adequacy of the pavement design.
9. All structures such as manholes, valve boxes, etc. shall be adjusted to meet the new surface elevation. Furthermore, structures such as manholes, valve boxes, etc. that lie within Portland Cement Concrete slab areas (i.e. driveways, etc.) shall be boxed out by means of a cut out area with full depth joints.
10. All pavement, walk, and curb removal shall be accomplished by saw cutting prior to removal.
11. All pavement areas such as driveways shall have a two (2) inch diameter galvanized steel conduit buried beneath them at a depth of 24" (minimum) for future street light cable(s). The conduit shall extend a minimum of three (3) feet beyond the back of curb or edge of the pavement if no curb exists.
12. All drives in the right-of-way of public streets and in industrial and truck loading areas shall be a minimum of eight (8) inch thick portland cement concrete on a four (4) inch compacted granular base.
13. Saw cut existing curb at limit of the work and replace with depressed curb as required. Drill and dowel all new curb, including depressed curb, to existing as required.
14. All driveway material thicknesses shall meet the minimum pavement standard requirements of the Village of Wheeling.
15. Driveway apron removal and replacement shall include the installation of a truncated dome handicapped sidewalk ramp on both sides of the apron unless otherwise approved by the Village Engineer.
16. All dimensions for curbs are to back of curb, unless otherwise specified.
17. The use of cold-patch for temporary pavement patching shall be approved by the Village Engineer **prior** to placement.

STORM SEWER

1. All storm sewer pipes shall be reinforced concrete pipe conforming to ASTM C-76 Class IV with confined O-ring gasketed joints in compliance with ASTM C-361 or Tylox Super Seal gasket conforming to ASTM C-361.
2. Elevations of flared end sections shall be interpreted at the invert of the flared endsection.
3. All storm structures are to have open (grate) lids unless specified as having closed lids (C.L.).
4. Rim grades for storm sewer structures located within the curb and gutter are flow line elevations.
5. All sump pump and drain tile discharges shall be routed to the storm sewer system. Sump pump service connections shall be four (4) inch PVC SDR 26 conforming to ASTM D2751 or ASTM D3034 at a minimum slope of 2% and shall be air gapped. Minimum cover shall be two (2) feet, wherever possible.
6. All downspouts, footing drains, and outside drains shall discharge to the storm sewer or over ground as approved by the Village Engineer.
7. Minimum diameter of storm sewer shall be 12" unless approved otherwise.
8. No storm water shall be discharged to the sanitary sewer system.
9. Any storm sewer damaged during the work shall be repaired with full sized permanent or temporary storm sewer pipe. Use of temporary under-sized storm sewer pipe is strictly prohibited.

SANITARY SEWER

1. All sanitary sewers shall be P.V.C. pipe SDR 26 (min.) complying with ASTM D3034, with factory fabricated joints complying with ASTM D3212, and elastomeric gaskets complying with ASTM F-477 or as approved by the Village of Wheeling. Non Shear Couplings are to be used for all dissimilar pipe connections with prior approval by the Village Engineer. Watermain crossings shall consist of material and jointing in accordance with the Illinois Environmental Protection Agency Public Water Supplies Technical Policy Statements.
2. Sanitary sewers shall have a minimum cover of 3.5 feet to top of pipe.
3. All newly constructed sanitary sewers shall be televised and air tested and manholes vacuum tested as required by the Village of Wheeling and the Metropolitan Water Reclamation District of Greater Chicago.
4. Sanitary sewer services shall be connected to the main by use of a fitting or manhole.
5. All floor drains shall discharge to the sanitary sewer.
6. Sanitary services to be six (6) inch diameter D.I.P. Class 52 (min.) with a minimum slope of 1% prior to entering clean out, with a distance from outside of the foundation wall to be six (6) feet. Sanitary services to be six (6) inch diameter PVC pipe SDR-26 (min.) with a minimum slope of 1% after leaving clean out. Provide clean out on every lot near each single family house, at the change of pipe material, or as required.
7. Flexible rubber boots shall be used at all connections and penetrations into sanitary manholes.
8. All sanitary manholes to be provided with "Cretex" type chimney seals.
9. Manholes shall have steps sixteen (16) inches on center with step alignment to be perpendicular to the main pipe flow direction wherever possible.
10. All sanitary sewer and sewer joints shall conform to:

Material	Pipe Spec	Joint Spec
DIP	ANSI A-21.51	ANSI A-21.11
PVC SDR 26 (min.)	ASTM D-3034	ASTM D-3212
ABS (SDR 26)	ASTM D-2680	ASTM D-3212
Solid (8"-15" Truss)	ASTM D-2680	ASTM D-3212

11. All objectionable waste containing grease, fats, and/or oils shall discharge to an exterior grease interceptor or grease basin, with "water-tight" covers, before discharging into the sanitary sewer, including but not limited to restaurant and food preparation facilities. Automatic dishwasher and effluent domestic waste shall not discharge through the grease interceptor.
12. Contractor must pay special attention to the existing sanitary pipe and service lines. Contractor is responsible for any damage to the existing sanitary sewer system. Any damage to the sanitary sewer system shall be repaired by the contractor by removing & replacing the existing damaged sanitary pipe with matching size in ductile iron pipe without any compensation.

WATER MAIN

1. All water mains shall be pressure tested per requirements of the Village of Wheeling. Method shall be a leakage test of 150 p.s.i. held for 2 hours. 200 p.s.i. on fire suppression line.
2. All water mains shall be chlorinated per the requirements of the Village of Wheeling.
3. All water mains to be ductile iron pipe per ANSI A21.51 (AWWA C151), Class 52, with "push on" or mechanical joint as required by the Village Engineer or PVC SDR 18 AWWA C900 Restrained Joint Pipe conforming to AWWA C900-07. All Ductile Iron Pipe to be cement lined per ANSI A21.4 (AWWA C104).
4. The minimum cover for watermain shall be 5.5 feet from finished grade to top of main (6 ft. max. unless approved otherwise by the Village Engineer).
5. All water services shall be installed per the Village Standard.
6. Water service and fire suppression systems shall be made and installed by a licensed plumber, in accordance with the Illinois State Plumbing Code.
7. Fire sprinkler and water lines must be pressure tested and chlorinated from the point of connection at the existing watermain to the valve inside the building. Contact the Village of Wheeling Public Works Utility Division (847-229-4600) at least 48 hours prior to tap and inspections.
8. The Village of Wheeling Plumbing Inspector (847) 459-2620 and Engineering Inspector (847) 229-4600 shall be contacted at least 48 hours prior to all water service work.
9. All B-boxes shall be 1-1/2" Mueller or Ford telescopic B-box with "WATER" imprinted on the lid of the box and a brass pentagon plug.
10. All fastener hard ware (i.e. nuts, bolts, and washers) associated with fittings shall be stainless steel.
11. All fittings shall be restrained by thrust resistant wedge, retainer glands, manufactured with torque limiting twist off nuts.
12. All brass fittings for services lines shall be "Lead Free" in accordance with AWWA C800, latest revision, made from UNS/CDA 89520 or UNS/CDA 89833. Brass alloy UNS/CDA 83600 is not acceptable for any brass component in contact with potable water.
13. Any lead caulking encountered at existing service line connections to the old watermain shall be removed and properly disposed of.

IEPA NOTES

Sewers crossing water mains shall be laid to meet the following specifications:

1. Horizontal Separation:
   a. Whenever possible, a water main must be laid at least ten feet horizontally from any existing or proposed drain or sewer line.
   b. Should local conditions exist which would prevent a lateral separation of ten feet, a water main may be laid closer than ten feet to a storm or sanitary sewer provided that the water main invert is at least eighteen inches above the crown of the sewer, and is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
   c. If it is impossible to obtain proper horizontal and vertical separation as described in 1 and 2 above, both the water main and sewer must be constructed of pipe material which would conform to water main standards and be pressure tested to assure water tightness before backfilling.
2. Vertical Separation:
   a. Whenever water mains cross house sewers, storm drains or sanitary sewers, the water main shall be laid at such an elevation that the invert of the water main is eighteen inches above the crown of the drain or sewer. This vertical separation must be maintained for that portion of the water main located within ten feet horizontally of any sewer or drain crossed. This must be measured as the normal distance from the water main to the drain or sewer.
   b. Where conditions exist that the minimum vertical separation set forth in 1 above cannot be maintained, or it is necessary for the water main to pass under a sewer or drain, one of the following two measures must be taken:
   i. The water main shall be installed within a PVC carrier pipe and the carrier pipe shall extend on each side of the crossing until the normal distance from the water main to the sewer or drain line is at least ten (10) feet.
   ii. The involved sewer or drain shall be constructed of pipe material which would conform to water main standards until the normal distance from the water main to the sewer is at least ten (10) feet.
   c. In making such crossings, center a length of water main pipe over the sewer to be crossed so that the joints will be equidistant from the sewer and as remote there from as possible. Where a water main must cross under a sewer, a vertical separation of eighteen inches between the invert of the sewer and the crown of the water main shall be maintained, along with means to support the larger sized sewer lines to prevent their settling and breaking the water main.

The horizontal and vertical separation between water service lines and all sanitary sewers, storm sewers, or any drain should be the same as for water mains, as detailed above, except that when minimum horizontal and vertical separation cannot be maintained, water pipe as described under Vertical Separation above, may be used for sewer service lines.

IEPA CLEAN CONSTRUCTION AND DEMOLITION DEBRIS (CCDD) NOTES

CCDD Compliant Material Disposal:

1. Work shall be performed in compliance with the Illinois Environmental Protection Agency (IEPA) guildelines in effect at the time of construction.
2. The Contractor will be required to make all arrangements for coordination and submission of the testing reports and certification documents with their chosen CCDD disposal facility. Written confirmation of preliminary approval must be provided from the disposal facitility and confirmed by the Village as acceptable.
3. All surplus, clean material generated from the Contractor's activities must be disposed of at an IEPA permitted CCDD facility. The Contractor is responsible for providing documentation to the Village for each load hauled off-site showing the quantity of material and the location the material was disposed of.
4. The removal and disposal of CCDD compliant trench spoils for the installation of the water main shall be considered incidental to the cost of the pipe.
5. No extra compensation will be allowed to the Contractor for any expenses incurred complying with the requirements including, but not limited to: delays, inconvenience, or interruptions in the work resulting from compliance with these requirements.

CCDD Non-Compliant Material Disposal:

1. Work shall be performed in compliance with the Illinois Environmental Protection Agency (IEPA) guildelines in effect at the time of construction.
2. A quantity of 60 CY has been established in the bid proposal to address areas of possible non-compliant material. If such materials are found during construction, the Contractor shall notify the VIllage immediately. Suspect materials are to be set aside on non-permeable tarps/plastic, etc. and covered until they may be assessed. If after assessment the material is found to be non-compliant, it shall be loaded onto trucks for proper landfill disposal off-site. Disposal documentation will be provided by the Contractor to the Village prior to any applications for payment being requested.
3. The Village will provide a third party testing company to sample and analyze discovered suspect non-compliant material. After receipt of the analysis report, the Owner will determine the probable limits of contamination and confirm with the Contractor in order to establish a material quantity. Work shall include all labor, equipment,materials, trucking, re-handling, etc. as required to stockpile and dispose of material, whether compliant or not. Only material determined to be non-compliant shall be paid for at the provided unit price. Re-handling and disposal of material determined to be compliant shall be incidental to the water main pipe installation.

SUPPLEMENTAL NOTES

Note: In case of a conflict, contradiction, or discrepancy between the Village of Wheeling Notes or Village of Wheeling details and the Supplemental Notes, the Village of Wheeling Notes/Details shall apply, unless otherwise approved by the Village of Wheeling Engineer.

GENERAL NOTES

1. Definition of Terms:
   a. "Owner" shall mean the person or entity with which Haeger Engineering, LLC has been contracted with to prepare the Plans and Specifications.
   b. "Engineer" shall mean Haeger Engineering, LLC.
   c. "Contractor" shall mean the persons or entities responsible for performing and constructing the work described in the Plans, Specifications and other Construction Documents including but not limited to furnishing all labor, materials, tools, equipments, and other incidentals necessary.
   d. "Plans and Specifications" shall mean the Engineering Drawings and any Specifications prepared by Haeger Engineering, LLC, the Engineer.
   e. "Jurisdictional Agency" shall mean any local, municipal, county, township, state or federal entity of government or other entity having jurisdiction of some aspect of the project from whom approval, permit and/or review and approval was required.
2. The Specifications governing this project are as follows:
   a. All applicable Village/City and other applicable Jurisdictional Agency Ordinances, Codes, Regulations, Requirements, Policies, Specifications, Standards, etc.
   b. Roadway and Earthwork construction shall conform to the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction", latest edition and any subsequent "Supplemental Specifications and Recurring Special Provisions" as well as any applicable IDOT Highway Standards. Hereafter these items shall be collectively be referred to as the IDOT Standard Specifications.
   c. Water Main, Storm Sewer, and Sanitary Sewer construction shall conform to the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition.
   d. Soil Erosion and Sedimentation Control shall conform to the Illinois Environmental Protection Agency (IEPA) "Illinois Urban Manual" (IUM), latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition.
   e. Traffic Control shall conform to the "Manual of Uniform Traffic Control Devices" (MUTCD), latest edition, as well as the latest edition of the "Illinois Supplement to the MUTCD", and IDOT "Quality Standard for Work Zone Traffic Control Devices", latest edition.
   f. All handicap accessibility items shall conform to the Illinois Accessibility Code (IAC), latest edition.
   g. General Notes and Specifications contained herein or elsewhere as a separate document.

   If a conflict, contradiction, or discrepancy occurs between any of the above Specifications the more stringent requirement shall apply, unless directed otherwise by the applicable Jurisdictional Agency.
3. Contract Documents:
   a. The Engineer's Plans and Specifications shall be included as part of the Contract Documents.
   b. All Contractors shall carefully examine the Plans and Specifications, and other Contract Documents prepared for the work. They shall visit the site of the work and acquaint themselves with all local conditions, codes, and requirements affecting the contract. If awarded the contract, they shall not be allowed extra compensation by reason of any unforeseen difficulties or obstacles which the Contractor could have discovered or reasonably anticipated or inferred prior to bidding or start of construction.
   c. Should it appear that the work covered by the Plans and Specifications or other Contract Documents is not sufficiently detailed or explained, a Request For Information (RFI) Form shall be submitted to the Engineer for further explanations and drawings as may be necessary to clarify the point in question prior to the contract award. It is the intention of the Contract Documents to provide a job complete in every respect. Incidental items or accessories necessary to complete the work may not be specifically noted or shown but that are necessary to complete the project shall be considered incidental to the Contract. The Contractor is responsible for this result and to turn over the project in complete operating condition, irrespective of whether the contract documents cover every individual item in minute detail.
   d. If any additional soils data is needed to confirm the Contractor's opinions of the subsurface conditions, this shall be done at the Contractor's expense. The Contractor shall obtain the Owner's written authorization to access the site to conduct a supplemental soils investigation. Any bracing, sheeting, dewatering or special construction methods deemed necessary by the Contractor in order to install the proposed improvements shall be considered incidental to the Contract and no additional compensation will be allowed.
4. Should any apparent errors, omissions, discrepancies or conflicts be discovered on the Plans, Specifications, Quantities or other Contract Documents by the Contractor, whether prior to or after the award of the contract, the Engineer's attention shall be called to the same before work is begun thereon, so that proper clarification can be provided or revision made. If any work is done without contacting the Engineer, it shall be considered that the Contractor has proceeded at their own risk and expense.
5. Whenever the performance of work is indicated on the Plans, and no specific item is included in the Contract for payment, the work shall be considered incidental to the Contract and no additional compensation will be allowed. The Contractor shall provide all necessary labor, material, equipment, etc. necessary to perform all the work required for construction of the proposed improvements.
6. The base plan/drawing for the Engineering Plans (existing conditions, site topography, utilities, rights-of-way, etc.) was obtained from the topographic survey prepared by:

   Haeger Engineering, LLC
   1304 Plum Grove Road
   Schaumburg, IL 60173
   (847) 394-6600
   12-073A
7. The Owner shall obtain the necessary approvals from the following Jurisdictional Agencies:
   a. Village of Wheeling
   b. Illinois Environmental Protection Agency (IEPA) - Water Division
8. The Contractor, unless otherwise agreed upon in writing with the Owner prior to the start of Construction, shall at his own expense, obtain all other approvals including permits, licenses, etc., as may be required for the execution of this work as well as provide all necessary notices, pay all fees required, post bonds, obtain all necessary insurance, and comply with all laws, ordinances, rules, and regulations relating to the work and to the preservation of public health and safety. The Contractor shall also provide all required insurance and/or bonds as may be required by the Jurisdictional Agencies. In addition, the Contractor shall meet all of the requirements of any permits as might be issued for this work by other Agencies, and shall pay for at their sole expense any surety, insurance or bonds as may be required by the Jurisdictional Agencies.
9. No work shall proceed until the appropriate permit or permits have been obtained for the item or items to be constructed. If any work does proceed without the appropriate permits or approvals, it is being done without the permission or consent of the Engineer. The Contractor and Party authorizing the work to proceed shall be assumed to be proceeding at their own risk and the Engineer shall not be held liable or responsible for any work being performed without a permit.
10. The Contractor shall indemnify and hold harmless the Owner, Engineer, Village/City, and other Jurisdictional Agencies as well as all of their respective officers, employees, agents, and Engineers from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgment of every nature and description brought or recovered against them, by reason of any act, error or omission of said Contractor, their agents or employees in the execution of the work or in the guarding of it.
11. The construction shall be under the general inspection and observation of the designated individual authorized by the Village/City or other applicable Jurisdictional Agencies. The Village/City, Jurisdictional Agencies, Owner, and Engineer shall be notified at least two working days prior to the commencement of work.
12. In some instances, the existing utilities are shown on the Plans according to information obtained from the utility companies (atlas information) and/or surveys performed By Others. The Owner and Engineer do not guarantee the accuracy or completeness of this information. The Contractor shall be aware of potential conflicts with existing or other proposed utilities as indicated on the Plans or that become apparent as the result of field locates By Others. The Contractor shall make their own investigations as necessary to determine the existence, nature, and location of all utility lines and related appurtenances within the limits or adjacent to the proposed improvements. The Contractor shall locate all utilities far enough in advance to avoid all conflicts between existing utilities and proposed improvements and make the Engineer aware of any such conflicts. If the Contractor encounters a conflict between the proposed improvements and existing utility that was not located in advance by the Contractor, then the Contractor shall at no cost to Owner, relocate the proposed improvements and/or utility to avoid the conflict.
13. The Contractor will be required to cooperate with all utility companies involved in connection with the removal, temporary relocation, construction, reconstruction or abandonment by these companies of any and all services or facilities owned or operated by them within the limits or general vicinity of the proposed improvements. Further, at the direction of the Owner and Utility Companies the Contractor shall coordinate the location and install PVC sleeves as necessary under the proposed pavement, curbs, walks, etc. for utility companies to run their proposed utility lines.
14. Before doing any work which will damage, disturb or leave unsupported, or unprotected any utility lines or related appurtenances encountered, the Contractor shall notify the respective Owner thereof, who will make all arrangements for relocating, adjusting, bracing, or otherwise maintaining or abandoning service on lines that fall within the limits of the proposed construction without cost to the Contractor, including the removal of all cables, manhole covers and other related appurtenances which the Owner desires to salvage. After such arrangements have been made, the Contractor will proceed with the work as directed by the Engineer. All utility lines and related appurtenances which are abandoned shall be removed if necessary and legally disposed of legally off-site by the Contractor.
15. No extra compensation will be allowed by the Contractor for any expense incurred for complying with all of these aforementioned utility coordination and cooperation requirements, or because of delays, inconvenience or interruptions in their work resulting from the failure of any utility company to remove, relocate, construct, reconstruct or abandon their services. The responsibility for prompt and timely removal, relocation, reconstruction or abandonment of their facilities by all utility companies involved, and the coordination of their own work with that of these companies to the end that work on this improvement is not delayed because of the necessary changes in the existing utilities, public or private, shall rest upon the Contractor.
16. Prior to commencing work, the Contractor is to field check and verify all critical locations, elevations, materials, sizes, dimensions, and conditions affecting the work, and notify the Engineer immediately if there are any suspected discrepancies. No work shall be performed until the suspected discrepancy has been resolved. The Contractor shall also call to the attention of the Engineer any errors or discrepancies which may be suspected in the lines and grades which are established by the Surveyor, and shall not proceed with the work until any lines and grades which are to believed to be in error have been verified or corrected by the Engineer.
17. The Contactor shall maintain positive drainage at all times during construction. Construction shall not block off-site drainage and the flow from any drainage ways, field tiles, storm sewers or similar draining off-site properties. All on-site existing field tiles, storm sewers, drainage ways or similar encountered or damaged during construction shall be maintained, restored to their original pre-construction condition or better, properly re-routed, and/or connected to the proposed stormwater drainage system. If this can't be accomplished then the field tile should be repaired or re-routed with new pipe of similar diameter to the original line and put back in service. The Contractor shall notify the Engineer if any such field tiles are encountered. Whenever during any construction activities any loose material is deposited in the flow line of gutters, ditches, drainage structures, etc. such that the natural flow of water is obstructed, this material shall be removed by the responsible party.
18. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
19. No construction activities, disturbance or fill shall occur within the limits of natural resources such as wetlands, floodplains, creeks, streams, ponds, lakes, basins, reservoirs, etc. or their respective buffers unless specifically specified on the Plans and further that the work has been permitted. The Contactor shall take sufficient precautions to protect these natural resources that are to remain, whether on-site or on adjacent property, to protect them from sediment, fuels, oils, bitumens, calcium chloride, or other harmful materials that may be a detriment. The Contractor shall conduct and schedule their Construction so as to avoid siltation, or other disturbance or impact to these natural resource areas. The Contractor shall not disturb or otherwise impact these designated natural resource areas, or areas that have been designated to be protected or as essential habitat for State or Federal listed endangered or threatened species, or Prairie or Savannah areas where the Owner has made commitments for protection of these areas. Also, if previously unidentified natural resource areas, prairies, savannahs, or areas or locations suspected of containing protected species are identified during construction, the Contractor shall not disturb them unless written permission to do so is granted by the Owner or applicable Jurisdictional Agency. If the Owner, Engineer, or applicable Jurisdictional Agency determines that additional measures are necessary to prevent or mitigate project effects on natural resource areas, prairies, savannahs, protected species, or essential habitat the Contractor shall cooperate in accomplishing these measures.
20. The Contractor shall confine their activities to within the project boundaries, work areas, or easements specified. No work shall be performed on adjacent private property or outside the project work areas without the written permission of each respective Owner. The Contractor shall be liable for damage caused to existing or newly installed improvements as well as any damage on adjacent property or areas outside designated work areas, provided damage us a result of Contractor action, or lack thereof.
21. The Contractor is responsible for returning all areas affected by equipment, materials and/or laborers to pre-construction condition or better. All existing utilities or improvements, including but not limited to pavements, curbs, drives, trees, and parkways damaged or removed during construction shall be promptly restored to their respective original pre-construction condition or better. The Contractor is also responsible for protecting all newly constructed work from damage until the project has been completed and has been approved and accepted by the Owner.
22. Clean-up and final restoration shall be performed immediately upon completion of each phase of the work or when directed to do so by the Owner, so that these areas will be restored as nearly as possible to their original pre-construction condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, landscaping, fences, mailboxes, storm sewers, drain tiles, sanitary sewers, water mains, etc. It shall also be the responsibility of the Contractor to remove from the site any and all materials and debris which results from their construction operations at no additional expense to the Owner.
23. All proposed grades shown on the Plans shall be considered to be finished grade surface elevations unless noted otherwise.
24. Construction staking/layout shall be provided by the Contractor and shall be included in the Contract Price unless otherwise agreed upon in writing with the Owner prior to the start of Construction.
25. All Construction means and methods, techniques, procedures, scheduling, sequencing, and job site safety is the sole responsibility of the Contractor.
26. The Contractor shall observe and comply with all the Occupational Safety and Health Administration (OSHA) standards, rules and regulations, as well as any other applicable local, state and federal safety requirements.
27. All trenching, shoring, bracing and construction work performed shall be in accordance with the Occupational Safety and Health Administration (OSHA) standards.
28. The Contractor shall take whatever steps necessary to protect the public from open trenches, excavations, and other site obstructions or hazards. No trenches, excavations or holes in the pavement or parkway are to be left open over a holiday, weekend, or after 3 p.m. on the day preceding a holiday or weekend.
29. During construction the Contractor and their Sub-Contractors shall keep the premises clean by removing all rubbish, debris, waste material and other accumulations as necessary. The Contractor shall clean the premises to the satisfaction of the Village/City and Owner.
30. The Contractor shall have appropriate equipment and material including street sweepers and end loaders available on-site at all times when equipment or vehicles are using existing public or private roads and/or pavement. The Contractor shall immediately remove any sediment or debris including but not limited to dirt, mud, clay, sediment, concrete, gravel, sand, stones, plant material, refuse, garbage, oil, grease, etc. deposited on any roadway, street, walk, alley or other pavement by any equipment, vehicles or personnel associated with this project. This work shall be considered incidental to the Contract.
31. The Contractor shall at all times maintain proper dust control at the site and shall have a watering truck readily available during all working hours. The Contractor shall water the entire site whenever the site conditions become unhealthy due to blowing soil or dust. The site shall be watered as many times per day as necessary to maintain a healthy work site as determined by the Owner or Engineer. Water for non-emergency use shall not be obtained from any fire hydrant, unless the fire hydrant is metered with a proper backflow preventer in accordance with Village/City or Jurisdictional Agency requirements. The cost to furnish dust control shall be incidental to the cost of Construction.
32. Trees not marked for removal shall be protected as necessary by the Contractor. In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree or trees in accordance with Village/City requirements. If the Village/City does not have specific tree replacement requirements, the damaged existing or newly planted tree shall be replaced in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications. The Contractor shall ensure that they are familiar with the applicable tree preservation requirements and shall be held responsible for the replacement of all damaged trees not designed for removal, and any penalties associated with the unapproved removal of trees.
33. Where overhanging branches, limbs, or roots interfere with the required construction activities, said branches, limbs, or roots shall be trimmed or pruned as necessary in accordance with Section 201 of the IDOT Standard Specifications. This work shall be performed under the supervision of an approved arborist or landscape architect.
34. The Contractor is responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices, in accordance with the Plans, applicable IDOT Standard Specifications and the MUTCD Standards to inform and protect the public during all phases of construction. The Contractor shall provide all signage, barricades, devices, equipment, personnel, etc. necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. Roadways shall remain open to a degree satisfactory to the Owner or applicable Jurisdictional Agency which at their discretion may require the Contractor to furnish traffic control under these or other circumstances where in their opinion it is necessary for the protection of life and property. Emergency vehicle access along with access to fire hydrants shall be maintained at all times. Further, unless authorized by the Owner, all existing access points shall be maintained at all times by the Contractor.
35. Where noted in the Plans, the Contractor shall have Shop Drawings and any other required supporting documentation or calculations prepared and submitted for review and approval prior to any fabrication, placement, or construction. If structural elements such as retaining walls are required, the drawings and any required supporting design calculations must be prepared, and signed and sealed by an Illinois licensed Structural Engineer.
36. The Contractor is responsible for having a set of approved Plans and Specifications with the latest revision date on the job site at all times during the construction period.
37. The Contractor shall maintain a clean, legible, undamaged set of Field Marked Construction Plans. These Field Marked Construction Plans shall show the location of the actual installed location of all underground utilities including related appurtenances (sanitary, storm, water, service stubs, gas, telephone, electric, cable TV, etc.) giving particular attention to concealed elements that would be difficult to measure and record at a later date. Any approved modifications, deviations, or alterations from the approved Plans should also be noted and shown on these Field Marked Construction Plans. These Field Marked Construction Plans shall be provided to the Owner/Engineer at the completion of construction.
38. All work that is performed that is not in conformity with the Plans, Specifications or other Contract Documents or that is defective shall be removed and replaced, or otherwise corrected or remedied by and at the sole expense of the Contractor. Any unauthorized work or work performed beyond the limits or in excess of that shown on the Plans will not be measured or paid for.
39. All work performed under the Plans, Specifications or other Contract Documents shall be guaranteed against all defects in materials and workmanship of whatever nature by the Contractor and his surety for a minimum period of 12 months from the date of final acceptance of the work by the Village/City, other applicable Jurisdictional Agencies, and the Owner, unless otherwise agreed upon in writing with the Owner prior to the

NOT FOR BIDDING

PAVING NOTES AND CONDITIONS

1. The Contractor shall coordinate construction activities with utility companies and the Village of Wheeling.
2. The Contractor shall be responsible for the protection of all underground utilities even though they may not be shown on the plans. Therefore, the Contractor shall have the respective utility companies field locate all of their facilities prior to beginning construction. any relocation or lowering of utilities shall be coordinated by the Contractor. Utilities that are damaged during construction shall be repaired or replaced by the Contractor at his own expense.
3. Ten (10) feet or three (3) meter transitions shall be used to match proposed curb and gutter and median items of work to existing curbs & gutters and medians in the field, unless otherwise shown. The transitions shall be paid for at the contract unit price for the proposed items of work specified.
4. Barricades: The Contractor shall provide and install two (2) weighted sandbags on each type I or type II barricade used- (1) weighted sand bag across each bottom rail.
5. All the work performed by the Contractor shall be guaranteed for a period of twelve (12) months from the date of final acceptance by IDOT. This guarantee shall include all defects in materials and workmanship.
6. The Village of Wheeling, Illinois, Public Works Department must be notified at least two (2) working days prior to a request for inspection, commencement or resumption of any work.
7. The Contractor is responsible for maintaining adequate signs, barricades, fencing, traffic control devices and measures and all other measures that are necessary to protect the safety of the project area at all times.
8. All structures, inlets, pipes, swales and roads must be kept clean and free of dirt and debris at all times.
9. Adjustment of any sanitary sewer manhole frames shall include the installation of chimney seals in accordance with Village requirements. The cost of the chimney seal shall be considered incidental to the adjustment of the structure.
10. Any defective or non-bicycle safe frame & grates shall be brought to the Village's attention. All frames & grates to be replaced shall remain property of the Village and shall be stored in the right-of-way for pick up by the Village.
11. Any mailboxes that are in conflict with the proposed construction shall be removed and replaced in accordance with the Village standards. This work will be included in the contract. Mail service shall be maintained all the times. Contractor must be careful with the existing mailboxes. Any damaged mailboxes shall be replaced by the Contractor at no additional cost to the homeowner or the Village.
12. Existing driveway pavement, sidewalk, and curb and gutter to remain in place shall be saw cut full depth to provide a neat vertical face between the proposed and the existing structure. This work shall be considered incidental to each pay item.
13. Brick driveway pavement shall be constructed on 8-inches of compacted CA-6 Grade 8 crushed limestone base (2 lifts) topped with 1-inch of sand, price of which shall be included in the pay item brick driveway pavement. No extra compensation will be allowed.
14. Class D patches shall be constructed at locations determined by the engineer in the field. Any saw cuts associated with this pay item will be considered incidental and no extra compensation will be made. Any subbase removal beneath it will also be incidental.
15. Any roots encountered while removing the sidewalk or driveway aprons shall be saw-cut and disposed by the Contractor.
16. Tree root pruning shall be provided at each tree location, the price of which shall be included in the pay item tree root pruning. No extra compensation will be allowed.
17. Limits of curb & gutter and sidewalk removal are approximate and shall be marked in field by Engineer/Owner. Limits are subject to change.
18. All items which are damaged or disturbed as a result of work shall be replaced to existing condition or better at the contractor's expense.
19. Access to streets and private driveways shall be provided at all times except during actual construction adjacent thereto. Temporary ramps shall be constructed as necessary to provide such access utilizing crushed aggregate (cost incidental). It will be the Contractor's responsibility to notify the residents and businesses when access to their driveways will be temporarily closed due to curb and gutter, driveway or sidewalk replacement. The contractor shall distribute Village approved notices of anticipated closures. Every effort shall be made to accommodate access to these properties involving placement of pavement in stages across driveways and knocking on doors when driveways will be closed.
20. Contractor shall ensure that access by Mail Delivery, Garbage Removal School Buses and Emergency Vehicles on public streets is maintained at all times.
21. Restoration limits for topsoil and sod shall be limited to maximum of 2-ft immediately adjacent to edge of removed and replaced curb and gutter, sidewalk or driveway. Any additional disturbed areas will not be paid for.

CONC. CURB, SIDEWALK & PAVING NOTES

1. The finished hot-mix asphalt surface course shall be constructed to 1/4" above the edge of gutter flag.
2. The proposed curb and gutter shall be depressed at abutting sidewalks and across driveways as indicated on the plans.
3. Saw cutting required for removal of existing driveway pavement, sidewalk, curb and gutter and where the proposed pavement abuts existing pavement to remain in place (begin, end and limits of construction) shall be as specified in article 440 of the Standard Specifications. Provide a neat vertical face between the proposed and existing surfaces. Saw cutting shall be included in the pay item being removed. All saw cutting shall be full depth.
4. Curb & gutter and driveway removal and replacement work shall be limited to one side of the street in each direction at a time to minimize congestion. Full depth saw cut 1 feet minimum off of edge of pavement is required prior to C&G removal to allow space for proper compaction of pavement base course (incidental).
5. Construction operations involving temporary closing of driveways or roads shall not commence without at least three (3) working days prior notice to the Village by the Contractor. The Contractor will also be required to provide 48 hours notice to affected parties by distributing written notices and posting signs.
6. Construct temporary ramps to adjoining pavement or driveways as needed or directed by Engineer. These ramps must be minimum two car wide and shall be constructed for the entire width of pavement removal. These ramps shall be constructed using crushed limestone CA-6, Gr-8, virgin material or as directed by the Engineer. Proper temporary driveway entrance signs must be installed. The Contractor is responsible to maintain open access to all side streets, homes, industries, and businesses at all times. These temporary ramps shall be considered incidental to pavement removal and will not be paid for separately.
7. All the density tests will be performed by using cores.
8. Leveling binder shall be used around the structures in the roadway in variable thickness as necessary or as determined by the engineer.
9. Protective coating for all concrete surfaces shall be considered included in cost of respective pay items.
10. Proposed $\frac{3}{4}$" preformed expansion joint is required at concrete sidewalk, driveways and curb and gutter and shall be incidental to the curb and gutter removal and replacement.
11. In areas where the existing driveway, sidewalk or curb and gutter is to be removed and replaced, the removal and disposal of any additional material required to establish the proposed driveway, sidewalk or curb and gutter subgrade elevation shall be included in the respective removal pay items.
12. If any milled pavement is open to traffic, the maximum grade differential between passes of milling machine shall not exceed 1.5 inches.
13. If any soft or yielding materials are detected after excavation to subgrade, the Contractor will at the direction of the Geotechnical Engineer to remove the material and replace with porous granular embankment, subgrade.

DRAINAGE NOTES

1. Any saw cuts and excavation required to remove and install drainage structures or storm sewer pipe shall be considered incidental to the item being removed or installed.
2. Trench backfill used shall be CA-6 (grade-8) crushed limestone and shall be considered incidental to the item being installed. No crushed concrete will be allowed as trench backfill material. Trench backfill shall be provided up to the existing pavement grade to eliminate any voids created and to provide temporary roadway access. The backfill material shall be placed in 8 inch lifts, loose measurement, and compacted by mechanical means to the satisfaction of the engineer.
3. Contractor must imply careful method to salvage all existing pipes. If any of the existing pipes are damaged during construction; the Contractor shall replace the damaged pipe at no extra cost to the Village. No extra compensation will be allowed.
4. Inlet and pipe protection must be installed in all open grate structures that recieve drainage from disturbed areas prior to commencing the work and shall be maintained regularly throughout the length of the project.
5. Contractor shall grade and construct improvements to provide positive drainage. Ponding water will not be permitted.
6. All Frame & Lid castings located within pavement which required adjusting to finished grade shall be backfilled with Class SI Concrete and allowed to cure for 72 hours prior to placement of surface course. Class PP Concrete shall be utilitized if surface course is to be placed in less than 72 hours. HMA materials will not be allowed as backfill around adjusted frames. This work shall be incidental to drainage & utility structures to be adjusted.
7. All storm drainage structures in curbs shall have modified drainage structure and pipe underdrain (special) per Village of Wheeling details.

TRAFFIC / CONSTRUCTION STAGING

The Contractor shall submit a pre-planned sequence of work at the pre-construction meeting for review and approval. The Contractor's superintendent and the Resident Engineer will be required to work together with the affected residents in planning their construction schedule so as to minimize the inconvenience and maintain a reasonable level of construction efficiency. The Resident Engineer and/or the Village reserve the right to restrict work on a pavement segment if construction operations on the previous segment are unacceptable.
The sequence of traffic / construction staging is recommended in the order listed below:
Stage 1 - Utility & Drainage structure improvements
Stage 2 - Curb and gutter, driveway and sidewalk removal and replacement where identified
Stage 3 - Pavement removal (see typical section for depth of removal)
Stage 4 - Pavement replacement - Resurfacing Areas
- Repair aggregate sub-base and/or subgrade in identified deteriorated areas
- Proof-roll compacted aggregate base course areas
- Install hot-mix asphalt binder course, in one 3" lift - install hot-mix asphalt surface course
Stage 5 - Install pavement markings and restoration as required

DRIVEWAY CLOSINGS:

It will be the Contractor's responsibility to notify residents and the Village two (2) days in advance when access to the residents' driveways will be temporarily closed due to the curb and gutter and/or driveway replacement. The Contractor shall distribute notices APPROVED by the Village, to the residents/property owners. Every effort shall be made to accomodate access to these properties (i.e. knock on doors when driveway is about to be closed).

DEBRIS REMOVAL:

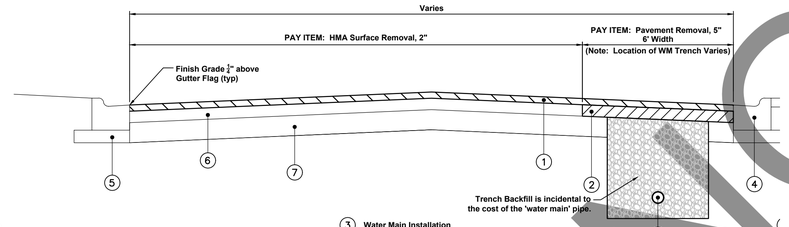
Materials resulting from the removal of pavement, driveways, curb and gutter, Hot-Mix Asphalt pavement and subgrade, etc. shall be removed at the end of each day to a village approved site. In the judgment of the Village, should it be necessary to remove such materials, the Village will have the material removed and the Contractor shall be billed (charged) accordingly.

WATER SUPPLY:

The Contractor can obtain municipal water in bulk, at NO CHARGE, as long as there is not a "watering ban" in effect. Prior to obtaining any water, an account with the Finance Department must be set up for documentation on water usage. The indiscriminate use of fire hydrants is strictly prohibited. Water for construction shall be metered or otherwise accounted for on a daily log maintained with the Public Works Department. The Contractor shall provide the water truck and driver required to obtain and transport this water. The Village reserves the right to restrict or refuse the use of Village water if deemed necessary.

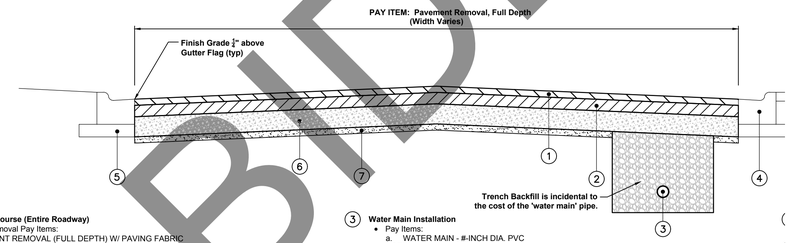
ADDITIONAL SPECIFICATIONS / INCIDENTALS NOTES:

1. Monotholically poured curb for the 'MODIFIED CURB DRAINAGE STRUCTURE TO BE ADJUSTED' shall be incidental to the cost of that pay item. No extra compensation will be paid for lineal feet of curb and gutter.
2. 'REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL' shall include the removal of all uncontaminated material required for removal in order to achieve the proposed design elevations, as well as any material required for undercut removals as directed by the Geotechnical Engineer.
3. Removal and Disposal of 'CONTAMINATED WASTE' shall include the storage, removal, and proper disposal of any materials determined to be 'contaminated' in accordance with IEPA standards.
4. All existing mailboxes are to remain in service at all times. Any necessary removals and/or reinstallations of mailboxes shall be done at the expense of the Contractor and are incidental to the Contract.
5. Whenever the performance of work is indicated on the plan, and no pay item is included in the contract for payment, the work shall be considered incidental to the contract and no additional compensation will be allowed.



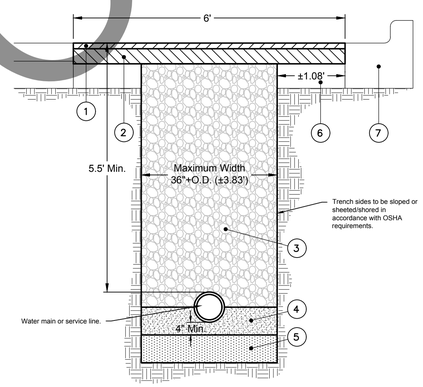
1. **2" Mill & Resurface**
   - Pavement Removal Pay Items:
     a. HOT-MIX ASPHALT SURFACE REMOVAL, 2-INCH
   - Pavement Installation Pay Item:
     a. HOT-MIX ASPHALT SURFACE COURSE, MIX 'D', N50 (2")
2. **3" HMA Binder Course (6' width over water main trench only. See Typical Section below)**
   - Pavement Removal Pay Items:
     a. PAVEMENT REMOVAL, 5-INCH or
     b. PAVEMENT REMOVAL, 5-INCH W/ PAVING FABRIC
   - Pavement Installation Pay Item:
     a. HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (3")
3. **Water Main Installation**
   - Pay Items:
     a. WATER MAIN - #-INCH DIA. PVC
   - NOTES:
     a. All costs for trench excavation, disposal of spoils, trench backfilling, connections/fittings, removal & disposal of existing pipe, and all required testing shall be incidental to the Pay Item for 'water main' pipe. Refer to the Contract Documents for full details on all Pay Items.
     b. Refer to "Water Main Trench" Typical Sections below for further details.
4. **Curb & Gutter Removal & Replacement**
   - Pay Items:
     a. B6.12 CURB & GUTTER REMOVAL & REPLACEMENT
   - NOTES:
     a. The Contractor shall be responsible for field verifying the type of curb & gutter per each street and providing the appropriate curb type to match existing conditions
     b. Actual limits of curb & gutter removal & replacement shall be determined in the field by the Village Engineer.

ROADWAY RESURFACING & WATERMAIN INSTALLATION TYPICAL SECTION



1. **2" HMA Surface Course (Entire Roadway)**
   - Pavement Removal Pay Items:
     a. PAVEMENT REMOVAL (FULL DEPTH) W/ PAVING FABRIC
   - Pavement Installation Pay Item:
     a. HOT-MIX ASPHALT SURFACE COURSE, MIX 'D', N50
2. **3" HMA Binder Course (Entire Roadway)**
   - Pavement Removal Pay Items:
     a. PAVEMENT REMOVAL (FULL DEPTH) W/ PAVING FABRIC
   - Pavement Installation Pay Item:
     a. HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50
3. **Water Main Installation**
   - Pay Items:
     a. WATER MAIN - #-INCH DIA. PVC
   - NOTES:
     a. All costs for trench excavation, disposal of spoils, trench backfilling, connections/fittings, removal & disposal of existing pipe, and all required testing shall be incidental to the Pay Item for 'water main' pipe. Refer to the Contract Documents for full details on all Pay Items.
     b. Refer to "Water Main Trench" Typical Sections below for further details.
4. **Curb & Gutter Removal & Replacement**
   - Pay Items:
     a. B6.12 CURB & GUTTER REMOVAL & REPLACEMENT
   - NOTES:
     a. The Contractor shall be responsible for field verifying the type of curb & gutter per each street and providing the appropriate curb type to match existing conditions
     b. Actual limits of curb & gutter removal & replacement shall be determined in the field by the Village Engineer.

ROADWAY RECONSTRUCTION & WATERMAIN INSTALLATION TYPICAL SECTION



1. **2" Hot-Mix Asphalt (HMA) Surface Course, Mix 'C', N50**
2. **3" Hot-Mix Asphalt (HMA) Binder Course, IL-19.0, N50**
3. **Compacted Trench Backfill (CA-6, Grade 8 or approved equal). Also required under sidewalks, driveways, curb & gutter, or other paved areas. (Incidental to cost of "Water Main - #-Inch Dia.")**
4. **CA-11 or CA-13 stone or approved select backfill. Tamped into place to spring line of pipe. (Incidental to cost of "Water Main - #-Inch Dia.")**
5. **If encountered, remove unsuitable materials and replace with 4" of stone as directed by the Village Engineer. (See Bid Item for 'Removal and Disposal of Unsuitable Material')**
6. **Existing aggregate base course to be recompacted**
7. **Existing curb & gutter to remain. (Removal & Replacement per the Village Engineer)**

WATER MAIN TRENCH (ROADWAY) TYPICAL SECTION

NOTE: The removal and disposal of uncontaminated trench spoils shall be incidental to the cost of the water main pipe.

Water main or servi

1. **6" Top**
2. **Compa (Incide**
3. **CA-11 line of**
4. **If enco (See B**

WAT

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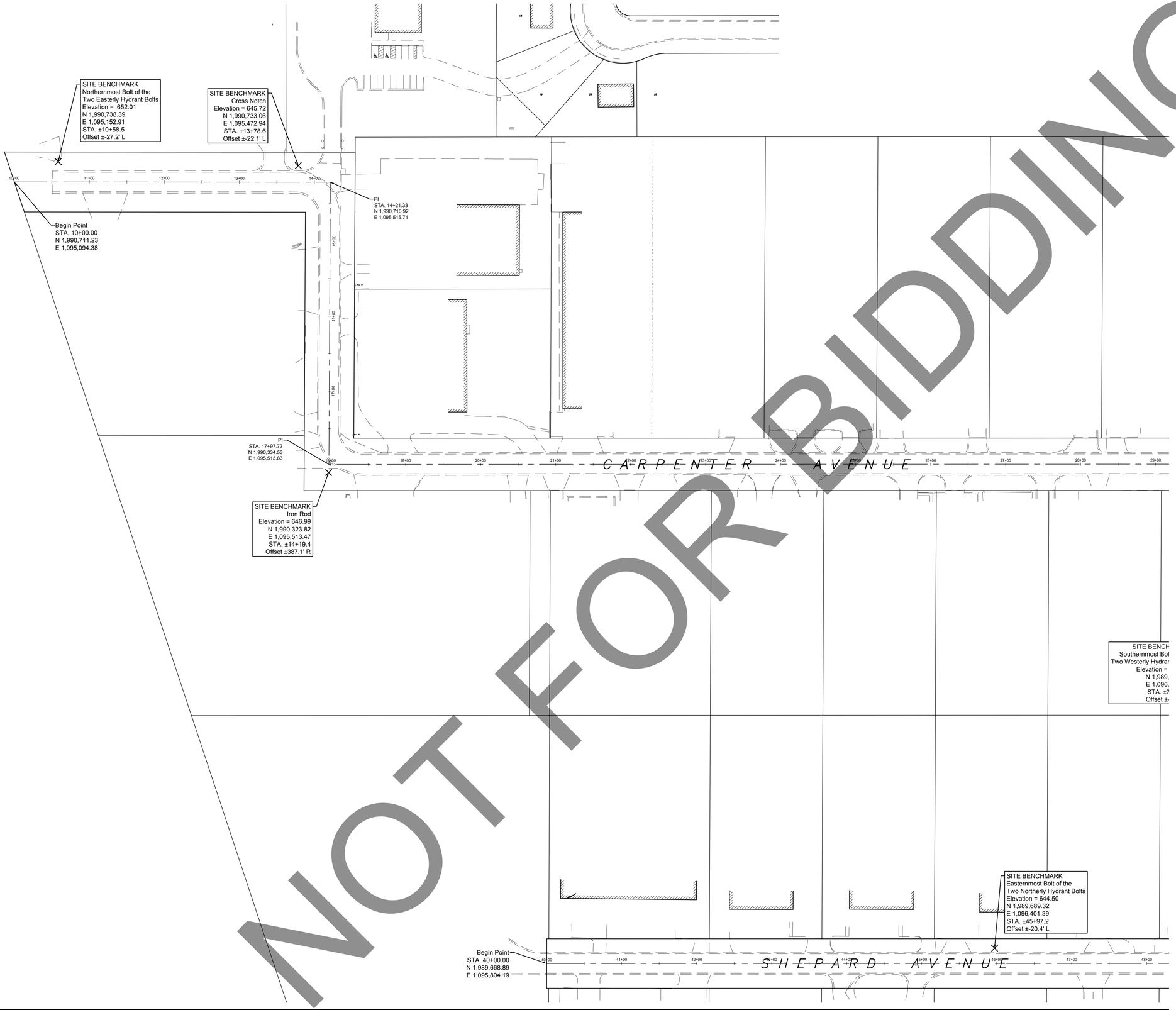

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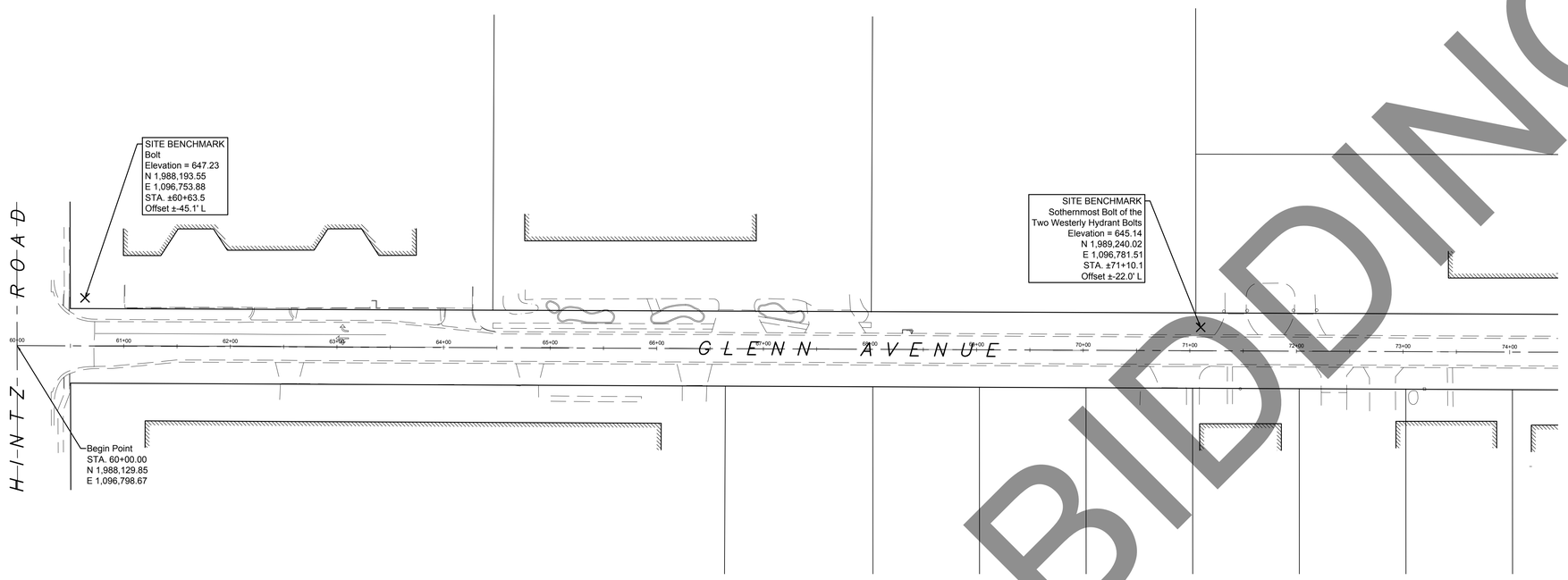

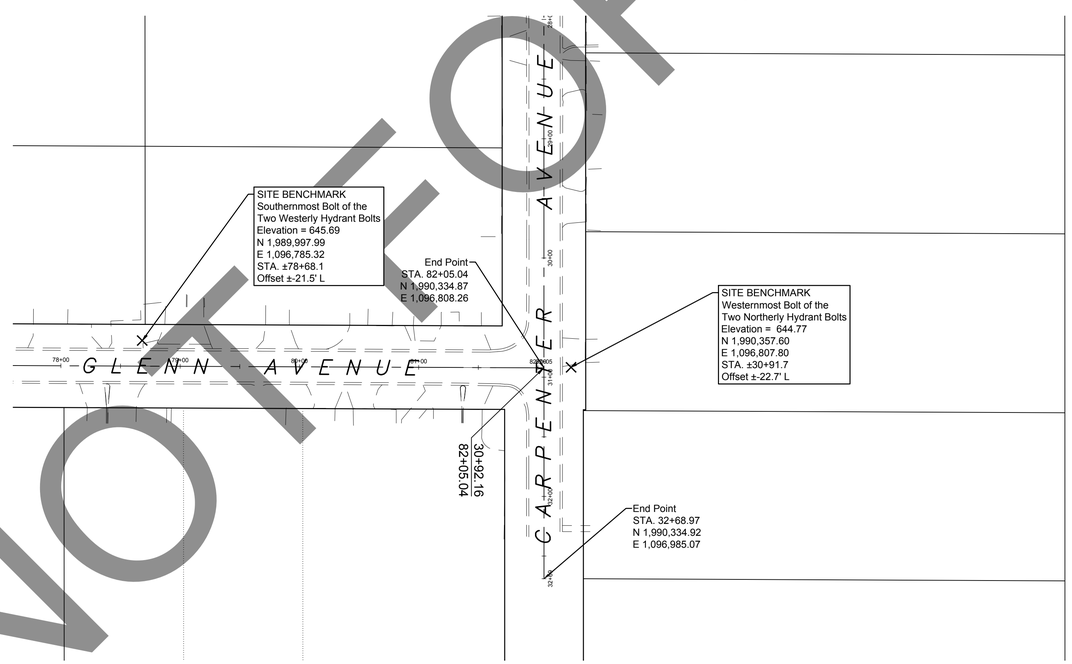

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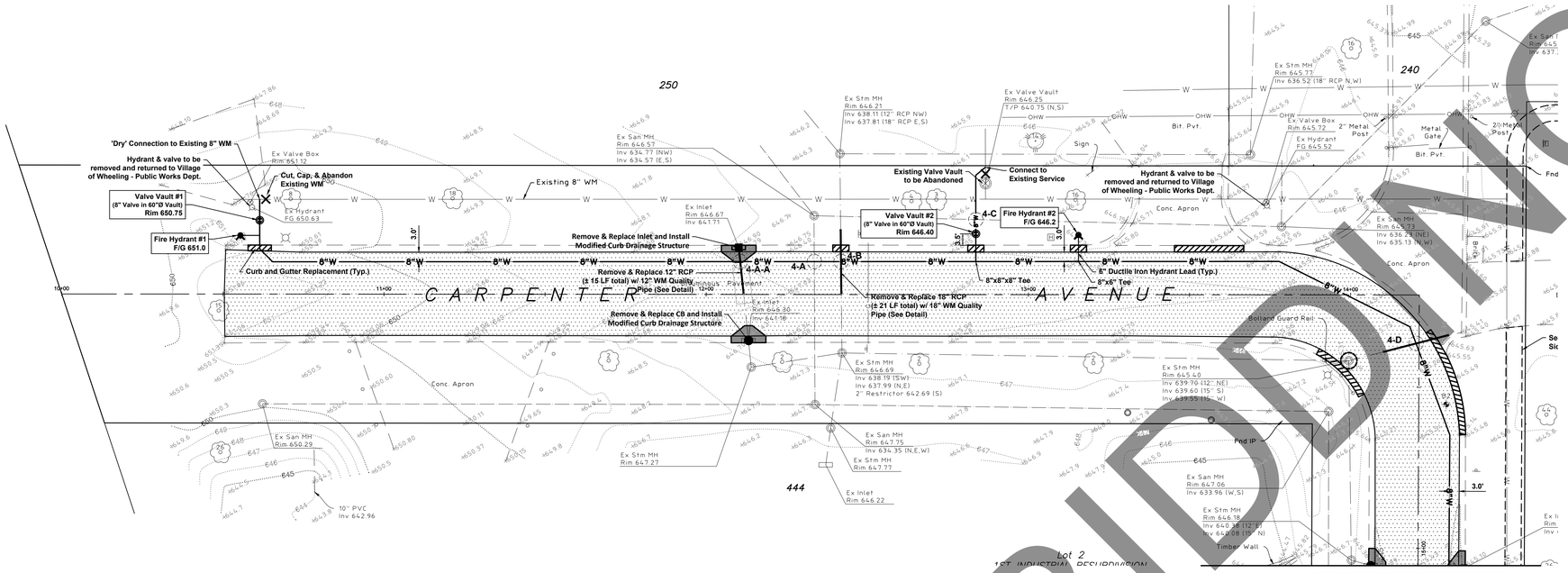

QUANTITY ASSUMPTIONS (CARPENTER AVENUE):

- The limits of all driveway apron, sidewalk, and curb and gutter removal and replacement shall be directed in the field by the Village of Wheeling.
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- PCC Driveway Removal and Replacement = 430 SY
- HMA Driveway Removal and Replacement = 48 SY
- B6.12 Curb & Gutter = 1,169 LF

DRIVEWAY APRON REPLACEMENT:

- All existing driveway aprons shall remain in place, unless shown otherwise on these plans or directed in the field by the Village of Wheeling. Any additional apron removals and/or replacements shall be done at the expense of the Contractor.

STRIPING REPLACEMENT:

- All existing striping, including stop bars and crosswalks, shall be replaced upon completion of paving activities in accordance with IDOT standards.

CURB AND GUTTER REPLACEMENT:

- The existing curb and gutter shall remain to the greatest extent possible, unless shown otherwise on these plans or directed in the field by the Village of Wheeling. Any additional curb replacement shall be provided at the cost of the Contractor.

DRIVEWAY CLOSINGS:

- It will be the Contractor's responsibility to notify property owners and the Village 2 days in advance when access to the residents' driveways will be temporarily closed due to curb and gutter and/or driveway replacement. The Contractor shall distribute notices APPROVED by the Village, to the residents/property owners. Every effort shall be made to accommodate access to the properties.

NOTE: It is assumed that the majority of the 6-inch sanitary sewer services along the North and East side of Carpenter Avenue will need to be removed and replaced at the new water main crossings. The Contractor shall be responsible for field verifying the locations and elevations of all service crossings, as well as confirming whether or not 18" vertical separation is being maintained. If vertical separation is less than 18", then the service shall be removed and replaced at the crossing with WM quality pipe.

NOTES:

1.) All disturbed areas shall be restored with 6" topsoil and salt-tolerant sod.
2.) All parkway trees shall be protected to the greatest extent possible. No tree removal sh allowed without prior approval from the Village.
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4.) Existing hydrants that are to be removed and replaced shall be delivered to the Villa Wheeling Public Works Department:
77 W. Hintz Road Wheeling, IL 60090 ph: (847) 279-6900 f: (847) 279-6420
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7.) All roads must stay open at all times. Should lane closures be required, one-lane traffic sh directed per IDOT requirements.
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9.) All new service lines beneath the roadway shall be PVC.
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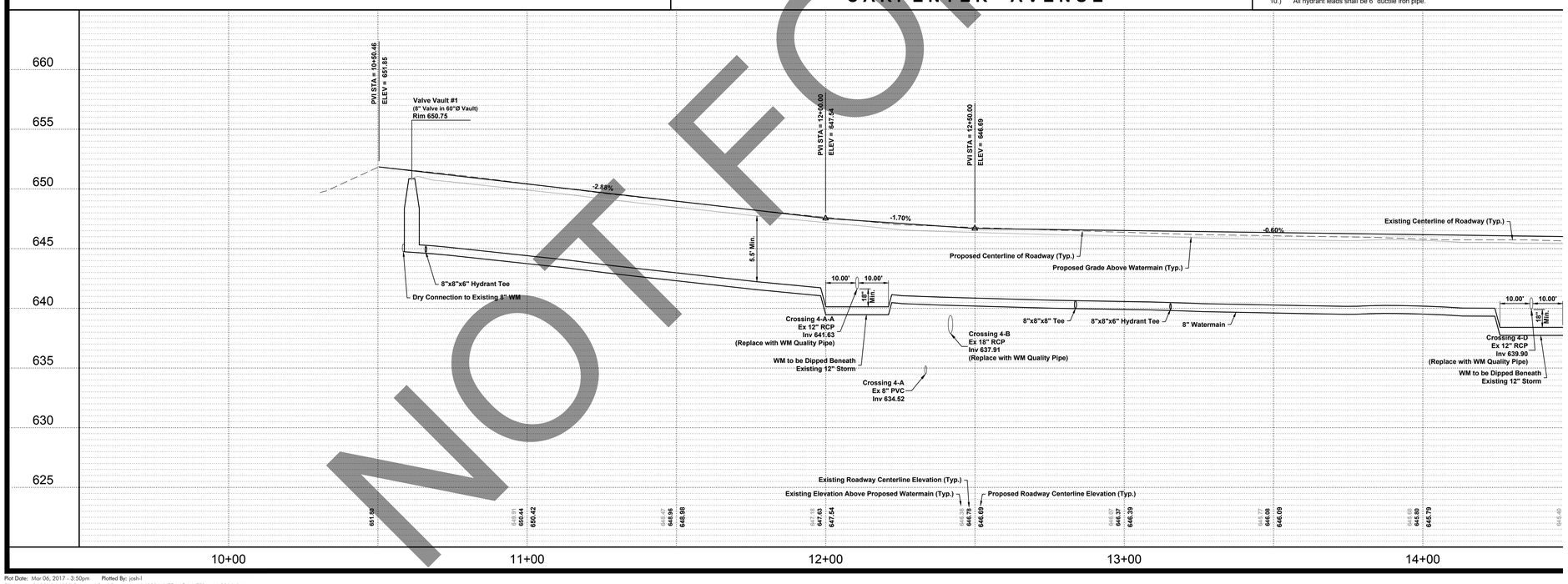

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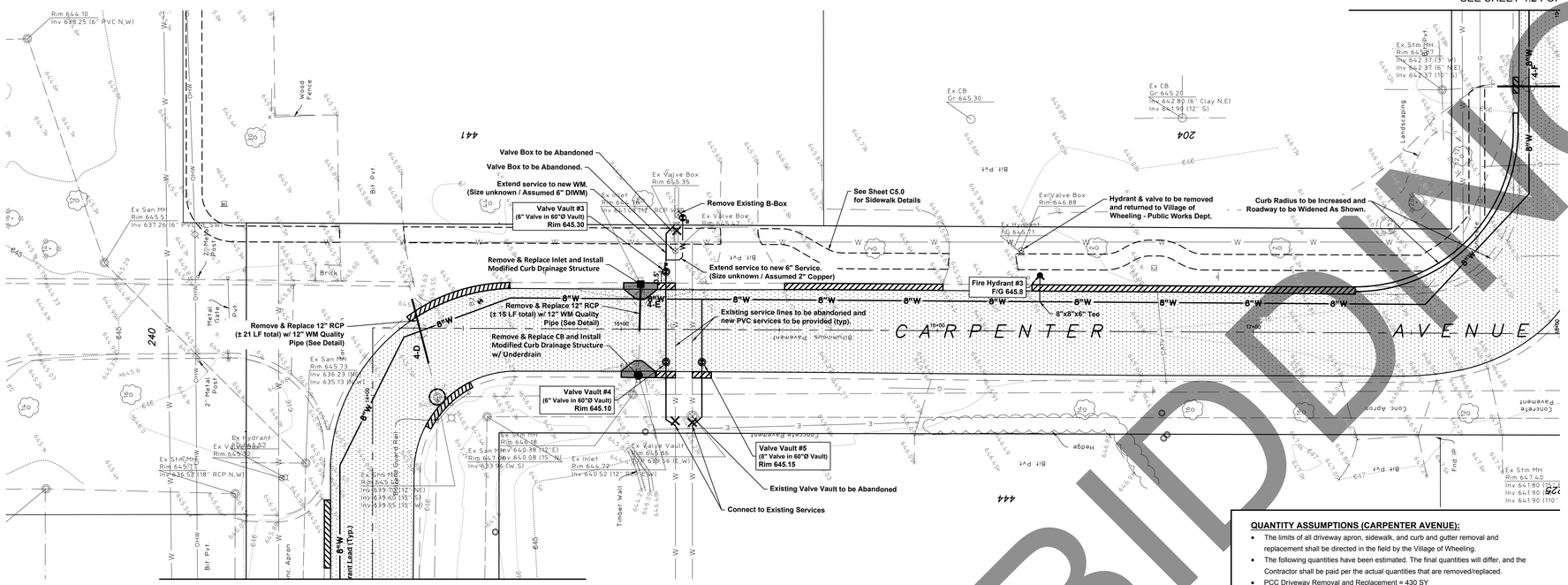
SEE SHEET 4.2 FOR



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DRIVEWAY APRON REPLACEMENT:

- All existing driveway aprons shall remain in place, unless shown otherwise on these plans or directed in the field by the Village of Wheeling. Any additional apron removals and/or replacements shall be done at the expense of the Contractor.

STRIPING REPLACEMENT:

- All existing striping, including stop bars and crosswalks, shall be replaced upon completion of paving activities in accordance with IDOT standards.

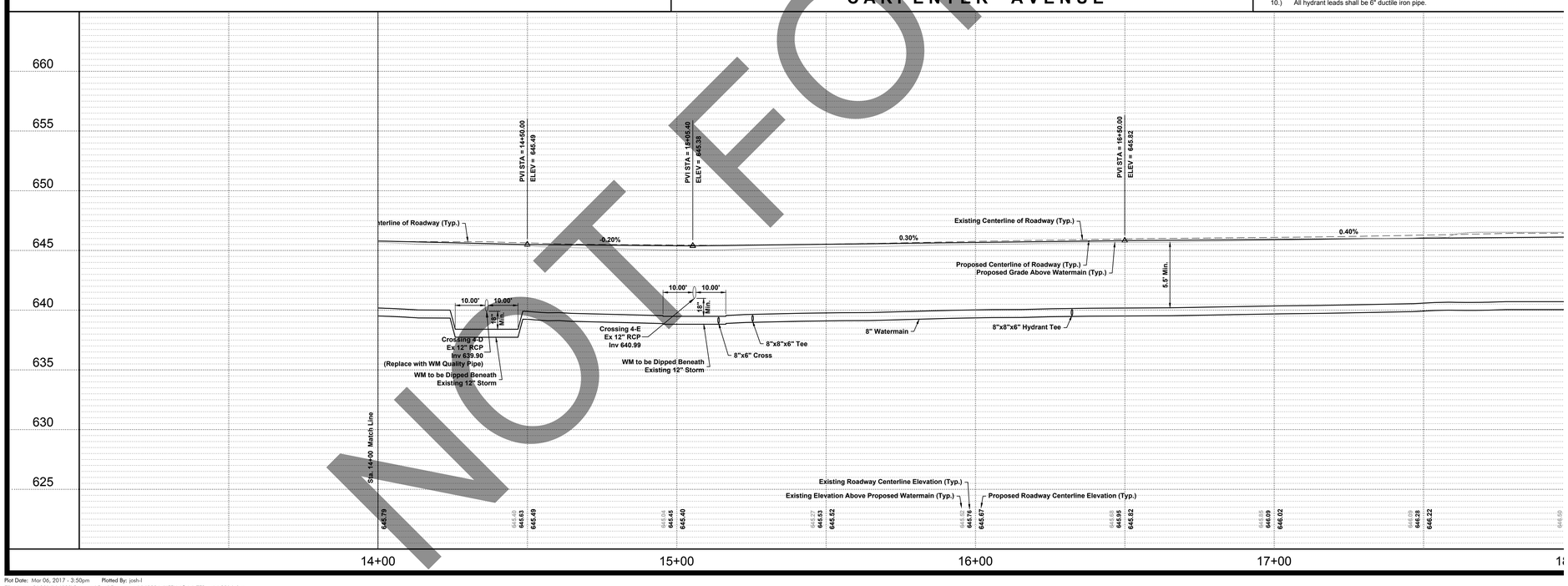
CURB AND GUTTER REPLACEMENT:

- The existing curb and gutter shall remain to the greatest extent possible, unless shown otherwise on these plans or directed in the field by the Village of Wheeling. Any additional curb replacement shall be provided at the cost of the Contractor.

DRIVEWAY CLOSINGS:

- It will be the Contractor's responsibility to notify property owners and the Village 2 days in advance when access to the residents' driveways will be temporarily closed due to curb and gutter and/or driveway replacement. The Contractor shall distribute notices APPROVED by the Village, to the residents/property owners. Every effort shall be made to accommodate access to the properties.

NOTE: It is assumed that the majority of the 6-inch sanitary sewer services along the North and East side of Carpenter Avenue will need to be removed and replaced at the new water main crossings. The Contractor shall be responsible for field verifying the locations and elevations of all service crossings, as well as confirming whether or not 18" vertical separation is being maintained. If vertical separation is less than 18", then the service shall be removed and replaced at the crossing with WM quality pipe.



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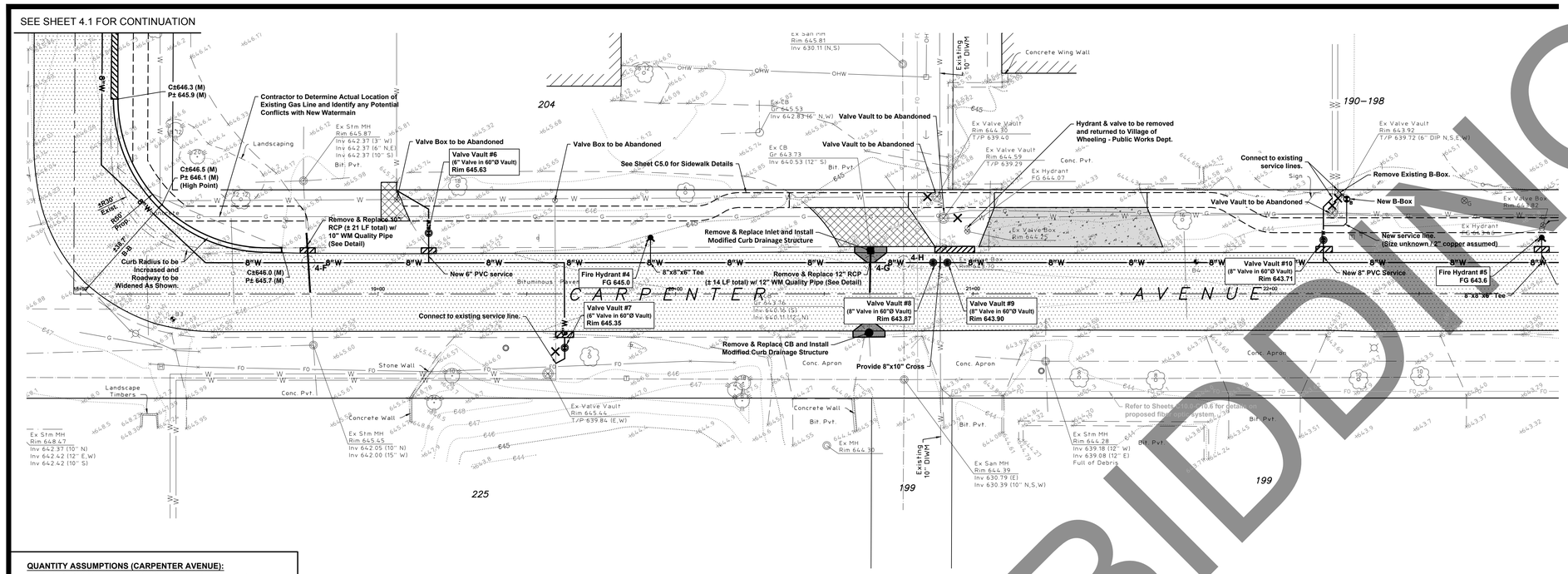

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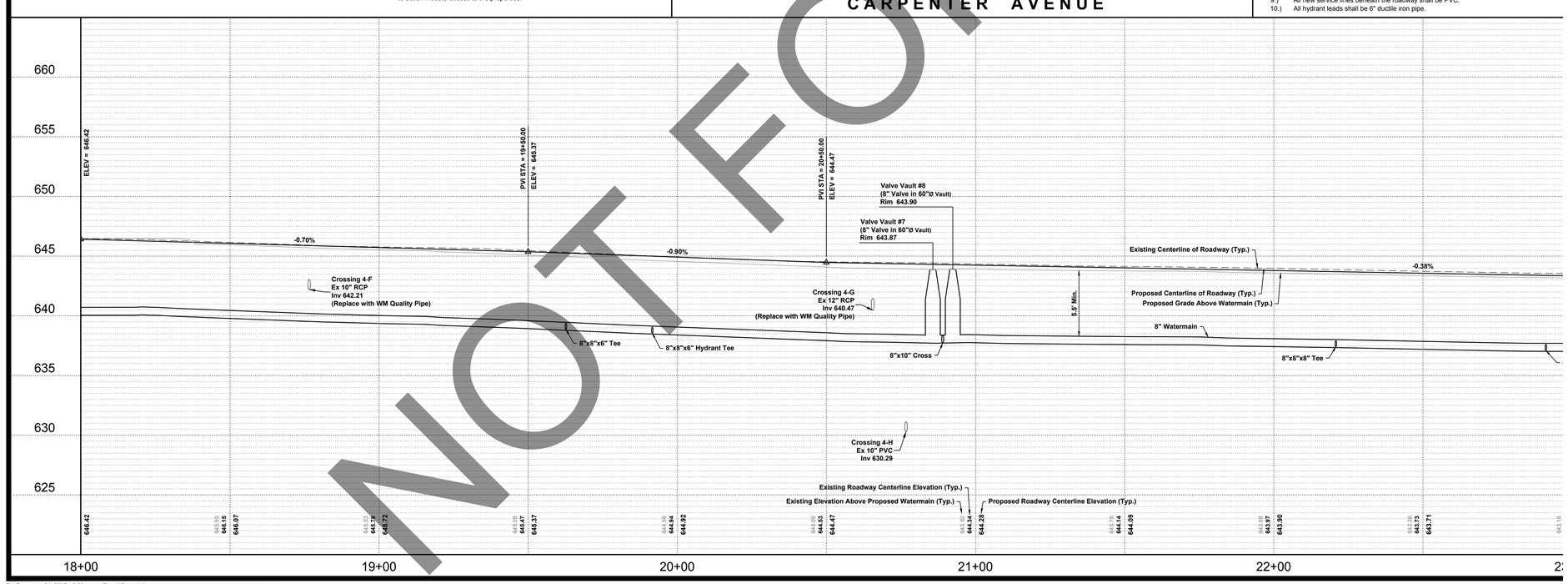

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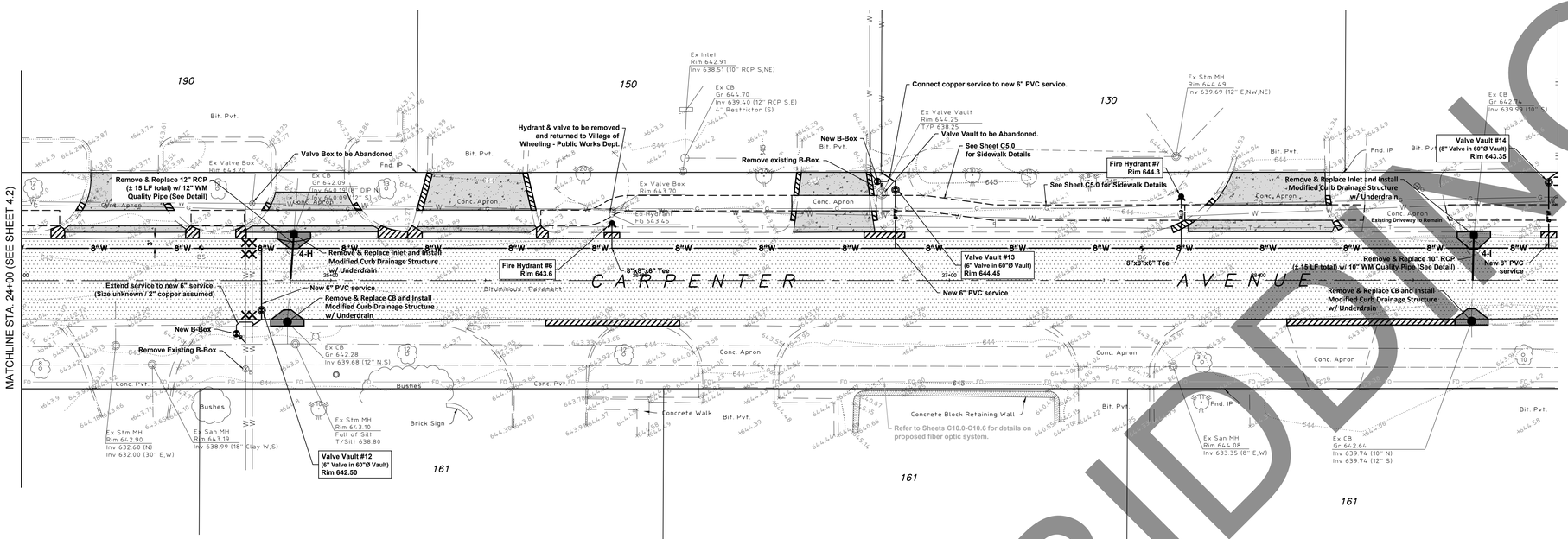

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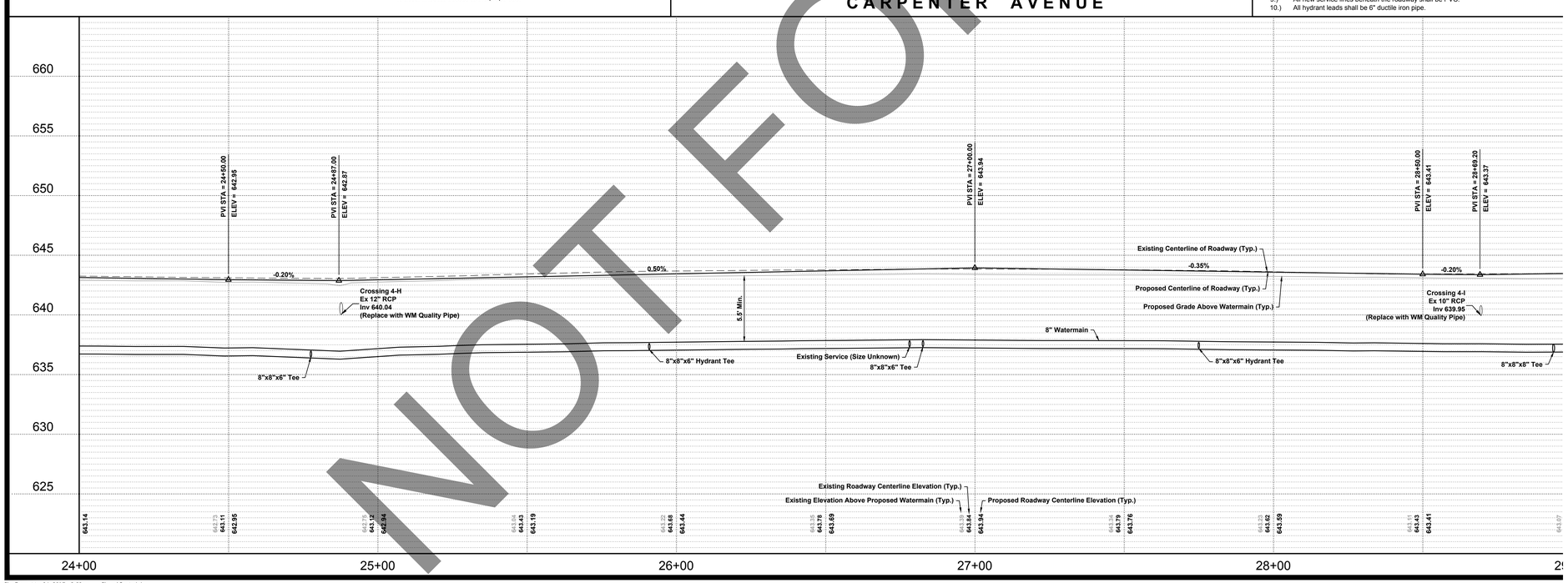
CARPENTER AVENUE



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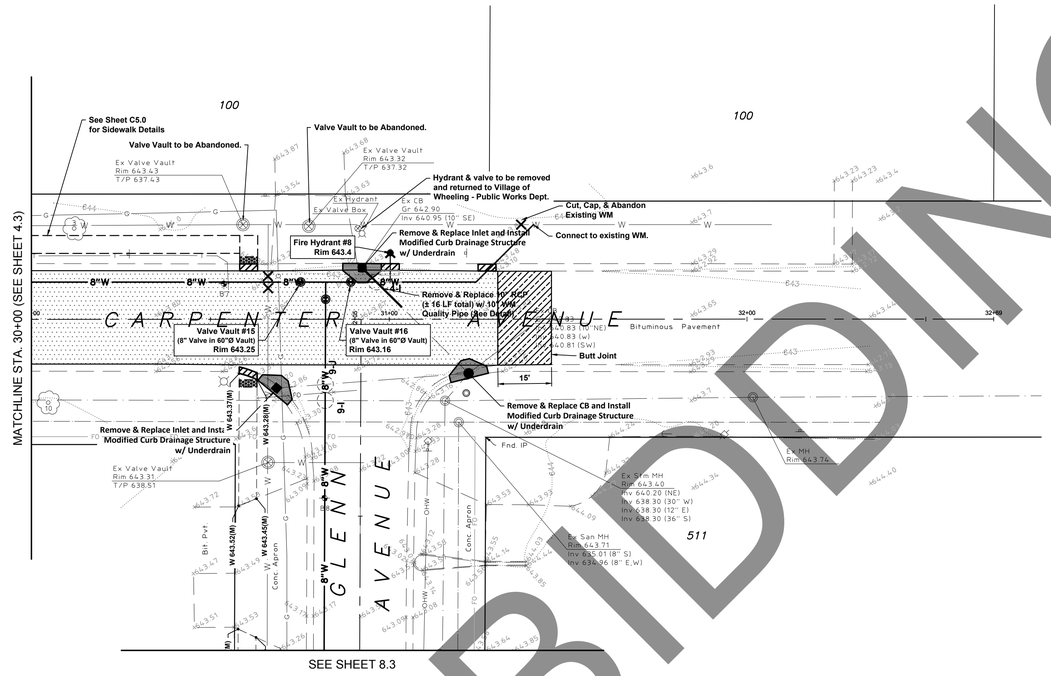
Plot Date: Mar 06, 2017 - 3:50pm Plotted By: josh-l
File Name: P:\2016\16039\Drawings\Final Engineering\16039-WHEELING-WATERMAIN-2016.dwg



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- HMA Driveway Removal and Replacement = 48 SY
- B6.12 Curb & Gutter = 1,169 LF

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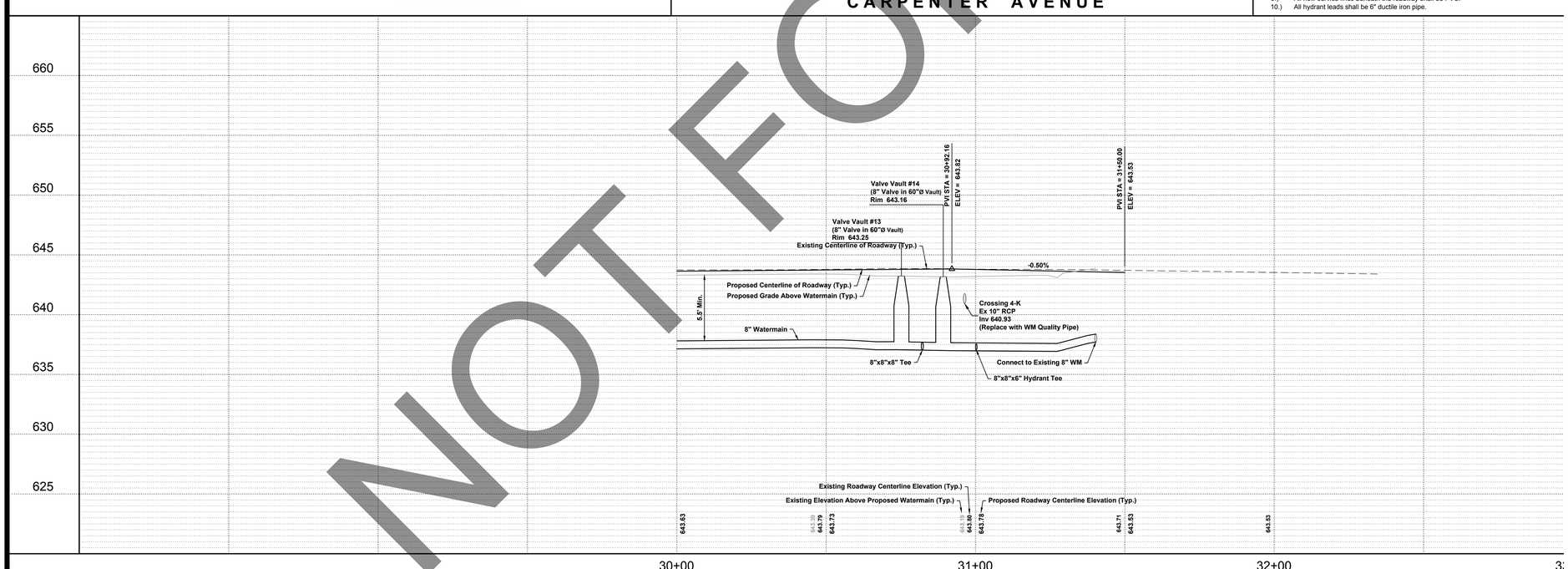


NOT FOR BIDDING

LEGEND

- **CONCRETE DRIVEWAY APRON - REMOVE & REPLACE**
  - See Village of Wheeling "Driveway Standard" Detail
- **BITUMINOUS DRIVEWAY APRON - REMOVE & REPLACE**
  - See Village of Wheeling "Driveway Standard" Detail
- **CONCRETE SIDEWALK (STANDARD)**
  - See Village of Wheeling "Public Sidewalk Standards" Detail
- **CONCRETE SIDEWALK (AT DRIVEWAY)**
  - See Village of Wheeling "Public Sidewalk Standards" Detail
- **W XXX.XX** — **PROPOSED SIDEWALK ELEVATION**
- **P XXX.XX** — **PROPOSED PAVEMENT ELEVATION**
- **(M)** — **MATCH EXISTING ELEVATION**
- **CURB & GUTTER TO BE REMOVED / REPLACED**

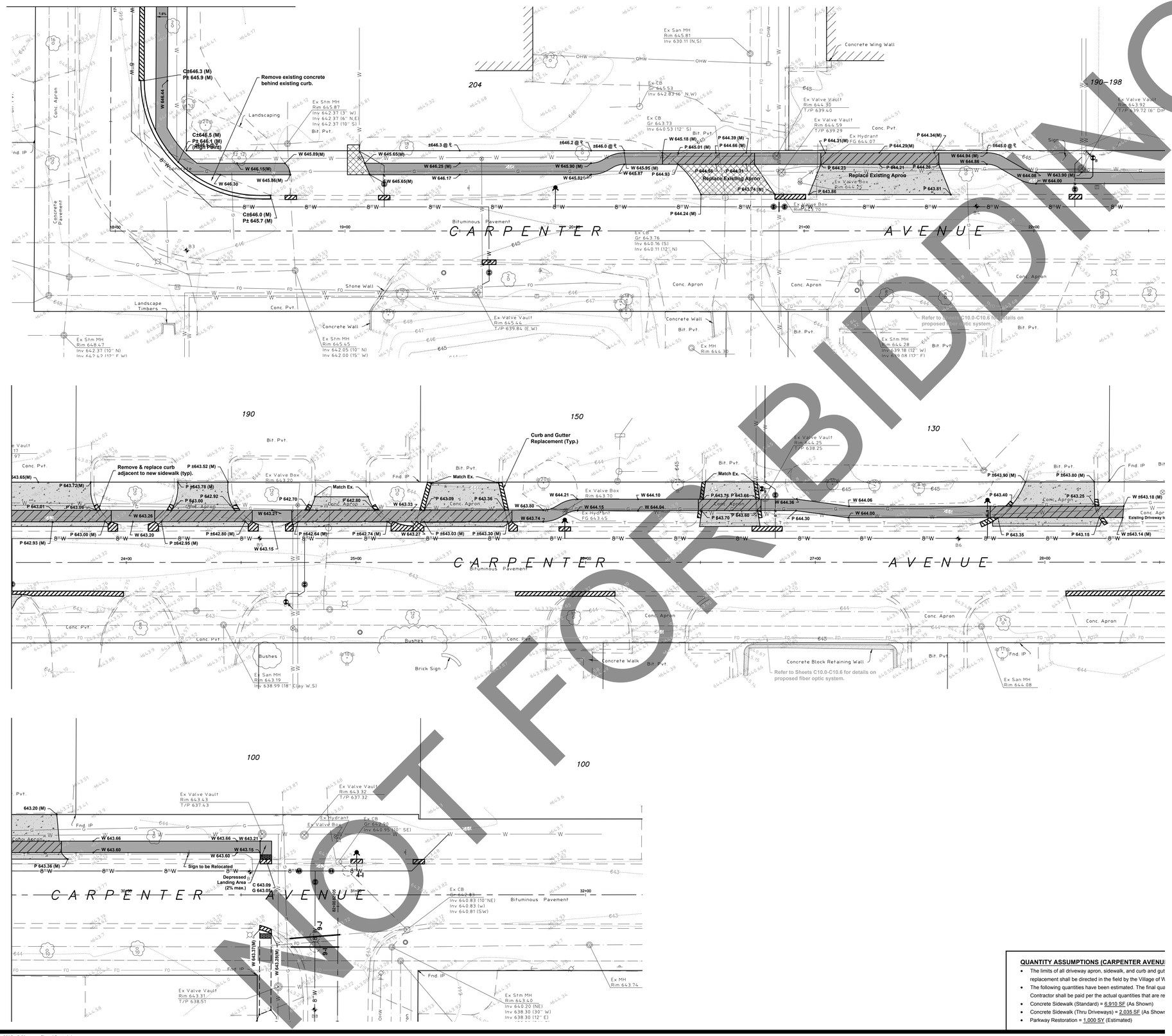
NOTES:

1. The limits of all driveway apron and curb and gutter removal and replacement shall be directed in the field by the Village of Wheeling.
2. The proposed sidewalk routing shown on these plans is subject to change in the field at the discretion of the Village Engineer. The Contractor shall coordinate with the Village Engineer prior to any excavation or framing to determine the preferred final locations.
3. The cross-slope for the new sidewalks shall be 1.5% (2% max.).
4. All sidewalk ramps shall be constructed per the Village of Wheeling's Standard Detail on Sheet C11.1.
5. Existing driveway aprons shall be removed & replaced as necessary to provide a 2% max. cross-slope along the new pedestrian path between sidewalk ramps.

QUANTITY ASSUMPTIONS (CARPENTER AVENUE - SIDEWALK):

- The following quantities have been estimated. The final quantities will differ, and the Contractor shall be paid per the actual quantities that are removed/replaced.
- Concrete Sidewalk (Standard) = 5,910 SF (As Shown)
- Concrete Sidewalk (Thru Driveways) = 2,035 SF (As Shown)
- Parkway Restoration = 1,000 SY (Estimated)

NOT FOR BIDDING



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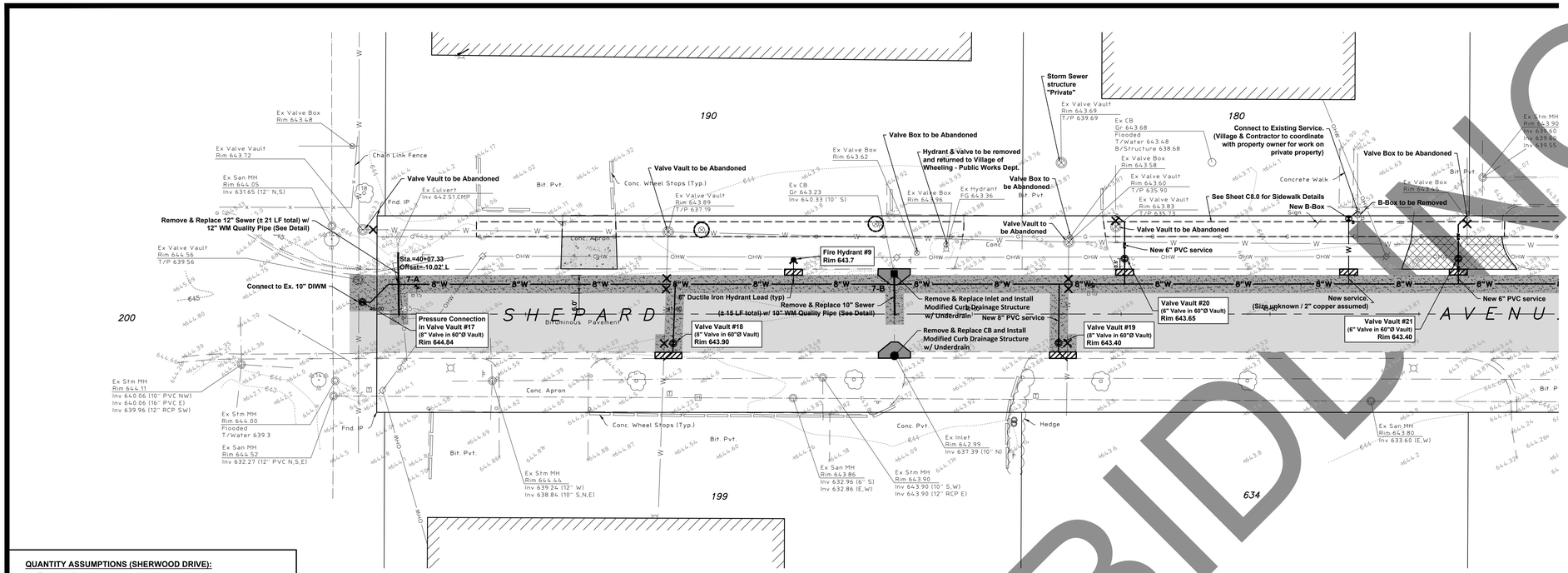

QUANTITY ASSUMPTIONS (SHERWOOD DRIVE):

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- PCC Driveway Pavement, 6" = 106 SY
- HMA Driveway Pavement, 5" = 100 SY
- B6.12 Curb & Gutter = 330 LF

DRIVEWAY APRON REPLACEMENT:

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STRIPING REPLACEMENT:

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CURB AND GUTTER REPLACEMENT:

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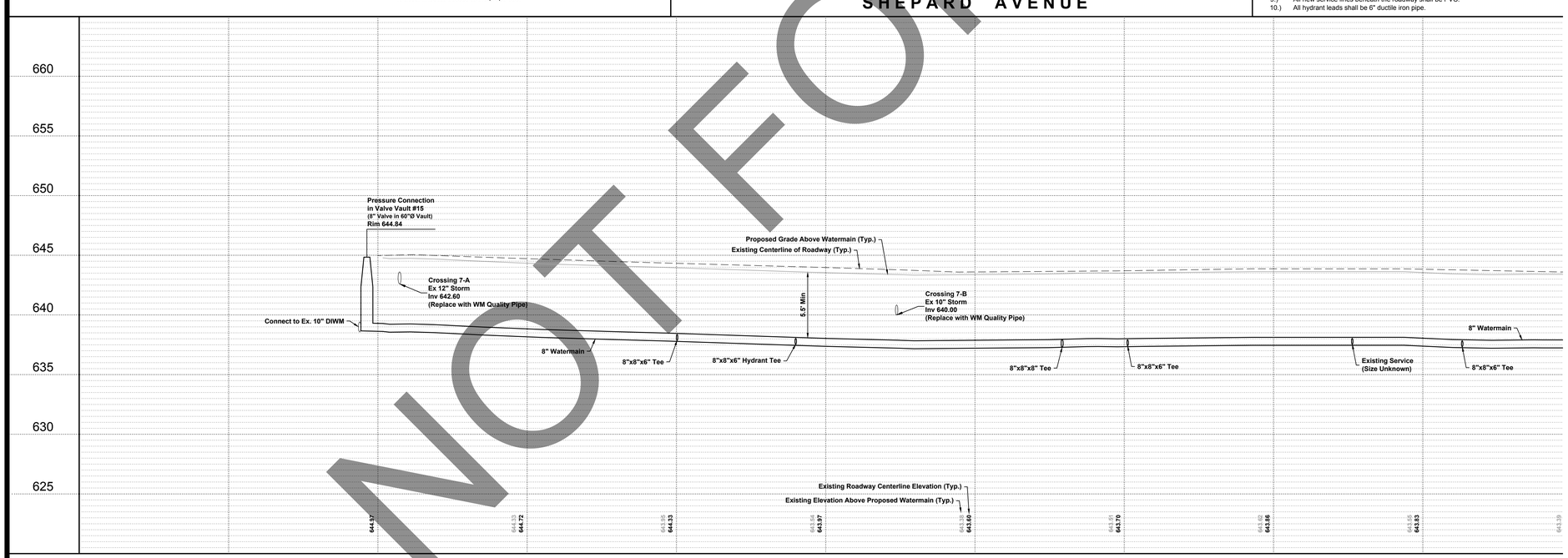
10.) All hydrant leads shall be 6" ductile iron pipe.

SHEPARD AVENUE



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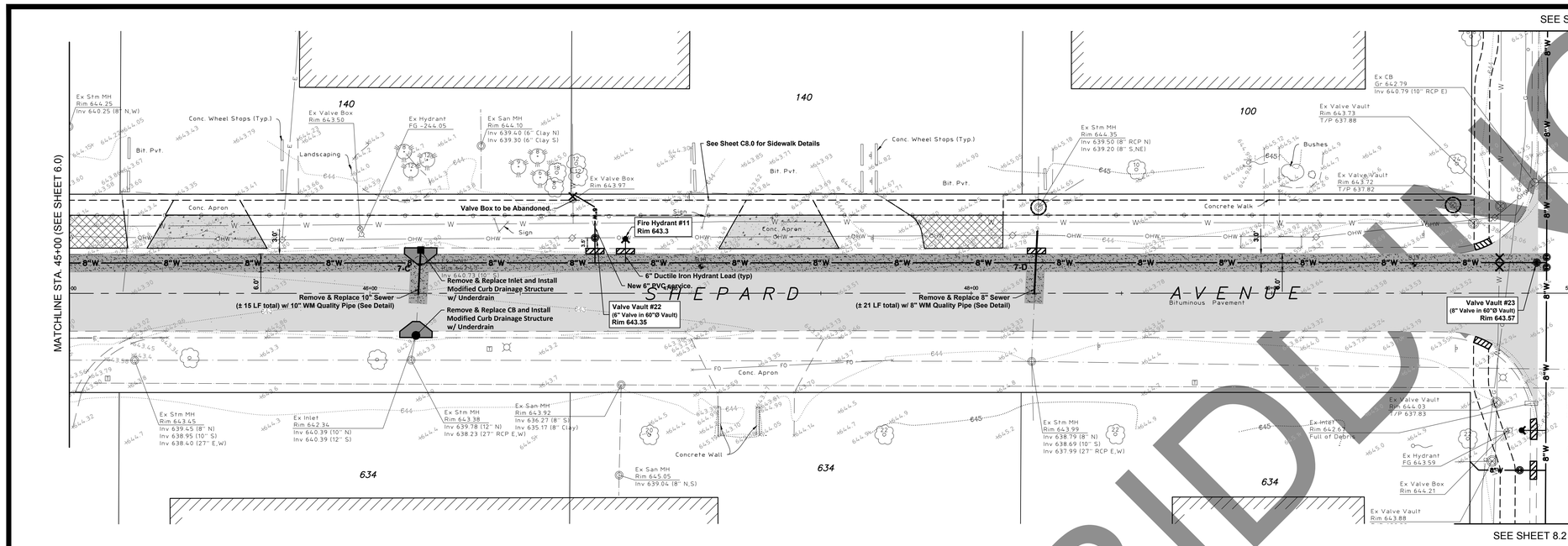

QUANTITY ASSUMPTIONS (SHERWOOD DRIVE):

- The limits of all driveway apron, sidewalk, and curb and gutter removal and replacement shall be directed in the field by the Village of Wheeling.
- The following quantities have been estimated. The final quantities will differ, and the Contractor shall be paid per the actual quantities that are removed/replaced.
- PCC Driveway Pavement, 6" = 106 SY
- HMA Driveway Pavement, 5" = 100 SY
- B6.12 Curb & Gutter = 330 LF

DRIVEWAY APRON REPLACEMENT:

- All existing driveway aprons shall remain in place, unless shown otherwise on these plans or directed in the field by the Village of Wheeling. Any additional apron removals and/or replacements shall be done at the expense of the Contractor.

STRIPING REPLACEMENT:

- All existing striping, including stop bars and crosswalks, shall be replaced upon completion of paving activities in accordance with IDOT standards.

CURB AND GUTTER REPLACEMENT:

- The existing curb and gutter shall remain to the greatest extent possible, unless shown otherwise on these plans or directed in the field by the Village of Wheeling. Any additional curb replacement shall be provided at the cost of the Contractor.

DRIVEWAY CLOSINGS:

- It will be the Contractor's responsibility to notify property owners and the Village 2 days in advance when access to the residents' driveways will be temporarily closed due to curb and gutter and/or driveway replacement. The Contractor shall distribute notices APPROVED by the Village, to the residents/property owners. Every effort shall be made to accommodate access to the properties.

NOTE: It is assumed that the majority of the 6-inch sanitary sewer services along the north side of Shepard Avenue will need to be removed and replaced at the new water main crossings. The Contractor shall be responsible for field verifying the locations and elevations of all service crossings, as well as confirming whether or not 18" vertical separation is being maintained. If vertical separation is less than 18", then the service shall be removed and replaced at the crossing with WM quality pipe.

NOTES:

1.) All disturbed areas shall be restored with 6" topsoil and salt-tolerant sod.
2.) All parkway trees shall be protected to the greatest extent possible. No tree removal sh
allowed without prior approval from the Village.
3.) The locations of existing utilities shown have been determined based on the best ava
information. The Contractor is responsible for verifying all utility locations/depths in orc
ensure their protection. If relocations of any proposed vaults or service lines are required
shall be coordinated with the Village Engineer.
4.) Existing hydrants that are to be removed and replaced shall be delivered to the Villa
Wheeling Public Works Department:
77 W. Hintz Road Wheeling, IL 60090 ph: (847) 279-6900 f: (847) 279-6420
5.) Existing service line locations and sizes have been estimated by the best available inform
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6.) Silt fencing shall be installed around auger pits and other excavated areas to pr
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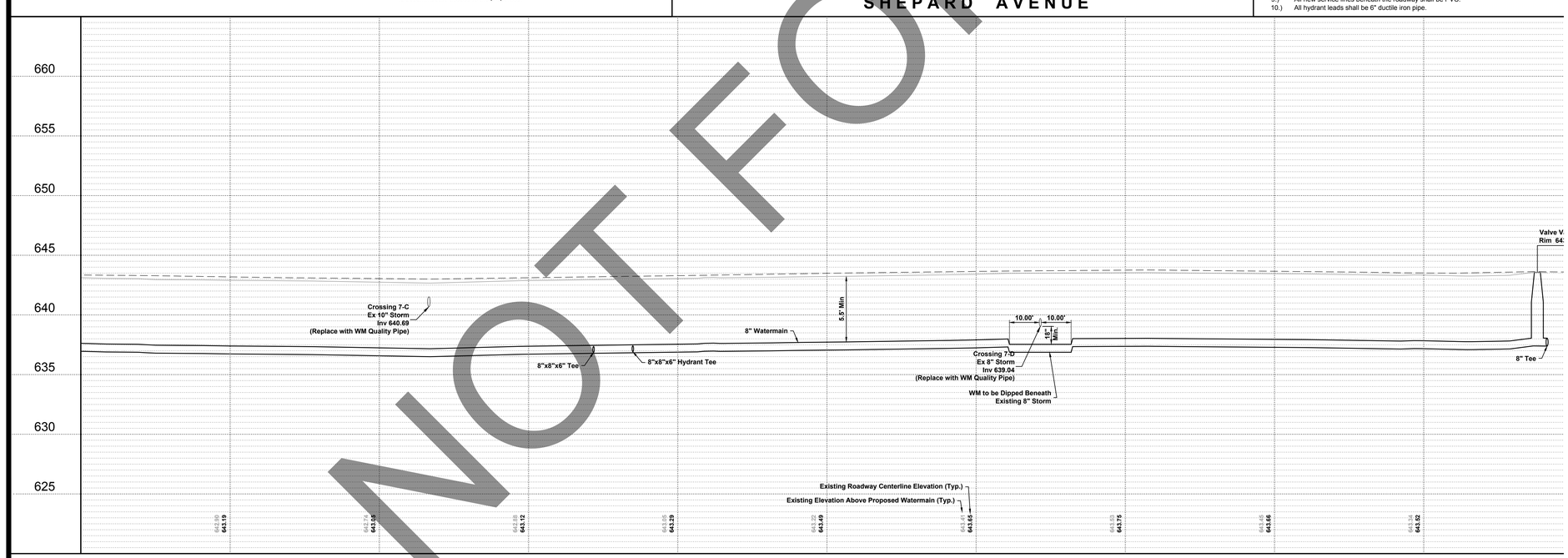
necessary.
7.) All roads must stay open at all times. Should lane closures be required, one-lane traffic sh
directed per IDOT requirements.
8.) All existing b-boxes for services that are being replaced shall be removed upon activation
new service. This b-box removal shall be incidental to the cost of the new service installatio
9.) All new service lines beneath the roadway shall be PVC.
10.) All hydrant leads shall be 6" ductile iron pipe.

S H E P A R D A V E N U E



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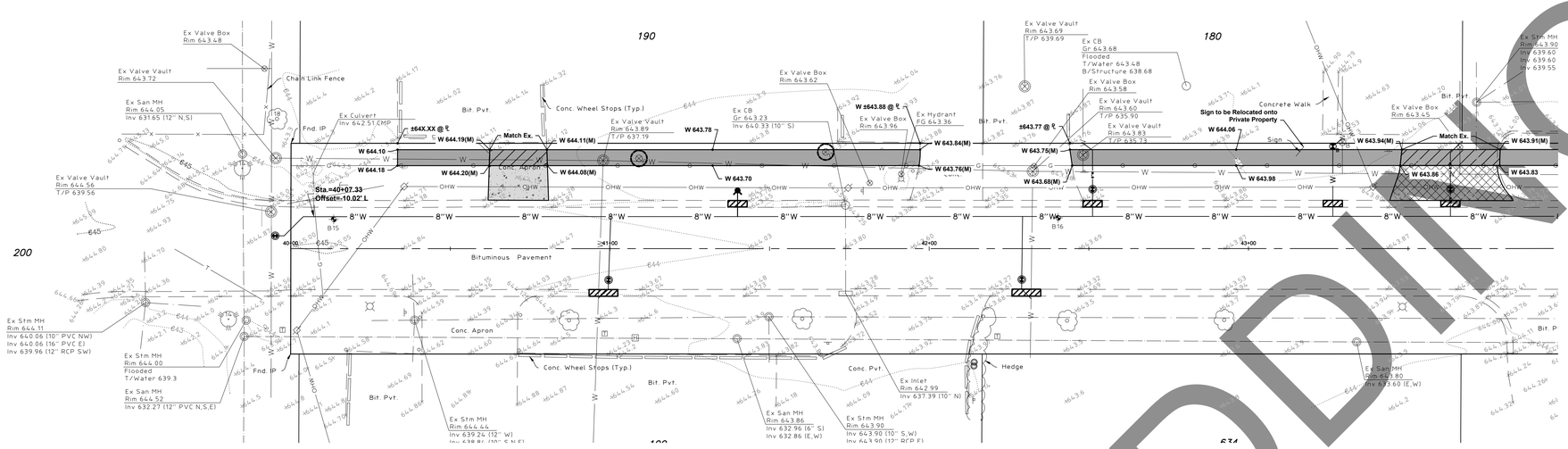

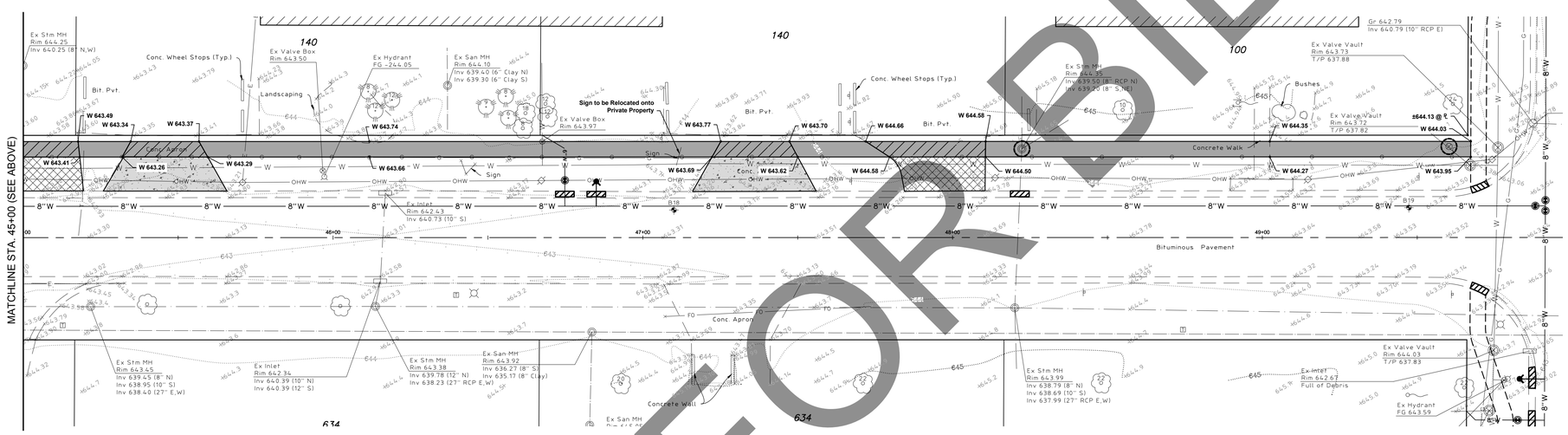

QUANTITY ASSUMPTIONS (SHEPARD DRIVE):

- The limits of all driveway apron, sidewalk, and curb and gutter removal and replacement shall be directed in the field by the Village of Wheeling.
- The following quantities have been estimated. The final quantities will differ, and the Contractor shall be paid per the actual quantities that are removed/replaced.
- PCC Sidewalk (Standard) = 3,670 SF
- PCC Sidewalk (Thru Driveways) = 763 SF
- Parkway Restoration = 475 SY

NOTES:

1. The limits of all driveway apron and curb and gutter removal ar be directed in the field by the Village of Wheeling.
2. The proposed sidewalk routing shown on these plans is subjec field at the discretion of the Village Engineer. The Contractor s the Village Engineer prior to any excavation or framing to deter final locations.
3. The cross-slope for the new sidewalks shall be 1.5% (2% max.
4. All sidewalk ramps shall be constructed per the Village of Whe Detail on Sheet C11.1 .
5. Existing driveway aprons shall be removed & replaced as nece max. cross-slope along the new pedestrian path between sidev

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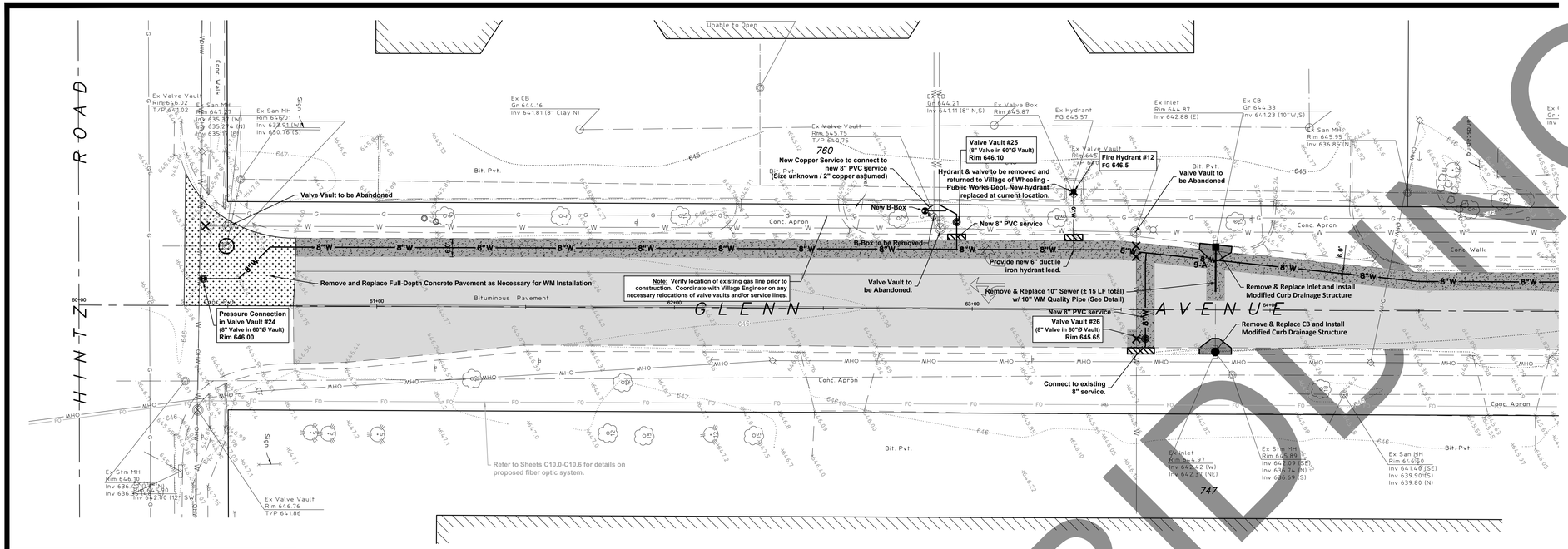

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- The following quantities have been estimated. The final quantities will differ, and the Contractor shall be paid per the actual quantities that are removed/replaced.
- PCC Driveway Pavement, 6" = 275 SY
- HMA Driveway Pavement, 5" = 75 SY
- B6.12 Curb & Gutter = 512 LF

DRIVEWAY APRON REPLACEMENT:

- All existing driveway aprons shall remain in place, unless shown otherwise on these plans or directed in the field by the Village of Wheeling. Any additional apron removals and/or replacements shall be done at the expense of the Contractor.

STRIPING REPLACEMENT:

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- It will be the Contractor's responsibility to notify property owners and the Village 2 days in advance when access to the residents' driveways will be temporarily closed due to curb and gutter and/or driveway replacement. The Contractor shall distribute notices APPROVED by the Village, to the residents/property owners. Every effort shall be made to accommodate access to the properties.

NOTE: It is assumed that the majority of the 6-inch sanitary sewer services along the east side of Glenn Avenue will need to be removed and replaced at the new water main crossings. The Contractor shall be responsible for field verifying the locations and elevations of all service crossings, as well as confirming whether or not 18" vertical separation is being maintained. If vertical separation is less than 18", then the service shall be removed and replaced at the crossing with WM quality pipe.

NOTES:

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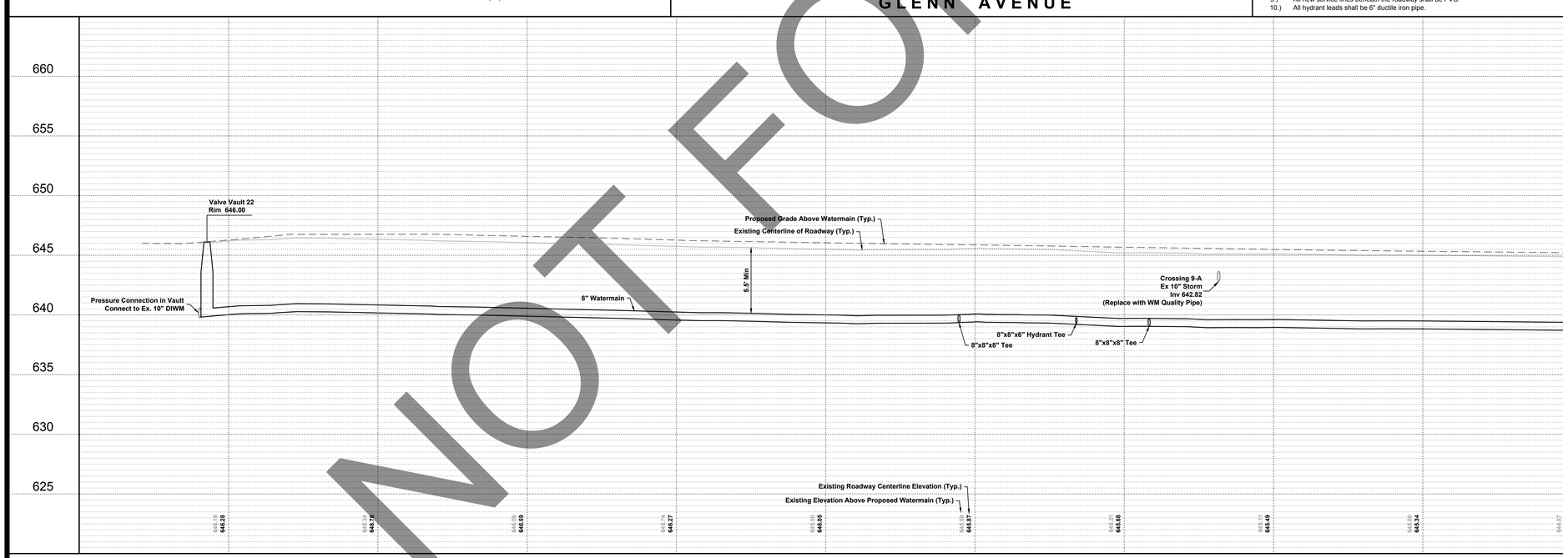

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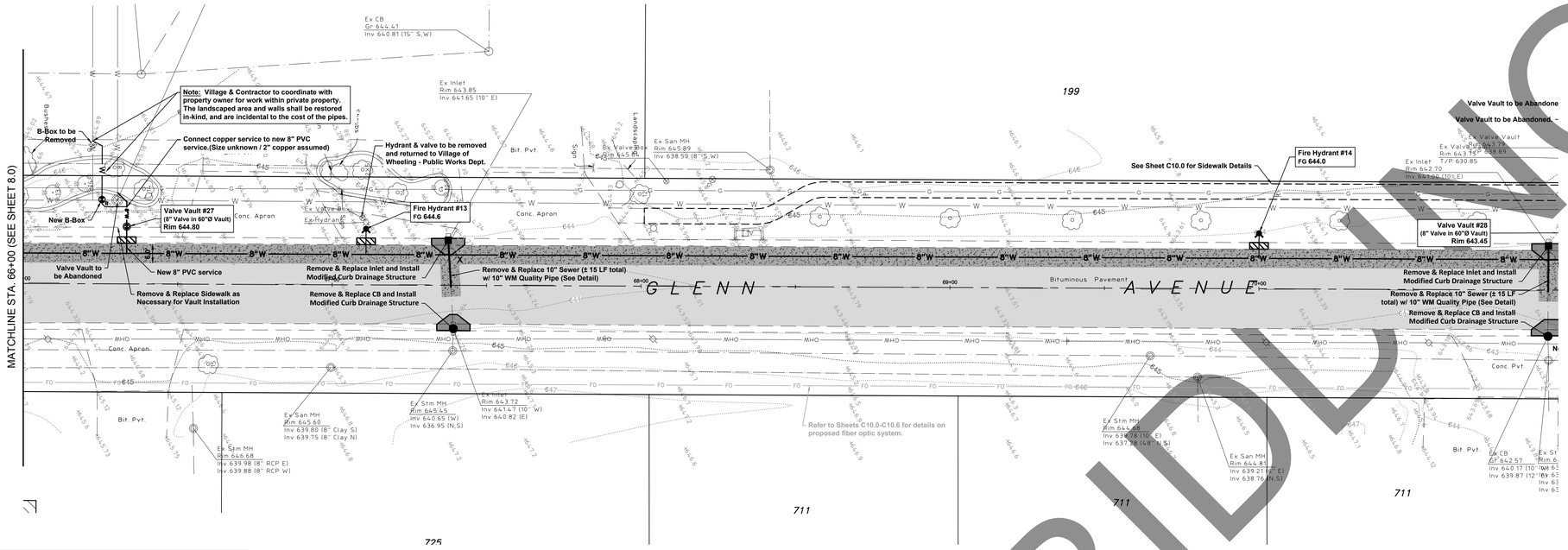

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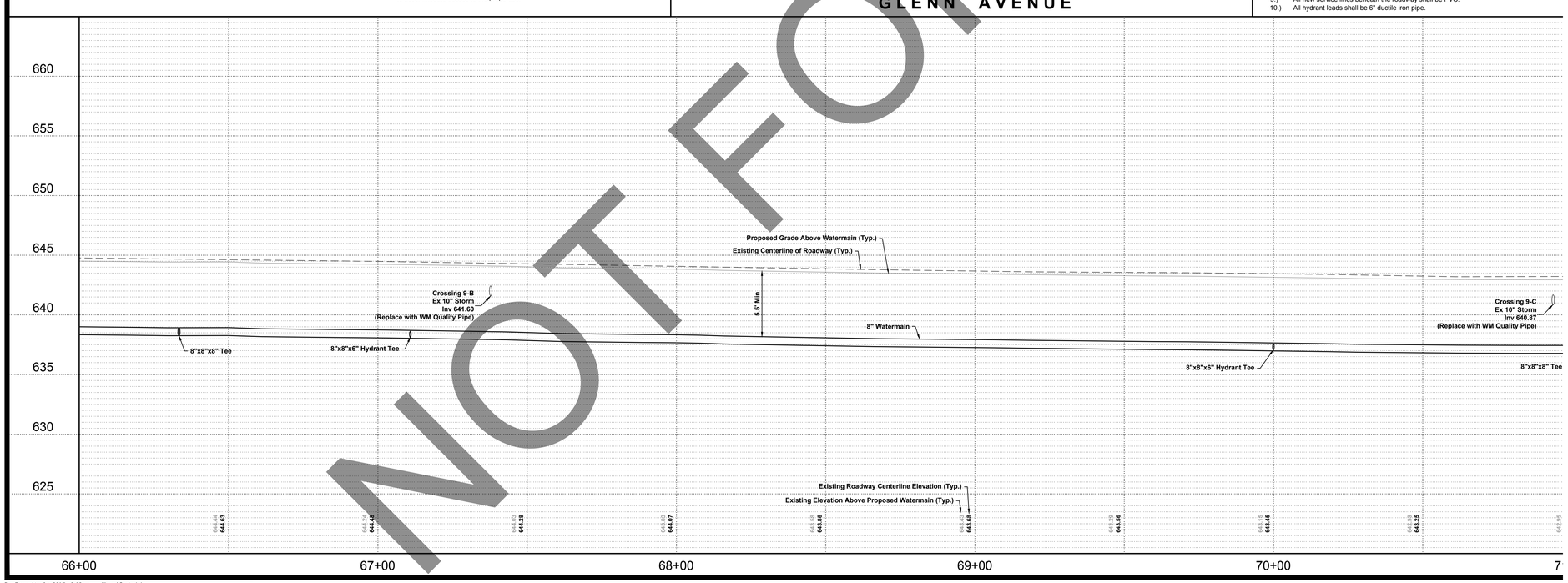

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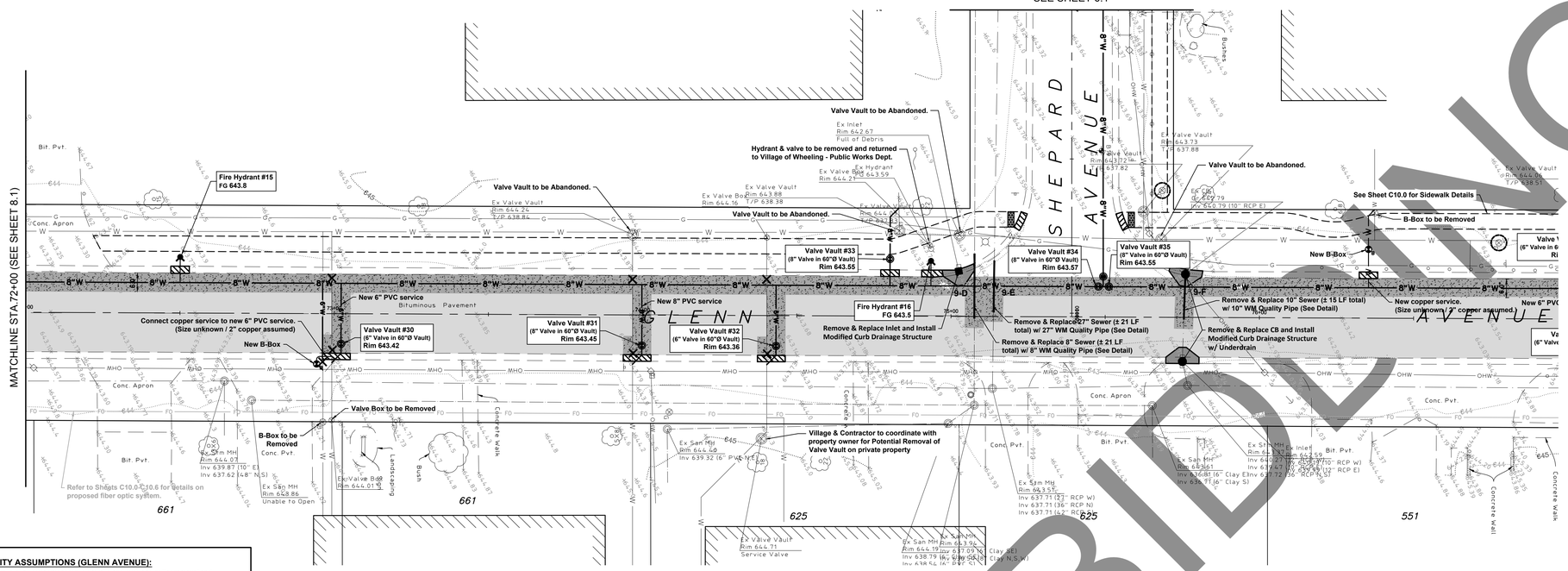

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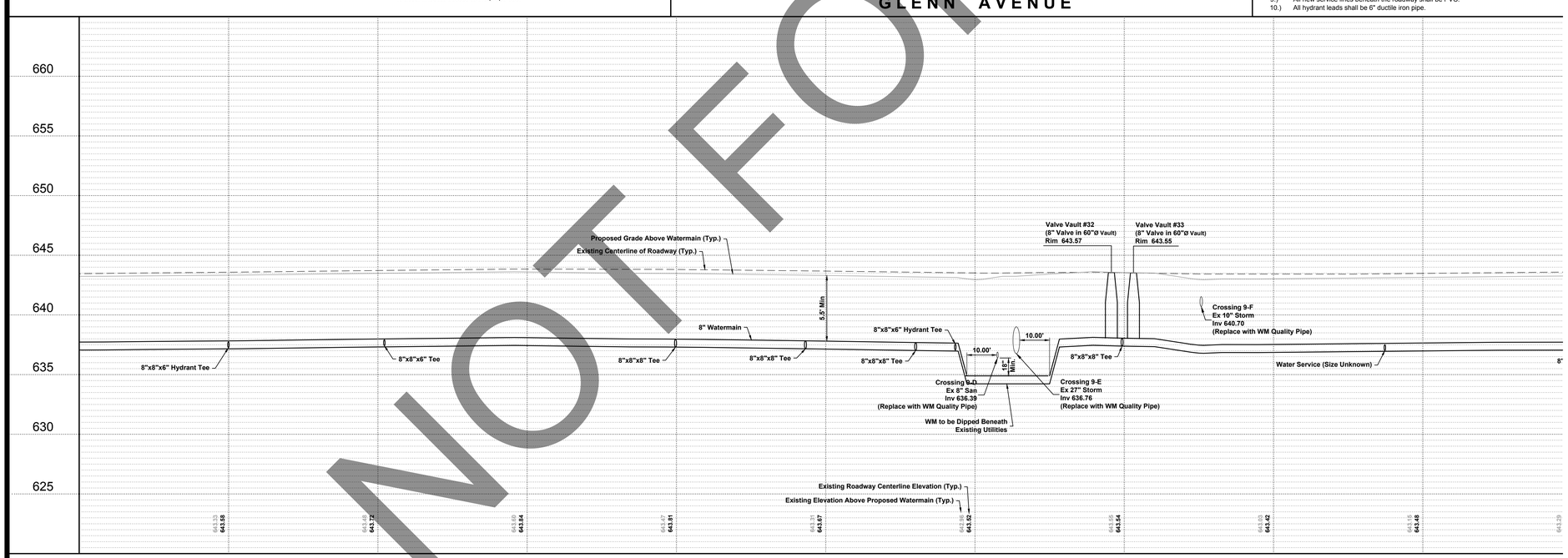
GLENN AVENUE



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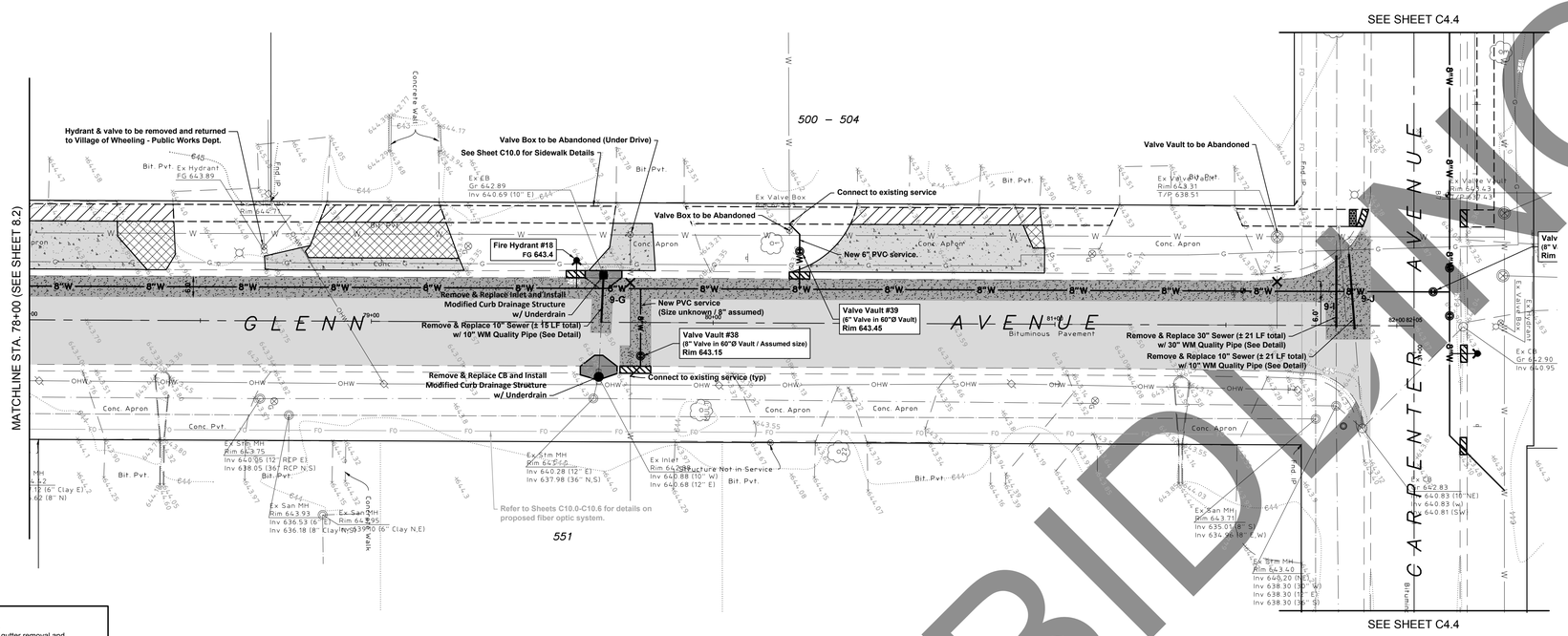

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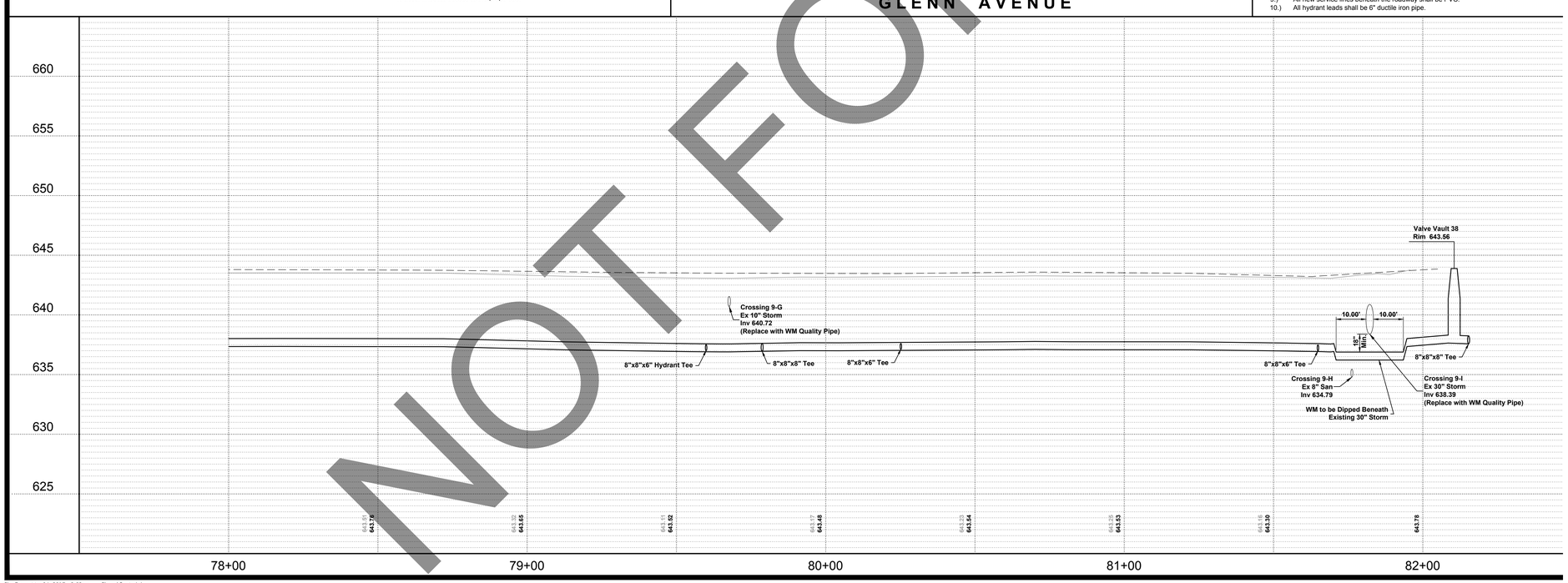
GLENN AVENUE



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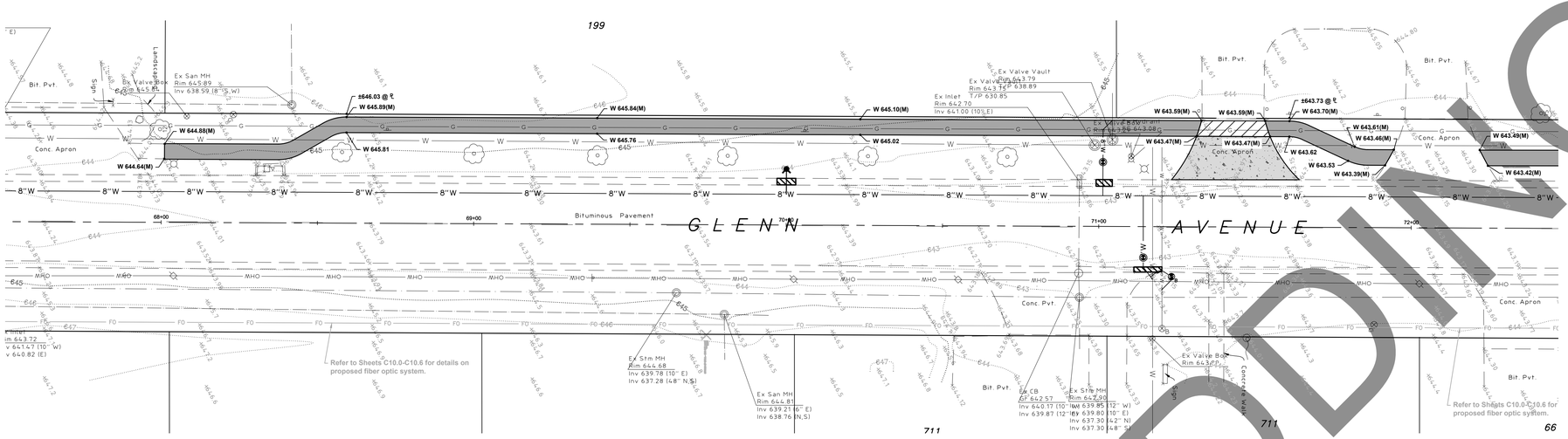

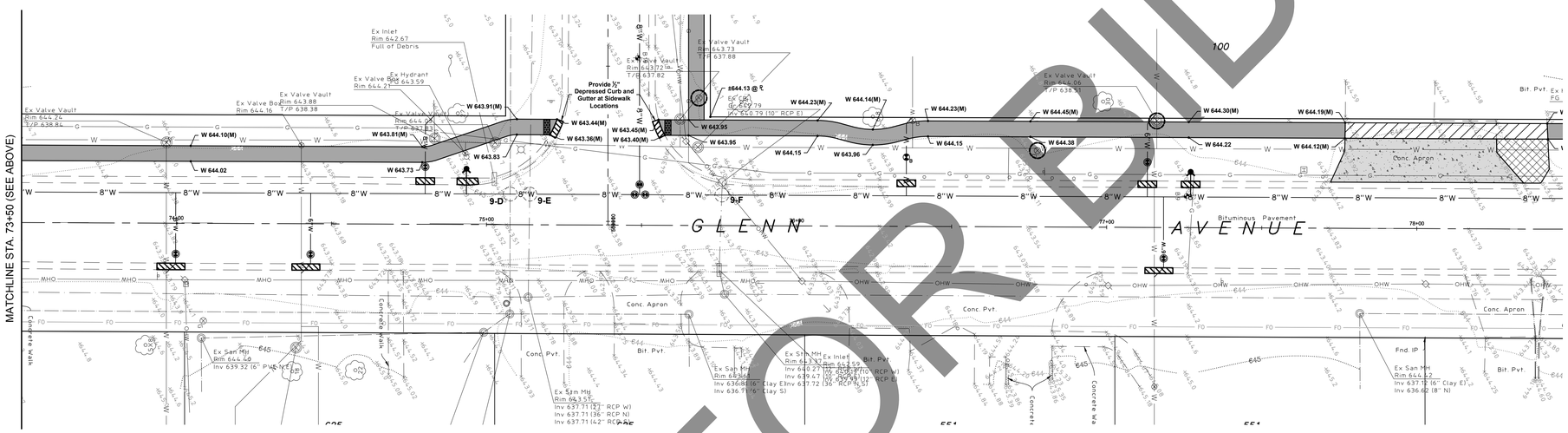

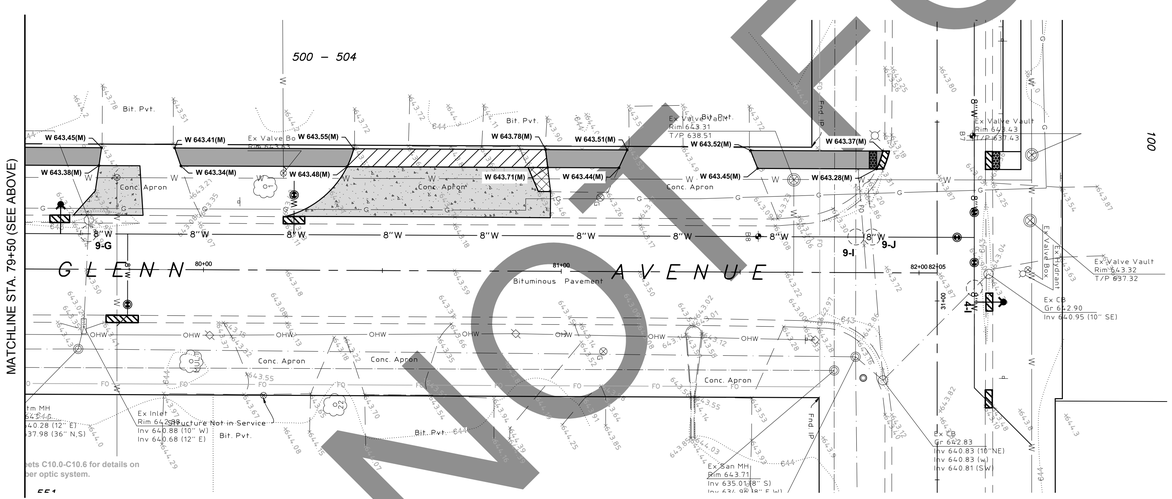

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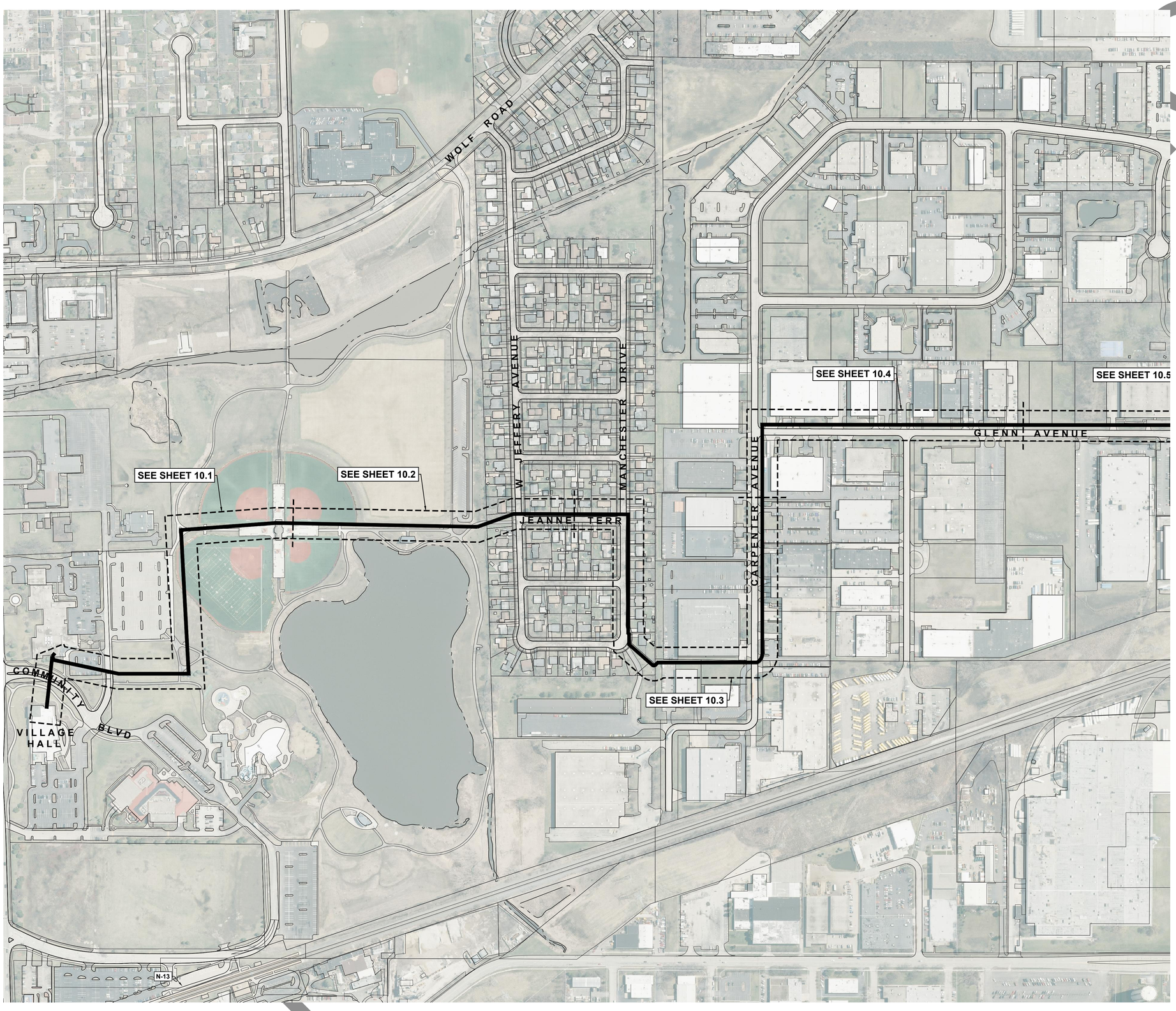

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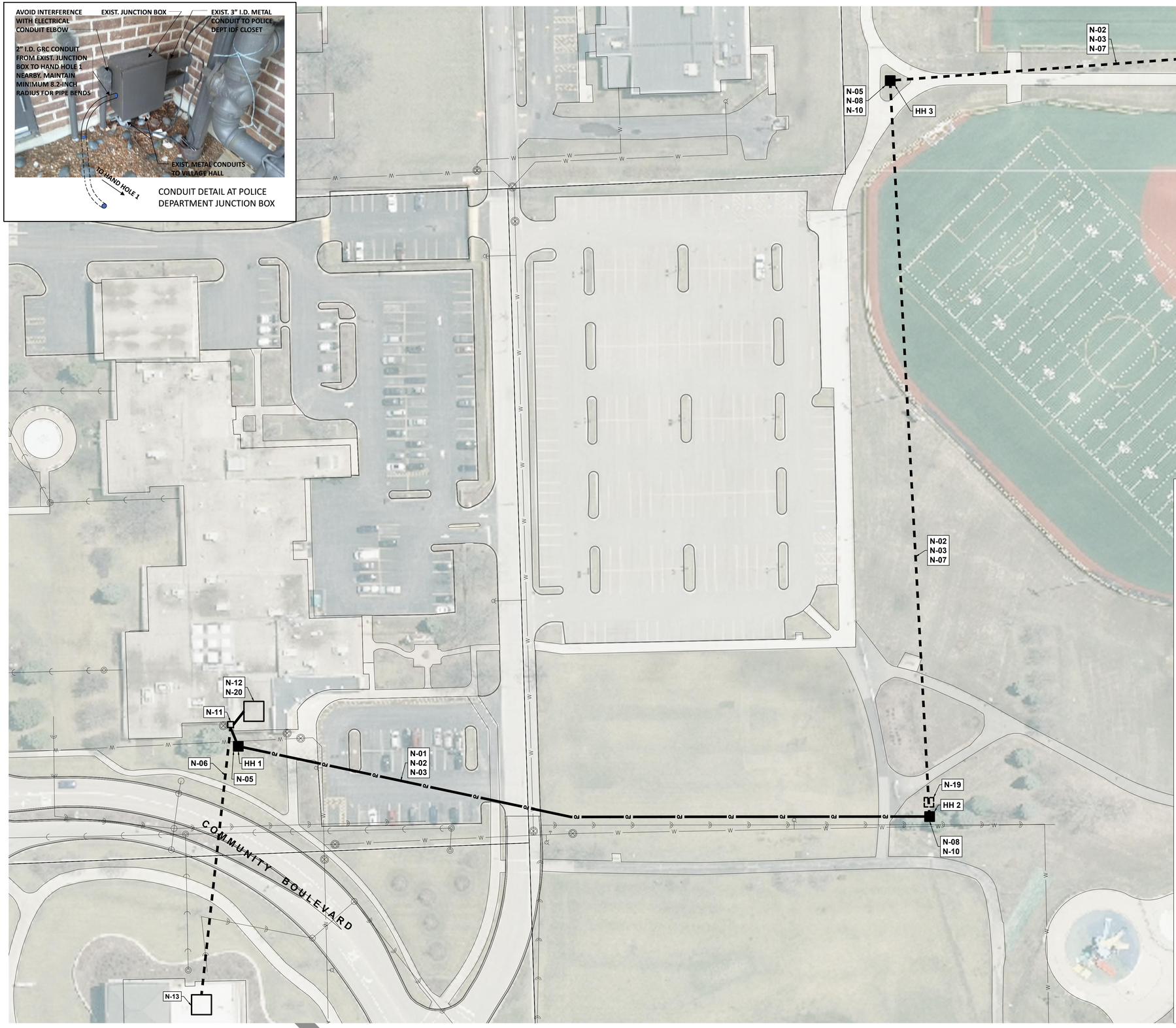
CONDUIT DETAIL AT POLICE DEPARTMENT JUNCTION BOX



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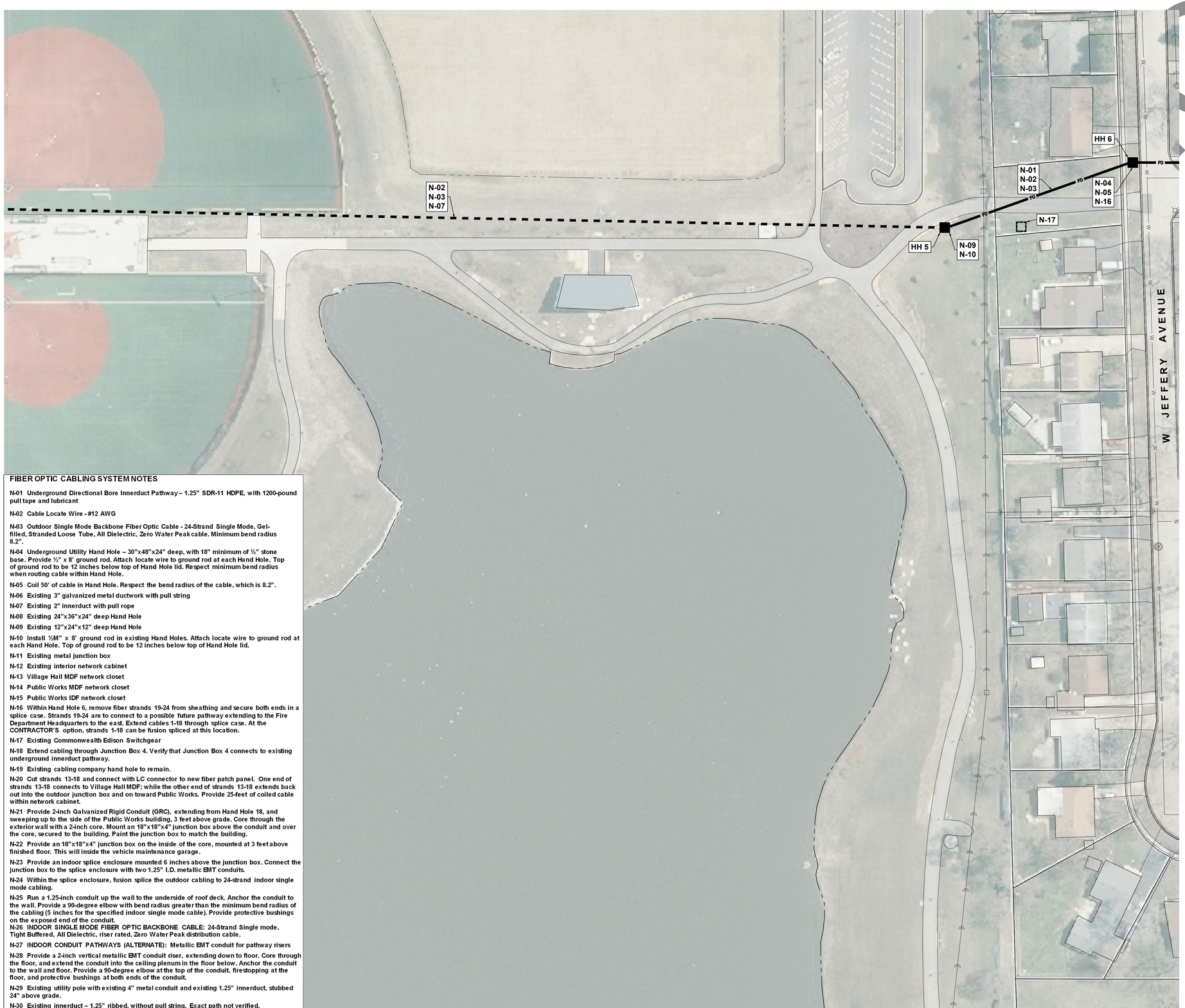

FIBER OPTIC CABLING SYSTEM NOTES

N-01 Underground Directional Bore Innerduct Pathway – 1.25" SDR-11 HDPE, with 1200-pound pull tape and lubricant

N-02 Cable Locate Wire - #12 AWG

N-03 Outdoor Single Mode Backbone Fiber Optic Cable - 24-Strand Single Mode, Gel-filled, Stranded Loose Tube, All Dielectric, Zero Water Peak cable. Minimum bend radius 8.2".

N-04 Underground Utility Hand Hole – 30"x48"x24" deep, with 18" minimum of ½" stone base. Provide ½" x 8' ground rod. Attach locate wire to ground rod at each Hand Hole. Top of ground rod to be 12 inches below top of Hand Hole lid. Respect minimum bend radius when routing cable within Hand Hole.

N-05 Coil 50' of cable in Hand Hole. Respect the bend radius of the cable, which is 8.2".

N-06 Existing 3" galvanized metal ductwork with pull string

N-07 Existing 2" innerduct with pull rope

N-08 Existing 24"x36"x24" deep Hand Hole

N-09 Existing 12"x24"x12" deep Hand Hole

N-10 Install ½M" x 8' ground rod in existing Hand Holes. Attach locate wire to ground rod at each Hand Hole. Top of ground rod to be 12 inches below top of Hand Hole lid.

N-11 Existing metal junction box

N-12 Existing interior network cabinet

N-13 Village Hall MDF network closet

N-14 Public Works MDF network closet

N-15 Public Works IDF network closet

N-16 Within Hand Hole 6, remove fiber strands 19-24 from sheathing and secure both ends in a splice case. Strands 19-24 are to connect to a possible future pathway extending to the Fire Department Headquarters to the east. Extend cables 1-18 through splice case. At the CONTRACTOR'S option, strands 1-18 can be fusion spliced at this location.

N-17 Existing Commonwealth Edison Switchgear

N-18 Extend cabling through Junction Box 4. Verify that Junction Box 4 connects to existing underground innerduct pathway.

N-19 Existing cabling company hand hole to remain.

N-20 Cut strands 13-18 and connect with LC connector to new fiber patch panel. One end of strands 13-18 connects to Village Hall MDF; while the other end of strands 13-18 extends back out into the outdoor junction box and on toward Public Works. Provide 25-feet of coiled cable within network cabinet.

N-21 Provide 2-inch Galvanized Rigid Conduit (GRC), extending from Hand Hole 18, and sweeping up to the side of the Public Works building, 3 feet above grade. Core through the exterior wall with a 2-inch core. Mount an 18"x18"x4" junction box above the conduit and over the core, secured to the building. Paint the junction box to match the building.

N-22 Provide an 18"x18"x4" junction box on the inside of the core, mounted at 3 feet above finished floor. This will inside the vehicle maintenance garage.

N-23 Provide an indoor splice enclosure mounted 6 inches above the junction box. Connect the junction box to the splice enclosure with two 1.25" I.D. metallic EMT conduits.

N-24 Within the splice enclosure, fusion splice the outdoor cabling to 24-strand indoor single mode cabling.

N-25 Run a 1.25-inch conduit up the wall to the underside of roof deck. Anchor the conduit to the wall. Provide a 90-degree elbow with bend radius greater than the minimum bend radius of the cabling (5 inches for the specified indoor single mode cable). Provide protective bushings on the exposed end of the conduit.

N-26 INDOOR SINGLE MODE FIBER OPTIC BACKBONE CABLE: 24-Strand Single mode, Tight Buffered, All Dielectric, riser rated, Zero Water Peak distribution cable.

N-27 INDOOR CONDUIT PATHWAYS (ALTERNATE): Metallic EMT conduit for pathway risers

N-28 Provide a 2-inch vertical metallic EMT conduit riser, extending down to floor. Core through the floor, and extend the conduit into the ceiling plenum in the floor below. Anchor the conduit to the wall and floor. Provide a 90-degree elbow at the top of the conduit, firestopping at the floor, and protective bushings at both ends of the conduit.

N-29 Existing utility pole with existing 4" metal conduit and existing 1.25" innerduct, stubbed 24" above grade.

N-30 Existing innerduct – 1.25" ribbed, without pull string. Exact path not verified.

FIBER

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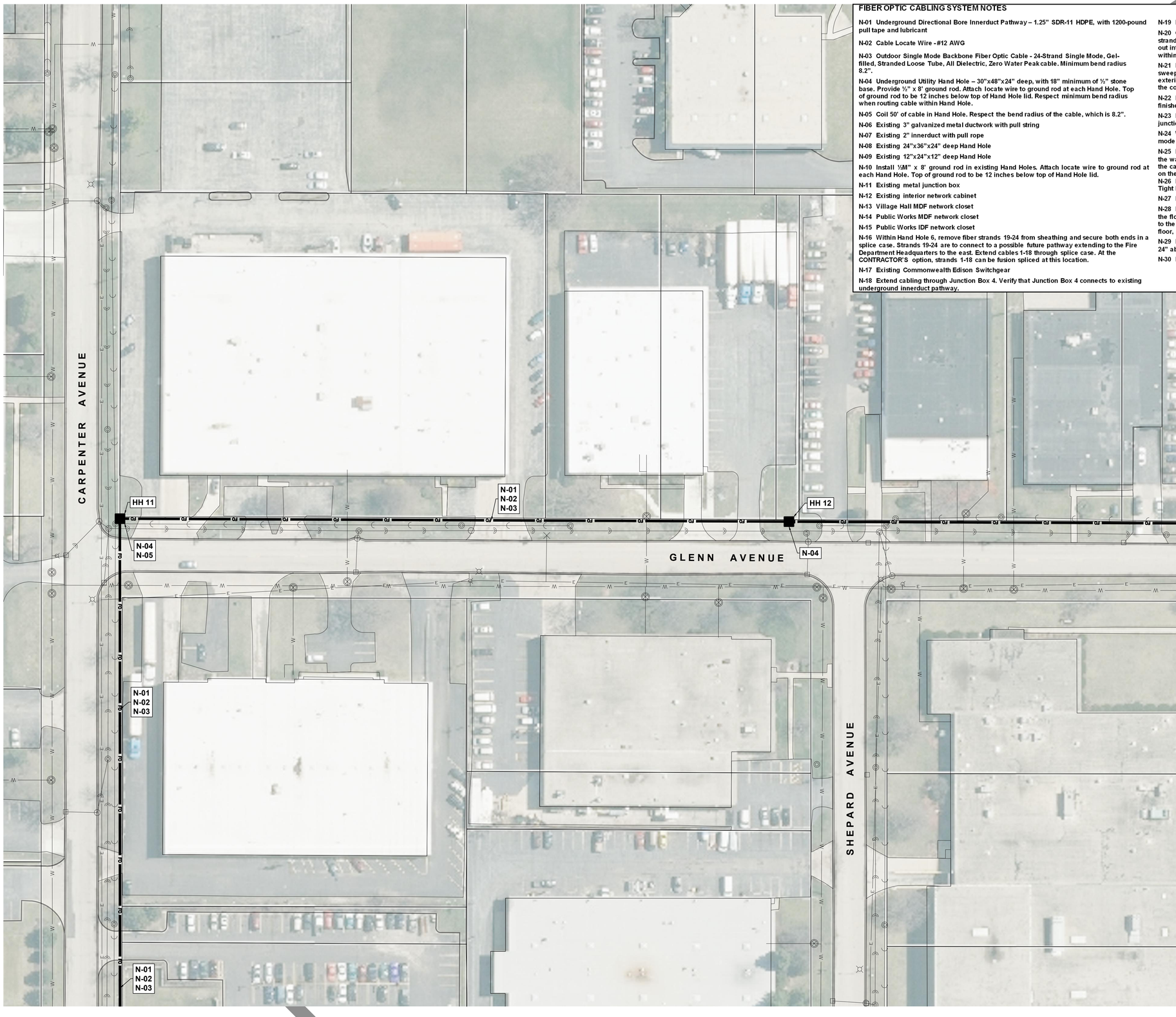

FIBER OPTIC CABLING SYSTEM NOTES

N-01 Underground Directional Bore Innerduct Pathway – 1.25" SDR-11 HDPE, with 1200-pound pull tape and lubricant

N-02 Cable Locate Wire - #12 AWG

N-03 Outdoor Single Mode Backbone Fiber Optic Cable - 24-Strand Single Mode, Gel-filled, Stranded Loose Tube, All Dielectric, Zero Water Peak cable. Minimum bend radius 8.2".

N-04 Underground Utility Hand Hole – 30"x48"x24" deep, with 18" minimum of ½" stone base. Provide ½" x 8' ground rod. Attach locate wire to ground rod at each Hand Hole. Top of ground rod to be 12 inches below top of Hand Hole lid. Respect minimum bend radius when routing cable within Hand Hole.

N-05 Coil 50' of cable in Hand Hole. Respect the bend radius of the cable, which is 8.2".

N-06 Existing 3" galvanized metal ductwork with pull string

N-07 Existing 2" innerduct with pull rope

N-08 Existing 24"x36"x24" deep Hand Hole

N-09 Existing 12"x24"x12" deep Hand Hole

N-10 Install ½M" x 8' ground rod in existing Hand Holes. Attach locate wire to ground rod at each Hand Hole. Top of ground rod to be 12 inches below top of Hand Hole lid.

N-11 Existing metal junction box

N-12 Existing interior network cabinet

N-13 Village Hall MDF network closet

N-14 Public Works MDF network closet

N-15 Public Works IDF network closet

N-16 Within Hand Hole 6, remove fiber strands 19-24 from sheathing and secure both ends in a splice case. Strands 19-24 are to connect to a possible future pathway extending to the Fire Department Headquarters to the east. Extend cables 1-18 through splice case. At the CONTRACTOR'S option, strands 1-18 can be fusion spliced at this location.

N-17 Existing Commonwealth Edison Switchgear

N-18 Extend cabling through Junction Box 4. Verify that Junction Box 4 connects to existing underground innerduct pathway.

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Plot Date: Mar 06, 2017 - 1:25pm Plotted By: jason-h
File Name: P:\2016\16039\Drawings\Final Engineering\16039-WHEELING-FIBER OPTIC-2016.dwg

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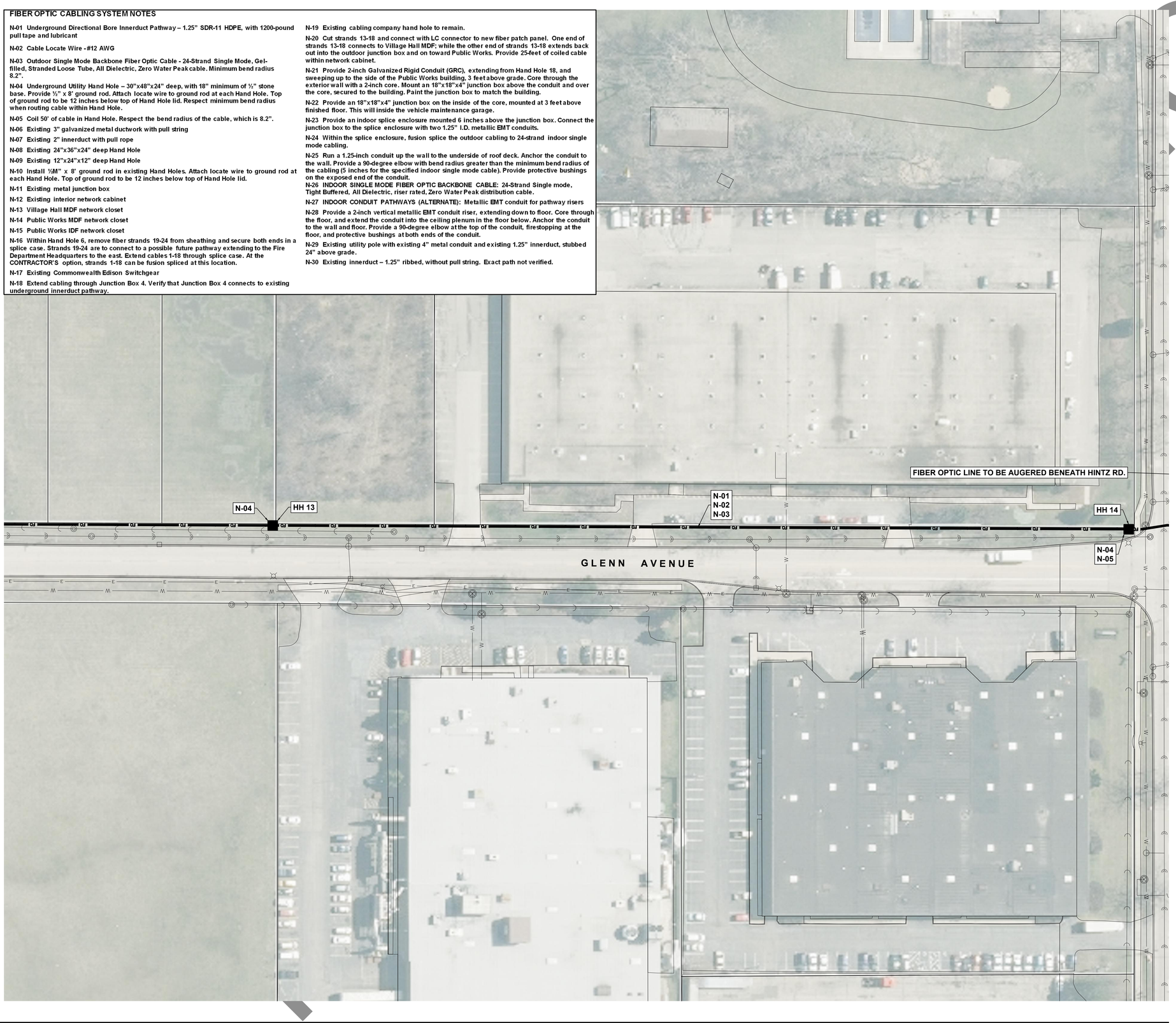
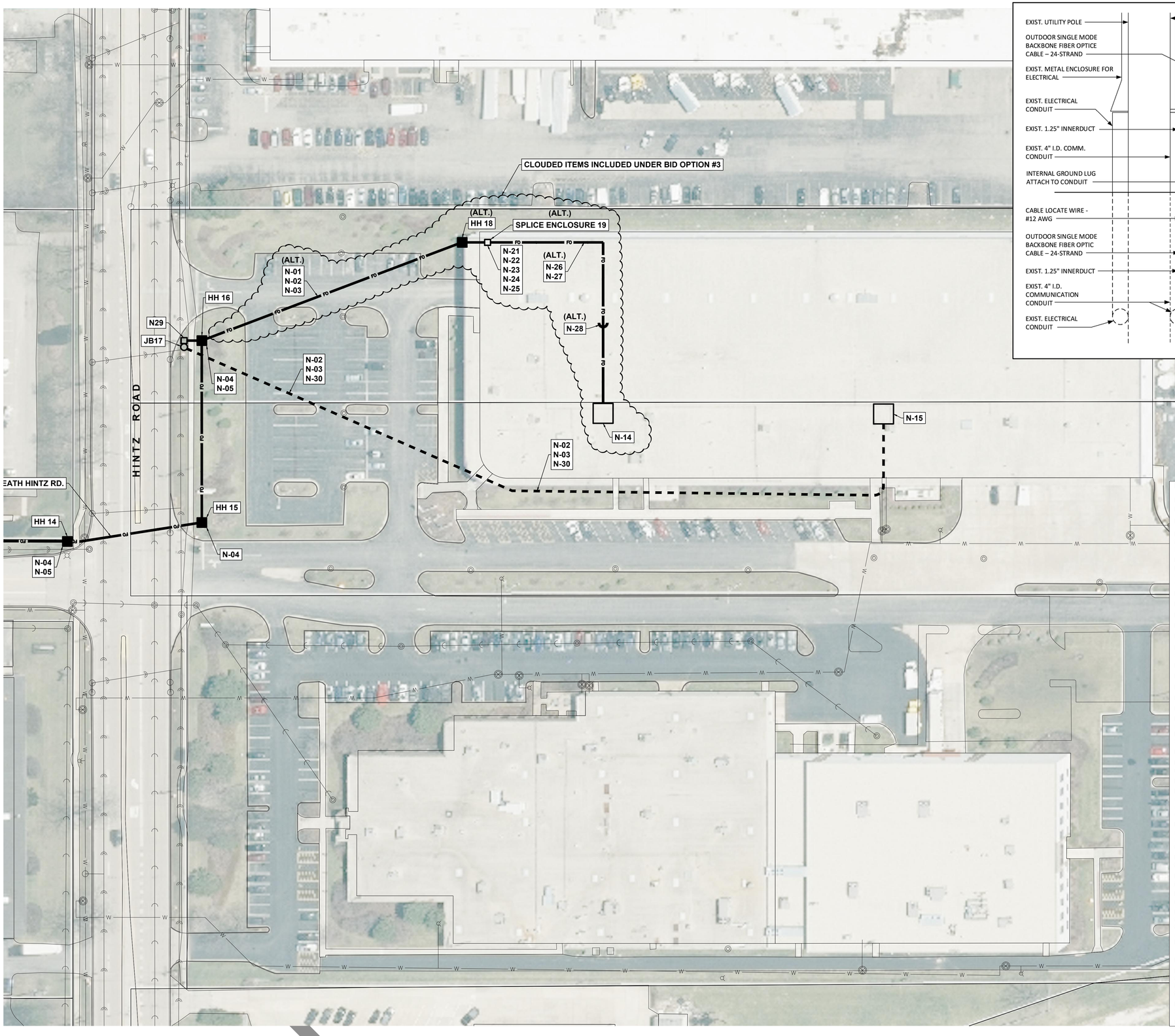
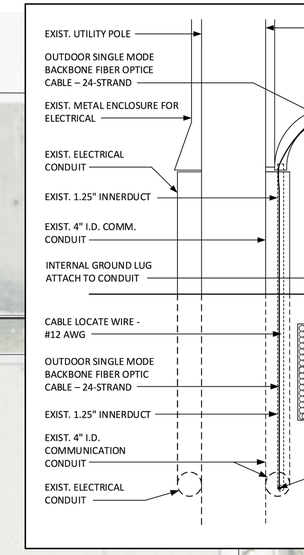
N-29 Existing utility pole with existing 4" metal conduit and existing 1.25" innerduct, stubbed 24" above grade.

N-30 Existing innerduct – 1.25" ribbed, without pull string. Exact path not verified.







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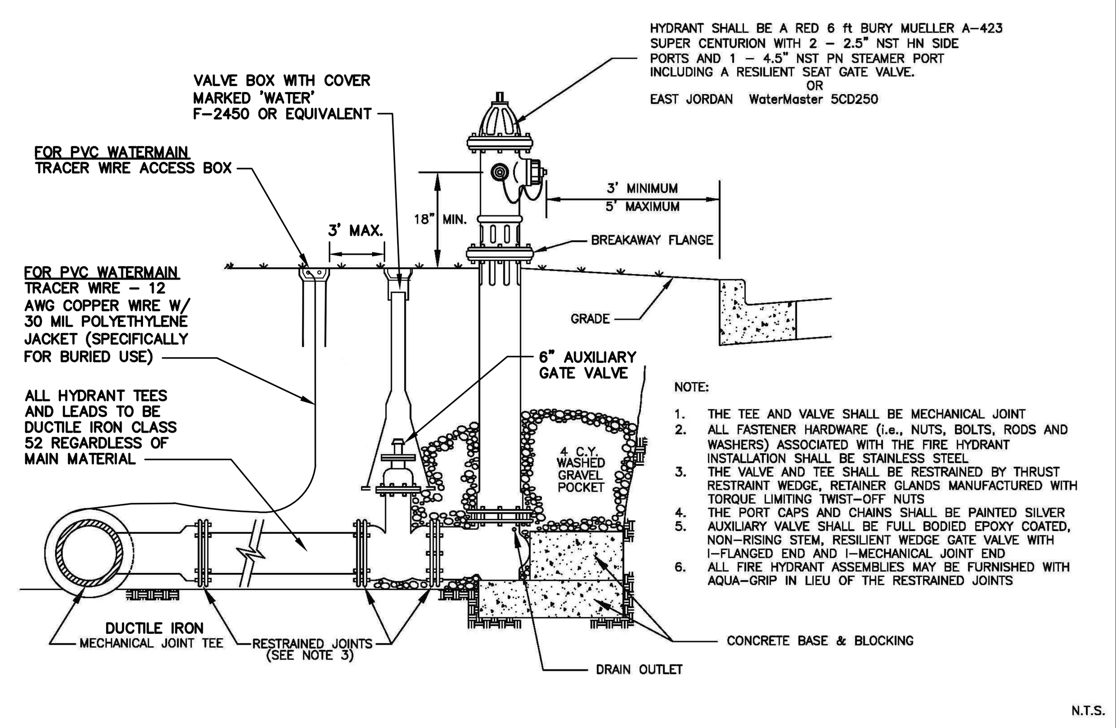


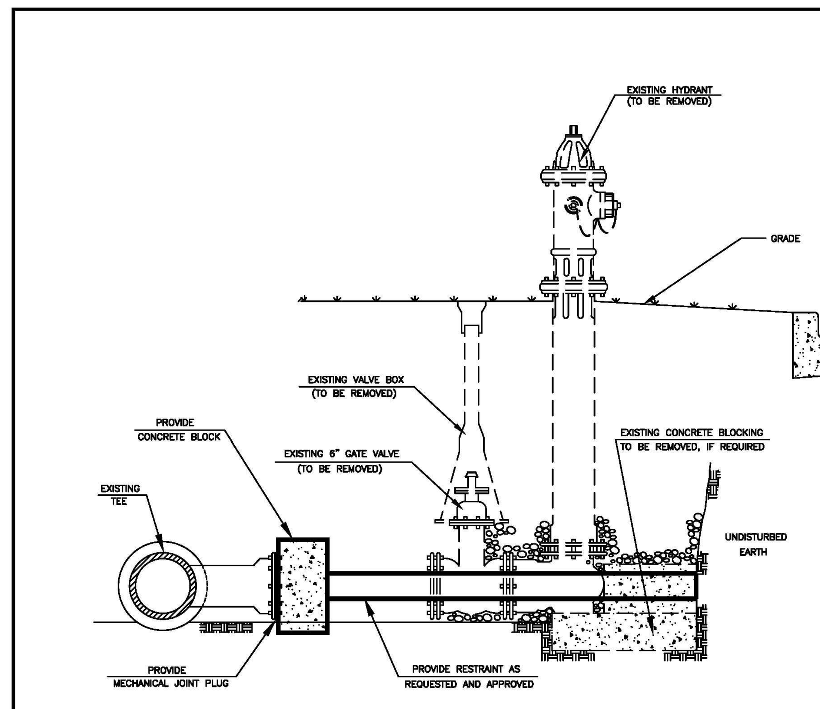
NOTE:
1. THE TEE AND VALVE SHALL BE MECHANICAL JOINT
2. ALL FASTENER HARDWARE (i.e., NUTS, BOLTS, RODS AND WASHERS) ASSOCIATED WITH THE FIRE HYDRANT INSTALLATION SHALL BE STAINLESS STEEL
3. THE VALVE AND TEE SHALL BE RESTRAINED BY THRUST RESTRAINT WEDGE, RETAINER GLANDS MANUFACTURED WITH TORQUE LIMITING TWIST-OFF NUTS
4. THE PORT CAPS AND CHAINS SHALL BE PAINTED SILVER
5. AUXILIARY VALVE SHALL BE FULL BODIED EPOXY COATED, NON-RISING STEM, RESILIENT WEDGE GATE VALVE WITH I-FLANGED END AND I-MECHANICAL JOINT END
6. ALL FIRE HYDRANT ASSEMBLIES MAY BE FURNISHED WITH AQUA-GRIP IN LIEU OF THE RESTRAINED JOINTS

VILLAGE OF WHEELING ENGINEERING DIVISION, 2 COMMUNITY BOULEVARD, WHEELING, IL 60090, WWW.WHEELINGIL.GOV

MODIFIED FIRE HYDRANT INSTALLATION STANDARD

VILLAGE OF WHEELING SPECIFICATIONS AND DETAILS — FILE LOCATION: N:\ENGINEERING\STANDARDS\WATER

REVISIONS	
P.F.	11-24-98 ADD NOTES
S.W.	01-24-07 PER COMMENTS
C.C.	03-07-07 PER COMMENTS
S.W.	08-15-08 EJIW WaterMaster.

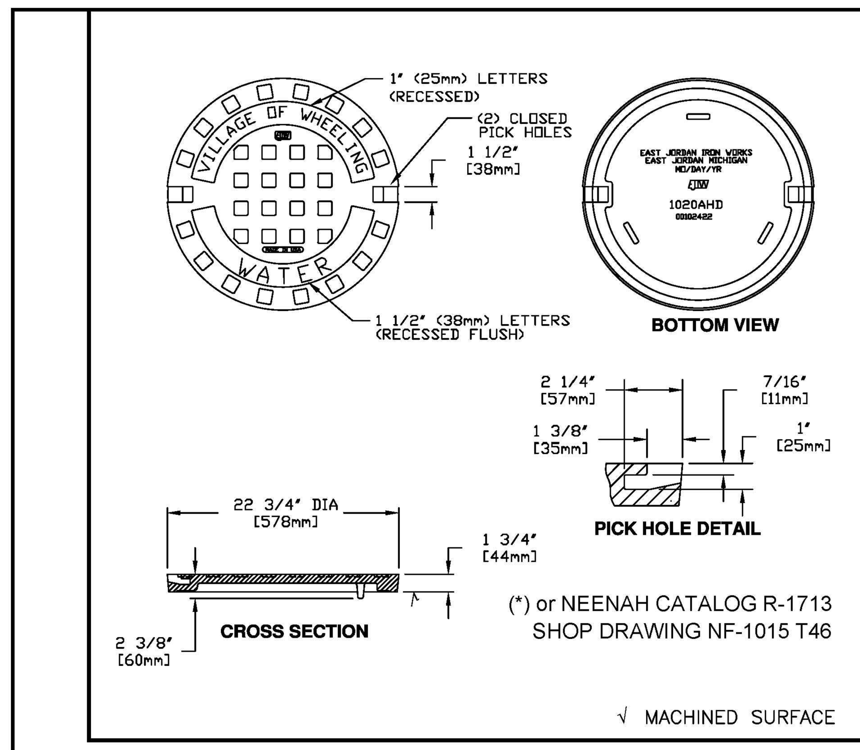


NOTE:
1. NOTIFY P/W UTILITY DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION AT (847) 229-4600.
2. COORDINATE WATER SHUTDOWN WITH THE PUBLIC WORKS DEPARTMENT, EXCAVATE AREA AND DISCONNECT HYDRANT LEAD, PLATE TEE, BLOCK AND RESTRAIN.
3. RETURN HYDRANT, AUXILIARY VALVE AND BOX TO PUBLIC WORKS DEPARTMENT.
4. BACKFILL AND COMPACTION PER THE VILLAGE OF WHEELING'S STANDARD.
5. THE PLUG SHALL BE MECHANICAL JOINT.
6. ALL FASTENER HARDWARE (i.e., NUTS, BOLTS, AND WASHERS) ASSOCIATED WITH THE PLUG SHALL BE STAINLESS STEEL.

FIRE HYDRANT ABANDONMENT STANDARD

FILE LOCATION: N:\ENGINEERING\STANDARDS\WATER

REVISIONS	
R.A.	8-19-99
S.W.	3-2-00 AUTOCAD FILE
C.J.C.	9-11-06 AUTOCAD FILE
S.W.	01-24-07 PER COMMENTS

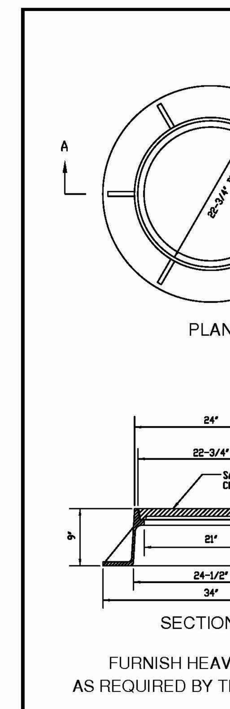


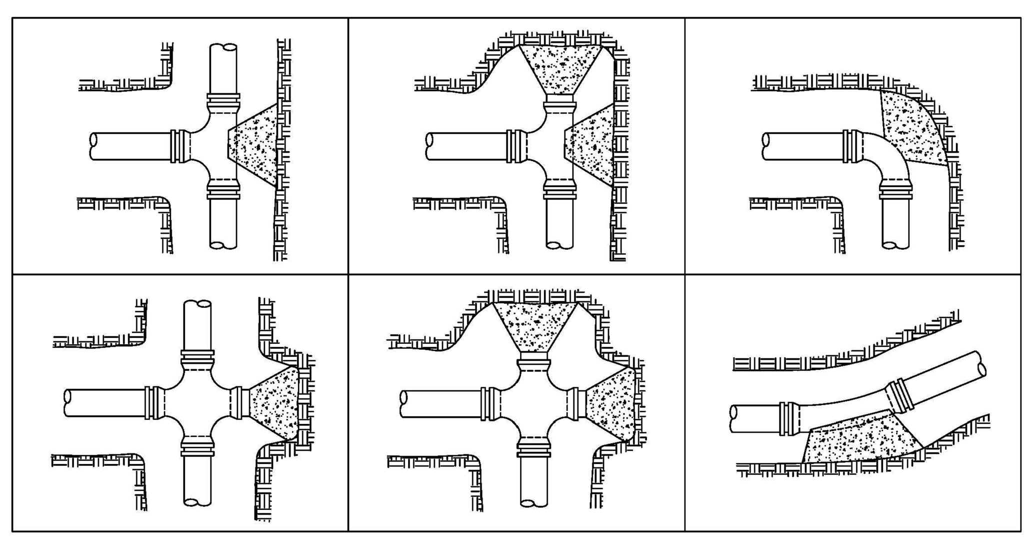
(*) EAST JORDAN IRON WORKS, INC. P.O. BOX 439 EAST JORDAN, MI. 49727 1-800-874-4100 FAX 231-536-4458	
DRAWN SMH	DATE 11/11/02
APPROVED	DATE
SPECIAL LETTERED COVER	
(*) PRODUCT NO. 00102422	
CATALOG NO. (*) 1020A	
REF. PRODUCT DRAWING 00102067	
EST. WT. COVER WT: 115 LBS (52kg)	
OPEN AREA N/A	
MAT'L SPEC. COVER – GRAY IRON ASTM A48 CL 35	
LOAD RATING HEAVY DUTY	

FRAME AND CLOSED LID WATER MANHOLE STANDARD

FILE LOCATION: N:\ENGINEERING\STANDARDS\WATER

REVISIONS	
S.W.	2-24-00 AUTOCAD FILE
S.W.	9-19-01 PER COMMENTS
S.W.	11-12-02 NPDES PHASE II
S.W.	02-07-03 ADDING NEENAH
C.J.C.	01-29-08 AUTOCAD FILE





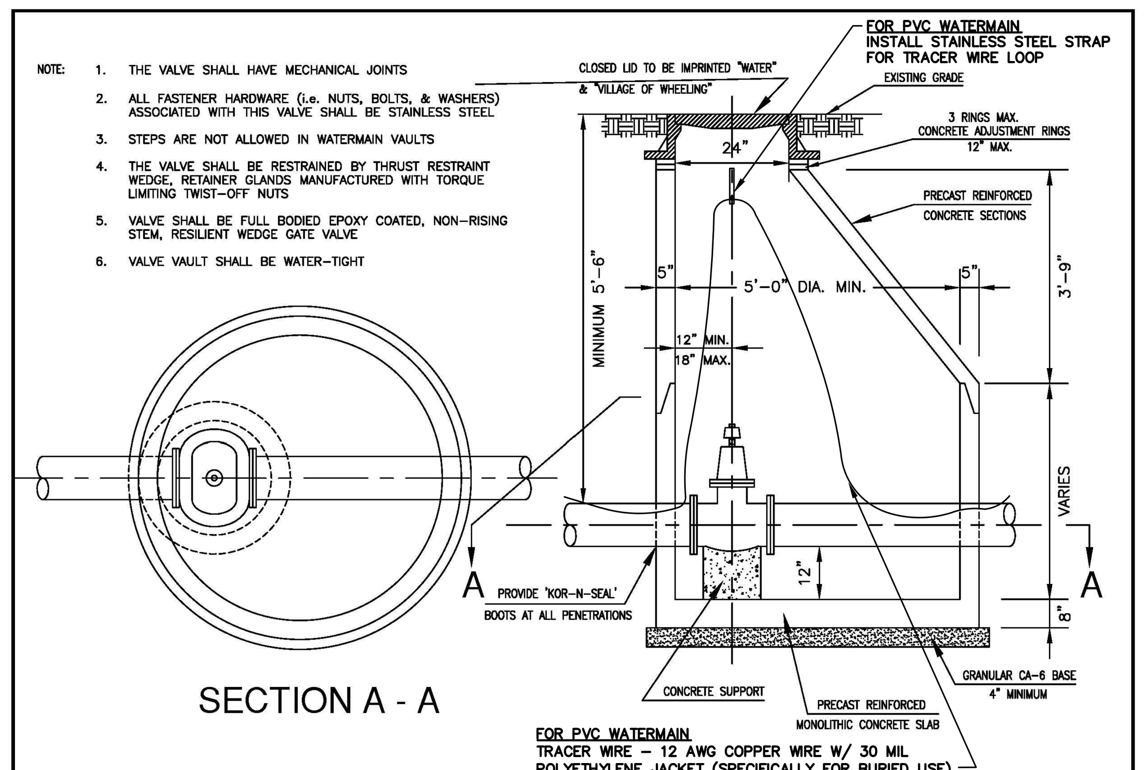
NOTE
1. ALL BLOCKING SHALL BE CONSTRUCTED WITH POURED CLASS X CONCRETE AGAINST UNDISTURBED VERTICAL EARTH FACE WITH A MINIMUM WIDTH OF 12 INCHES.
2. RESTRAINED JOINTS AND THRUST BLOCKS TO BE USED AT ALL BENDS, AT TEES AND AT CROSSES AS SHOWN ABOVE, OR AS REQUIRED PER THE VILLAGE ENGINEER.
3. THE FITTINGS SHALL BE MECHANICAL JOINT.
4. OTHER METHODS MAY BE USED AS AN ALTERNATIVE WHEN APPROVED BY THE VILLAGE ENGINEER.
5. ALL FASTENER HARDWARE (i.e. NUTS, BOLTS, AND WASHERS) ASSOCIATED WITH FITTINGS SHALL BE STAINLESS STEEL.
6. ALL FITTINGS SHALL BE RESTRAINED BY THRUST RESTRAINT WEDGE, RETAINER GLANDS MANUFACTURED WITH TORQUE LIMITING TWIST-OFF NUTS.

THRUST BLOCK STANDARD

FILE LOCATION: N:\ENGINEERING\STANDARDS\WATER

REVISIONS	
S.W.	4-27-00 AUTOCAD FILE
K.R.G.	9-11-06 AUTOCAD FILE

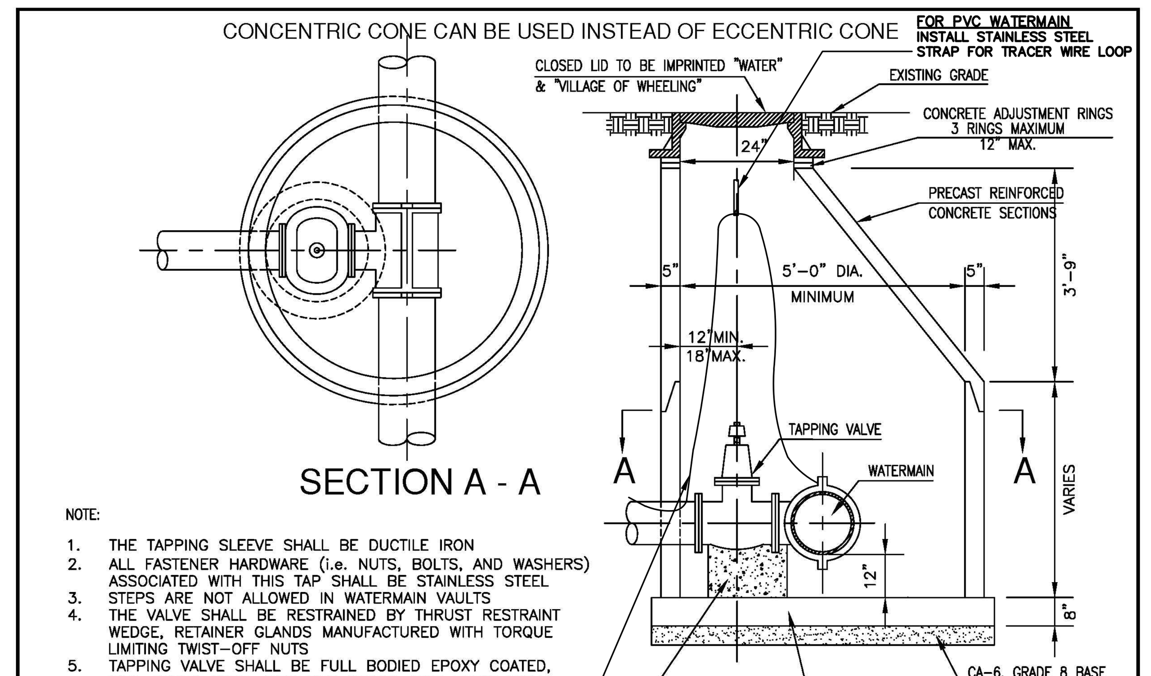
NOTE:
1. THE VALVE SHALL HAVE MECHANICAL JOINTS
2. ALL FASTENER HARDWARE (i.e. NUTS, BOLTS, & WASHERS) ASSOCIATED WITH THIS VALVE SHALL BE STAINLESS STEEL
3. STEPS ARE NOT ALLOWED IN WATERMAIN VAULTS
4. THE VALVE SHALL BE RESTRAINED BY THRUST RESTRAINT WEDGE, RETAINER GLANDS MANUFACTURED WITH TORQUE LIMITING TWIST-OFF NUTS
5. VALVE SHALL BE FULL BODIED EPOXY COATED, NON-RISING STEM, RESILIENT WEDGE GATE VALVE
6. VALVE VAULT SHALL BE WATER-TIGHT



5' DIA. VAVLE VAULT STANDARD (MODIFIED)

FILE LOCATION: N:\ENGINEERING\STANDARDS\WATER

REVISIONS	
S.W.	6-9-00 AUTOCAD FILE
S.W.	11-07-01 PER COMMENTS
C.C.	03-07-07 PER COMMENTS
K.R.G.	07-18-07 PER COMMENTS



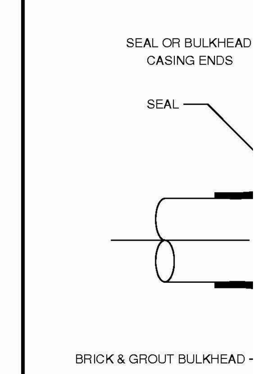
NOTE:
1. THE TAPPING SLEEVE SHALL BE DUCTILE IRON
2. ALL FASTENER HARDWARE (i.e. NUTS, BOLTS, AND WASHERS) ASSOCIATED WITH THIS TAP SHALL BE STAINLESS STEEL
3. STEPS ARE NOT ALLOWED IN WATERMAIN VAULTS
4. THE VALVE SHALL BE RESTRAINED BY THRUST RESTRAINT WEDGE, RETAINER GLANDS MANUFACTURED WITH TORQUE LIMITING TWIST-OFF NUTS
5. TAPPING VALVE SHALL BE FULL BODIED EPOXY COATED, NON-RISING STEM, RESILIENT WEDGE GATE VALVE WITH I-FLANGE END AND I-MECHANICAL JOINT END
6. VALVE VAULT SHALL BE WATER-TIGHT
7. PROVIDE KOR-N-SEAL BOOTS AT ALL PENETRATIONS

FOR PVC WATERMAIN
TRACER WIRE – 12 AWG COPPER WIRE W/ 30 MIL POLYETHYLENE JACKET (SPECIFICALLY FOR BURIED USE)

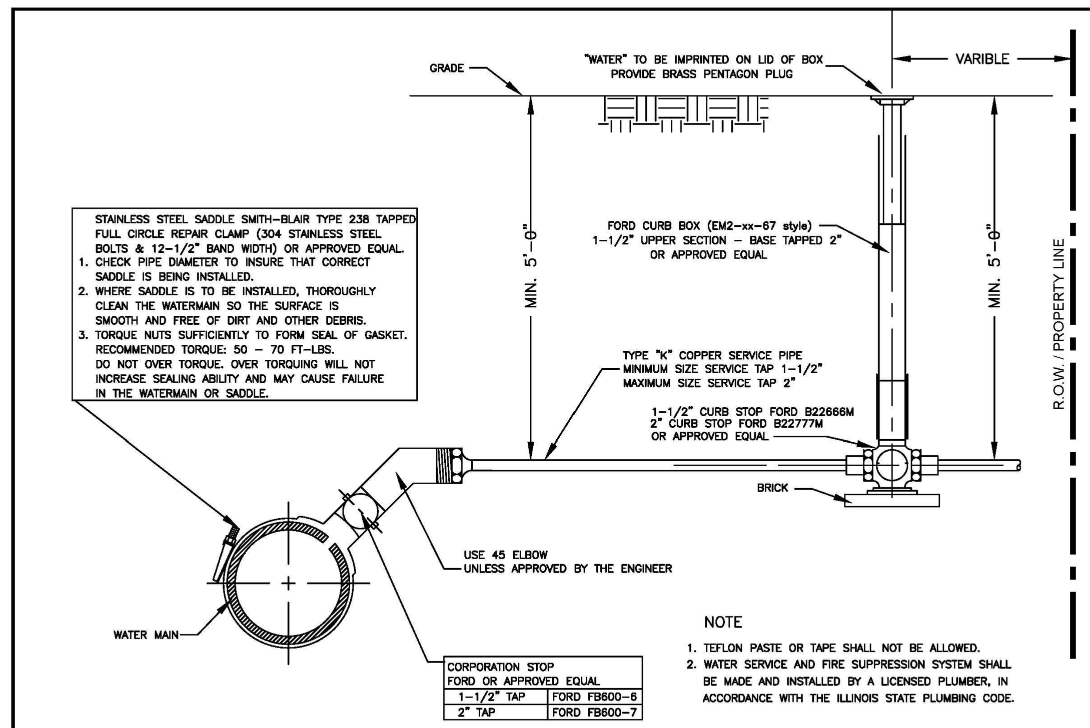
VALVE & TAPPING VAULT STANDARD (MODIFIED)

FILE LOCATION: N:\ENGINEERING\STANDARDS\WATER

REVISIONS	
S.W.	4-12-00 AUTOCAD FILE
C.C.	03-07-07 PER COMMENTS
S.W.	08-15-08 CONCENTRIC CONE



NOTE:
1. THE CASING SPACER
2. THE SPACER BANDS
3. ALL FASTENER HARD WITH THE CASING SP
4. THE SPACERS SHALL



CORPORATION STOP FORD OR APPROVED EQUAL	
1-1/2" TAP	FORD FB600-6
2" TAP	FORD FB600-7

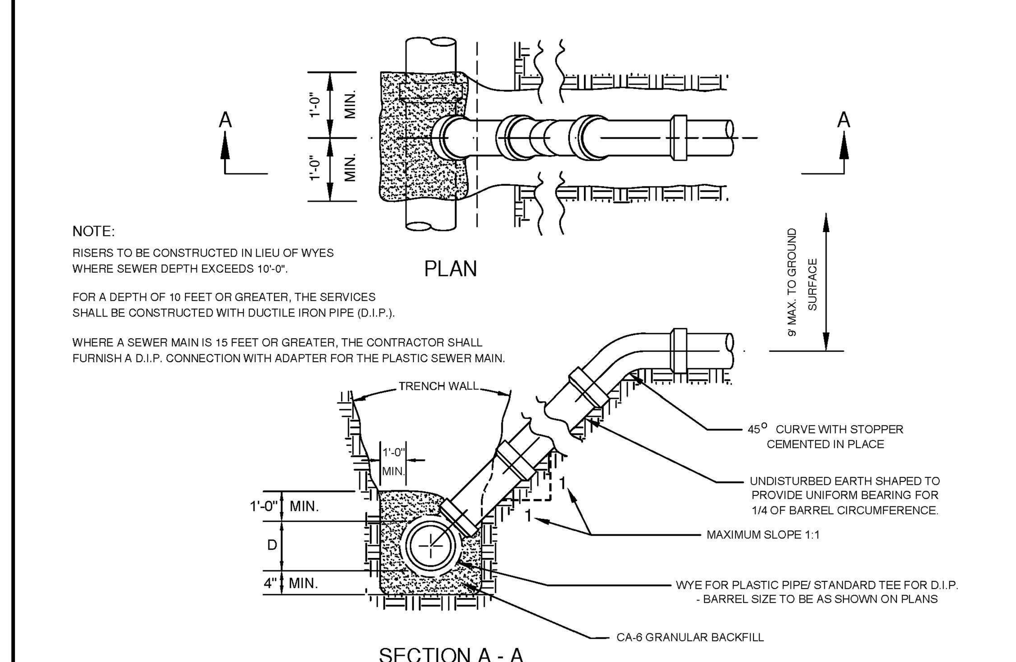
NOTE
1. TEFLON PASTE OR TAPE SHALL NOT BE ALLOWED.
2. WATER SERVICE AND FIRE SUPPRESSION SYSTEM SHALL BE MADE AND INSTALLED BY A LICENSED PLUMBER, IN ACCORDANCE WITH THE ILLINOIS STATE PLUMBING CODE.

All brass fittings for services lines shall be "Lead Free" in accordance with AWWA C800, latest revision, conforming to CDA 89520 or CDA89833. Brass alloy CDA 83600 is not acceptable.

TYPICAL SERVICE TAP STANDARD

FILE LOCATION: N:\ENGINEERING\STANDARDS\WATER

REVISIONS	
S.W.	5-12-06 PER COMMENTS
K.R.G.	9-11-06 AUTOCAD FILE
S.W.	8-15-08 ADDED 45 ELBOW



NOTE:
RISERS TO BE CONSTRUCTED IN LIEU OF WYES WHERE SEWER DEPTH EXCEEDS 10'-0".

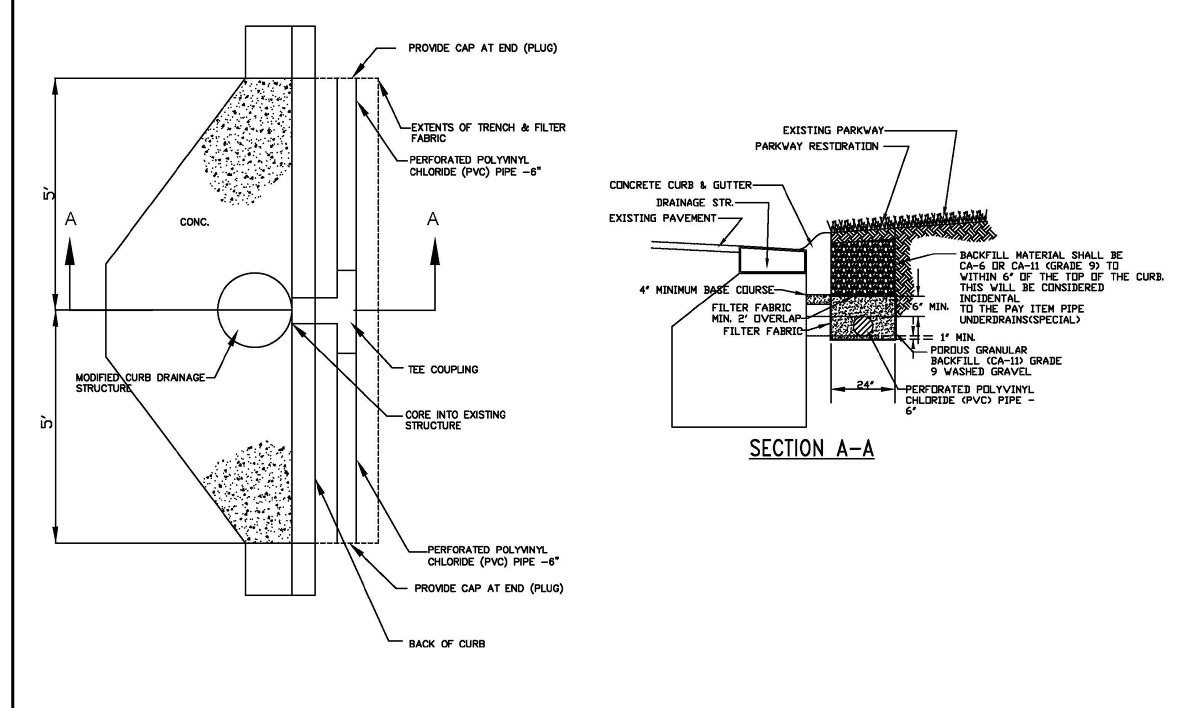
FOR A DEPTH OF 10 FEET OR GREATER, THE SERVICES SHALL BE CONSTRUCTED WITH DUCTILE IRON PIPE (D.I.P.).

WHERE A SEWER MAIN IS 15 FEET OR GREATER, THE CONTRACTOR SHALL FURNISH A D.I.P. CONNECTION WITH ADAPTER FOR THE PLASTIC SEWER MAIN.

SANITARY SERVICE RISER STANDARD

FILE LOCATION: N:\ENGINEERING\STANDARDS\SANITARY

REVISIONS	
S.W.	9-8-00 AUTOCAD FILE
C.J.C.	11-27-07 AUTOCAD FILE



PIPE UNDERDRAIN (SPECIAL) STANDARD

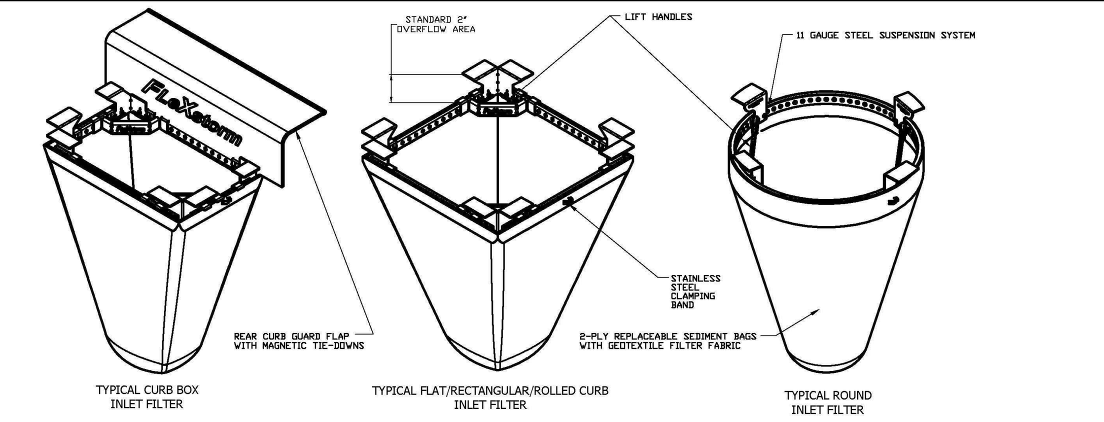
FILE LOCATION: N:\ENGINEERING\STANDARDS\STORM

REVISIONS	
C.J.C.	02-21-07 AUTO CAD FILE

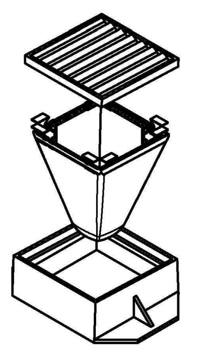
COMPACTED
VIRGIN AGG

NOTE:
CONCRETE REPLACE
MATERIAL AT CONST
BACK FILL WEDGE AR
OR AS DIRECTED BY

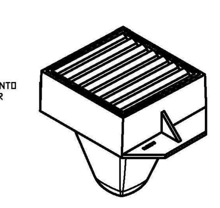
Plot Date: Mar 06, 2017 - 1:25pm Plotted By: jason-h
File Name: P:\2016\16039\Drawings\Final Engineering\16039-TITLE-NOTES-DETAILS-2016.dwg



IPP *FLeXstorm* Inlet Filter Specifications			
Material Property	*Test Method*	*Value (min ave)*	
> Inner Filter Bag Specs (2 ft³ min vol)		Non-Woven	Woven Mono
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4533	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Permittivity	ASTM D 4491	2.0 /sec	2.1/sec
Water Flow Rate	ASTM D 4491	145 gpm/sqft	145 gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/- 15%	
Thickness	ASTM D 1777	.040 +/- .005	
> Frame Construction			
A36 Structural Steel; 11 Guage; Zinc Plated	ASTM A 576	*Tensile Strength > 58,000 psi; Yield Strength > 36,000 psi*	



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



OR VILLAGE OF WHEELING APPROVED EQUAL

DRAWN ANDRIANO | CHECKED | QA | MFG | APPROVED

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC
1635 TONNE RD ELK GROVE, IL
WWW.INLETFILTERS.COM
(847) 722-0690 PH
(847) 364-5262 FX
SALES@INLETFILTERS.COM

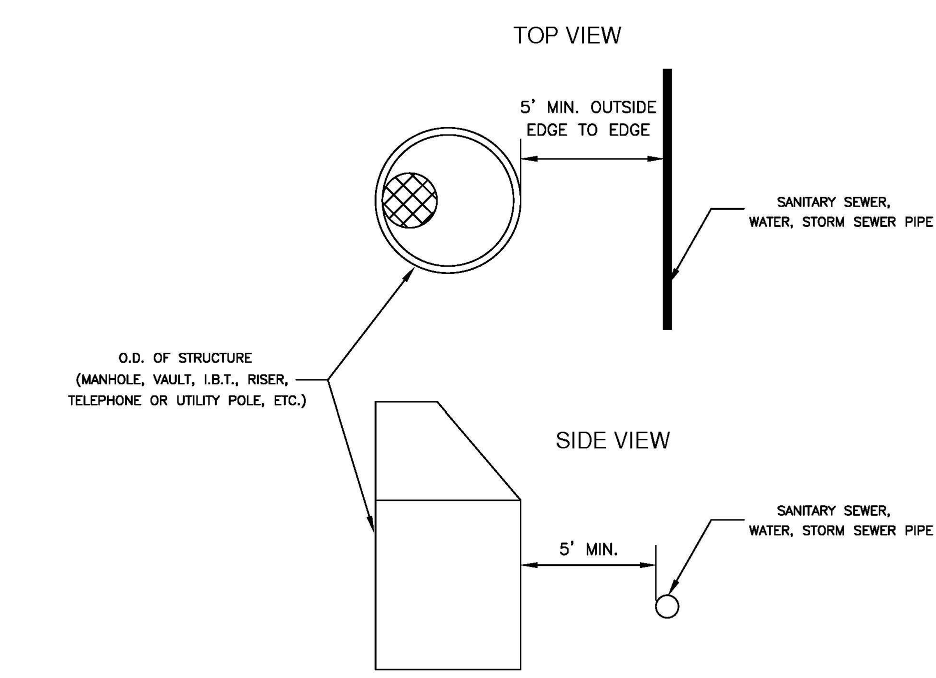
SIZE C | DWG NO IPP_FLEXSTORM_SPECS | REV | SCALE | SHEET 1 OF 1

VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV

INLET AND FILTER PROTECTION STANDARD

VILLAGE OF WHEELING SPECIFICATIONS AND DETAILS | FILE LOCATION N:\ENGINEERING\STANDARDS\EROSION CONTROL

REVISIONS	
C.J.C.	01-29-08 NEW FILE

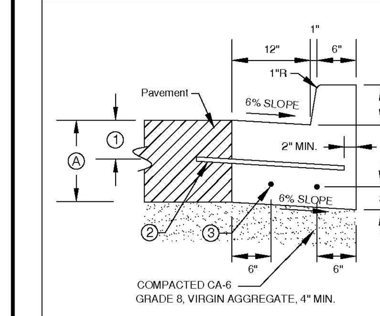


VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV

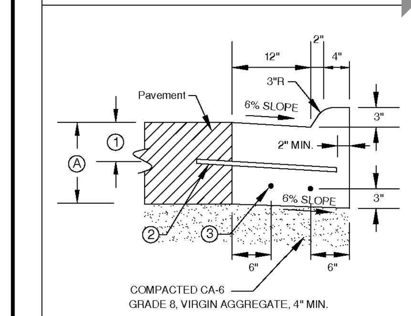
UTILITY CLEARANCE STANDARD

VILLAGE OF WHEELING SPECIFICATIONS AND DETAILS | FILE LOCATION N:\ENGINEERING\STANDARDS\GENERAL

REVISIONS	
S.W.	2-6-06 AUTOCAD FILE
K.R.G.	9-11-06 AUTOCAD FILE

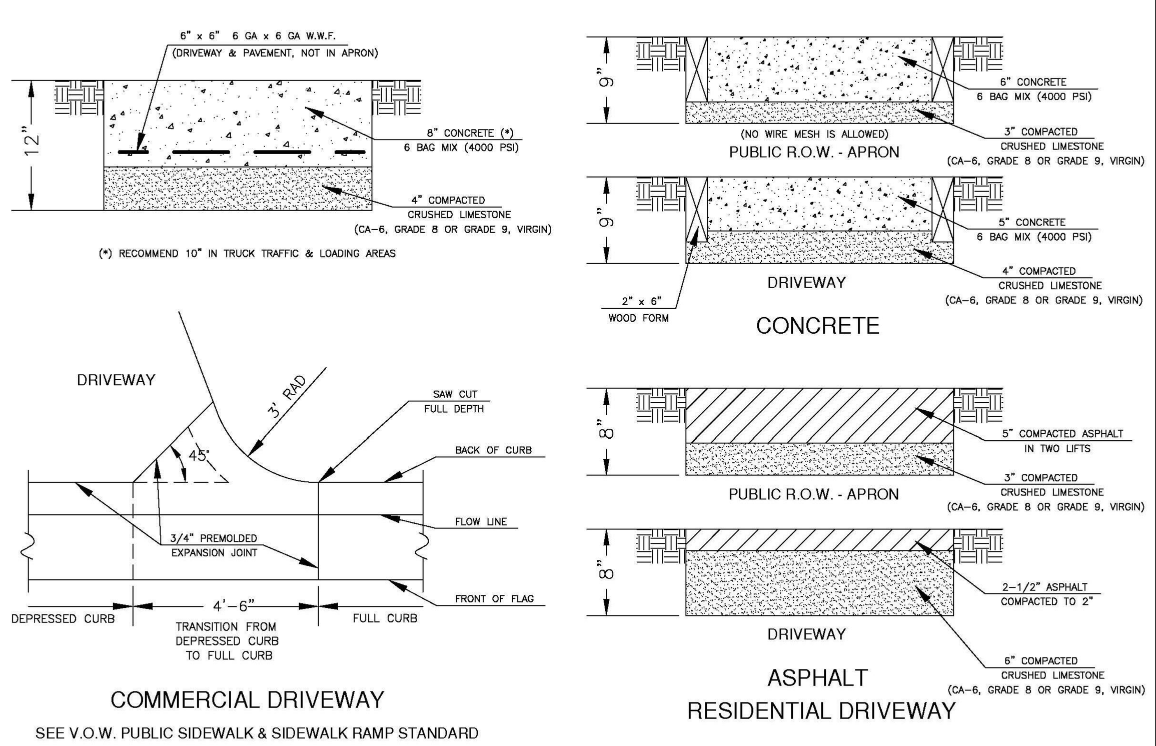


COMBINATION CURB & GUTTER TYPE B-6.12



COMBINATION CURB & GUTTER TYPE M-3.12

VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV

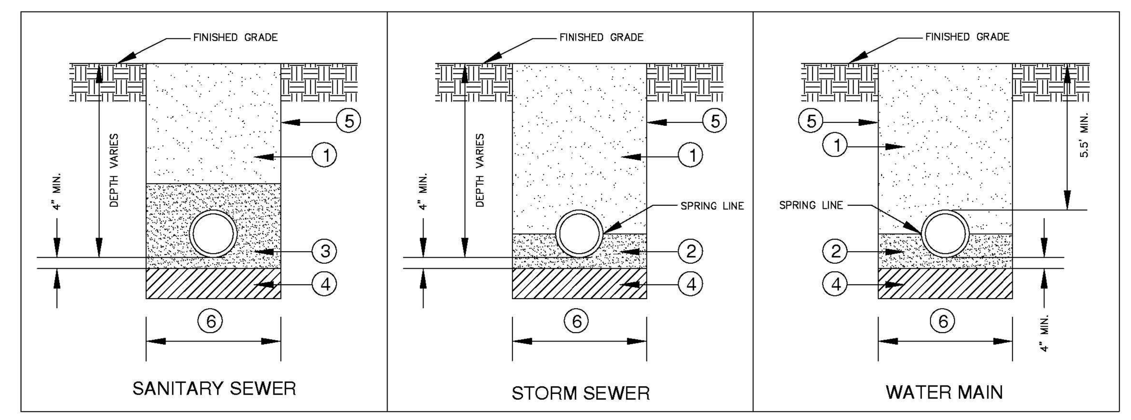


VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV

DRIVEWAY STANDARD

VILLAGE OF WHEELING SPECIFICATIONS AND DETAILS | FILE LOCATION N:\ENGINEERING\STANDARDS\ROADWAY

REVISIONS	
S.W.	02-09-06 REVISED PER RG
C.J.C.	11-27-07 AUTOCAD FILE
K.R.G.	12-17-08 APRON AGG. THICK
K.R.G.	03-29-10 REVISED GRADE 9



NOTES:

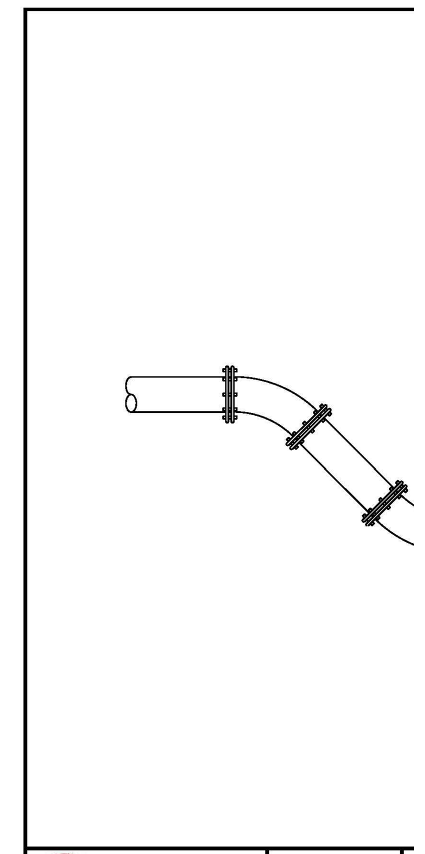
1. BACKFILL & COMPACT GRANULAR TRENCH BACKFILL (CA-6, GRADE 8 OR APPROVED EQUAL) UNDER STREET PAVEMENT, DRIVEWAYS, AND SIDEWALK EXCAVATED MATERIAL MAY BE USED IN NON-PAVED AREAS
2. CA-11 OR CA-13 STONE OR OTHER APPROVED SELECT BACKFILL. TAMPED INTO PLACE TO SPRING LINE OF PIPE.
3. CA-11 OR CA-13 STONE OR OTHER APPROVED SELECT BACKFILL. TAMPED TO 12" MINIMUM ABOVE TOP OF PIPE.
4. IF ENCOUNTERED, REMOVE UNSUITABLE MATERIALS AND REPLACE WITH 4" STONE AS DIRECTED BY THE TESTING AGENCY OR THE VILLAGE ENGINEER
5. TRENCH SIDES TO BE SLOPED OR SHEETED/SHORED IN ACCORDANCE WITH OSHA REQUIREMENTS.
6. MAXIMUM TRENCH WIDTH = 18" (1'-6") + O.D. WHEN TRENCH < 5 FEET
   = 36" (3'-0") + O.D. WHEN TRENCH > 5 FEET

VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV

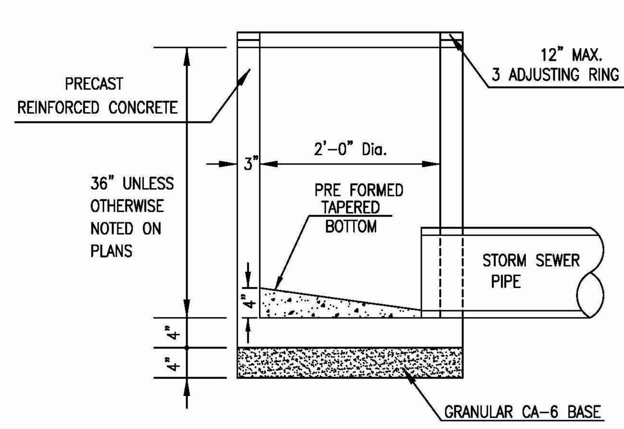
TRENCH BACKFILL STANDARD

VILLAGE OF WHEELING SPECIFICATIONS AND DETAILS | FILE LOCATION N:\ENGINEERING\STANDARDS\GENERAL

REVISIONS	
S.W.	6-1-00 AUTOCAD FILE
S.W.	9-18-01 PER COMMENTS
S.W.	11-19-04 NO POLY WRAP
C.J.C.	01-20-08 AUTOCAD FILE



VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV



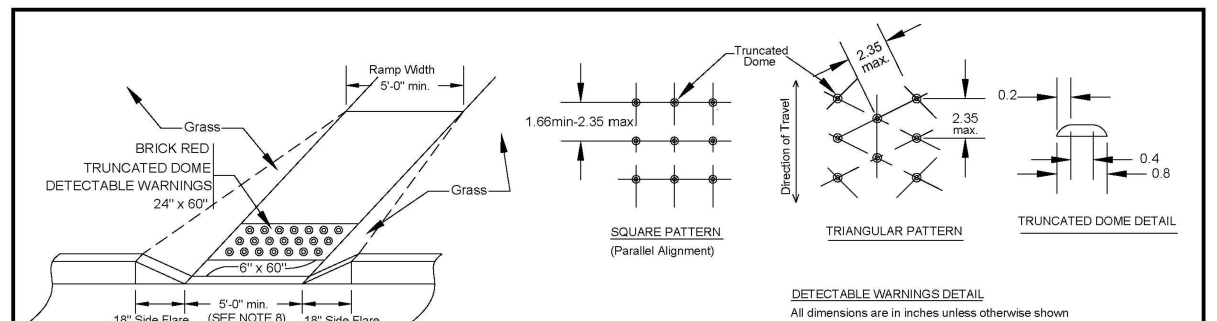
INLET (TYPE A)

VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV

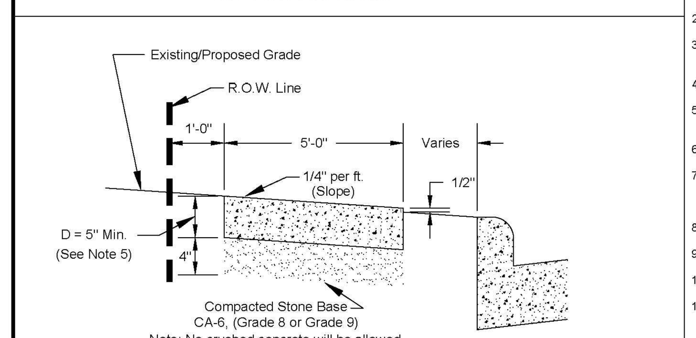
INLET STANDARD

VILLAGE OF WHEELING SPECIFICATIONS AND DETAILS | FILE LOCATION N:\ENGINEERING\STANDARDS\STORM

REVISIONS	
S.W.	5-17-00 AUTOCAD FILE
S.W.	9-21-01 PER COMMENTS
C.J.C.	01-29-08 AUTOCAD FILE



SIDEWALK RAMP



PUBLIC SIDEWALK

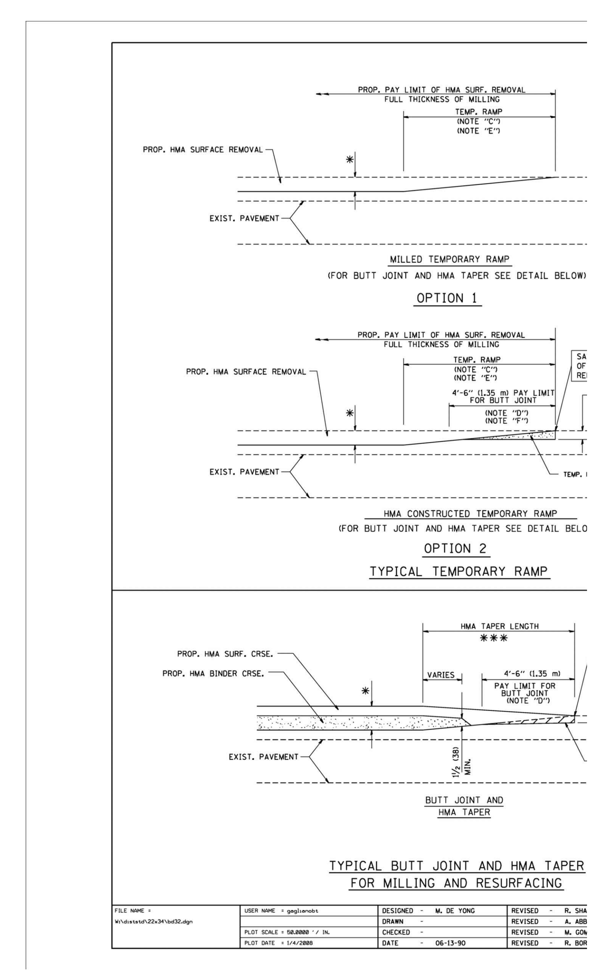
NOTE:
1. TO BE FORMED WITH 2" x 6" BOARDS OR BY 5" WIDE STEEL FORMS.
2. TOOLED JOINTS SHALL BE 1/2" AT 5' CENTERS.
3. EXPANSION JOINTS SHALL BE 3/4" THICK X 5 " WIDE BITUMINOUS IMPREGNATED FIBERBOARD AT 30' CENTERS, AT DRIVEWAYS AND OTHER CONCRETE JOINTS.
4. PROVIDE BROOM FINISH EXCEPT AT TRUNCATED DOME.
5. D = 6" AT RESIDENTIAL DRIVEWAY
   D = 8" AT COMMERCIAL/INDUSTRIAL DRIVEWAYS
6. SIDEWALK RAMPS AT DRIVEWAYS SHALL BE BUILT PER THE VILLAGE STANDARD.
7. THE CONCRETE SHALL BE A 6 BAG MIX AND SHALL NOT CONTAIN CHLORIDE OR FLY ASH. THE COMPRESSIVE STRENGTH SHALL MEET OR EXCEED I.D.O.T.'S REQUIREMENTS FOR "SI" CONCRETE (MINIMUM 3500 PSI @ 14 DAYS)
8. PROVIDE DEPRESSED CURBS AT ALL WALKS, 5' MINIMUM WIDTH ON DEPRESSION.
9. ALL SIDEWALKS, CURB/GUTTER AND PAVEMENT TO BE SAW-CUT AS REQUIRED.
10. MAXIMUM SLOPE OF RAMP NOT TO EXCEED 8%.
11. DRIVEWAY APRON REMOVAL & REPLACEMENT SHALL INCLUDE THE INSTALLATION OF A TRUNCATED DOME HANDICAPPED SIDEWALK RAMP ON BOTH SIDES OF THE APRON UNLESS OTHERWISE APPROVED BY THE VILLAGE ENGINEER.
12. TRUNCATED DOME CONSTRUCTION FOR DETECTABLE WARNINGS SHALL BE ARMOR-TILE TACTILE SYSTEMS FEDERAL #22144, BRICK RED AND SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE I.D.O.T. STANDARDS.

VILLAGE OF WHEELING ILLINOIS | VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOULEVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV

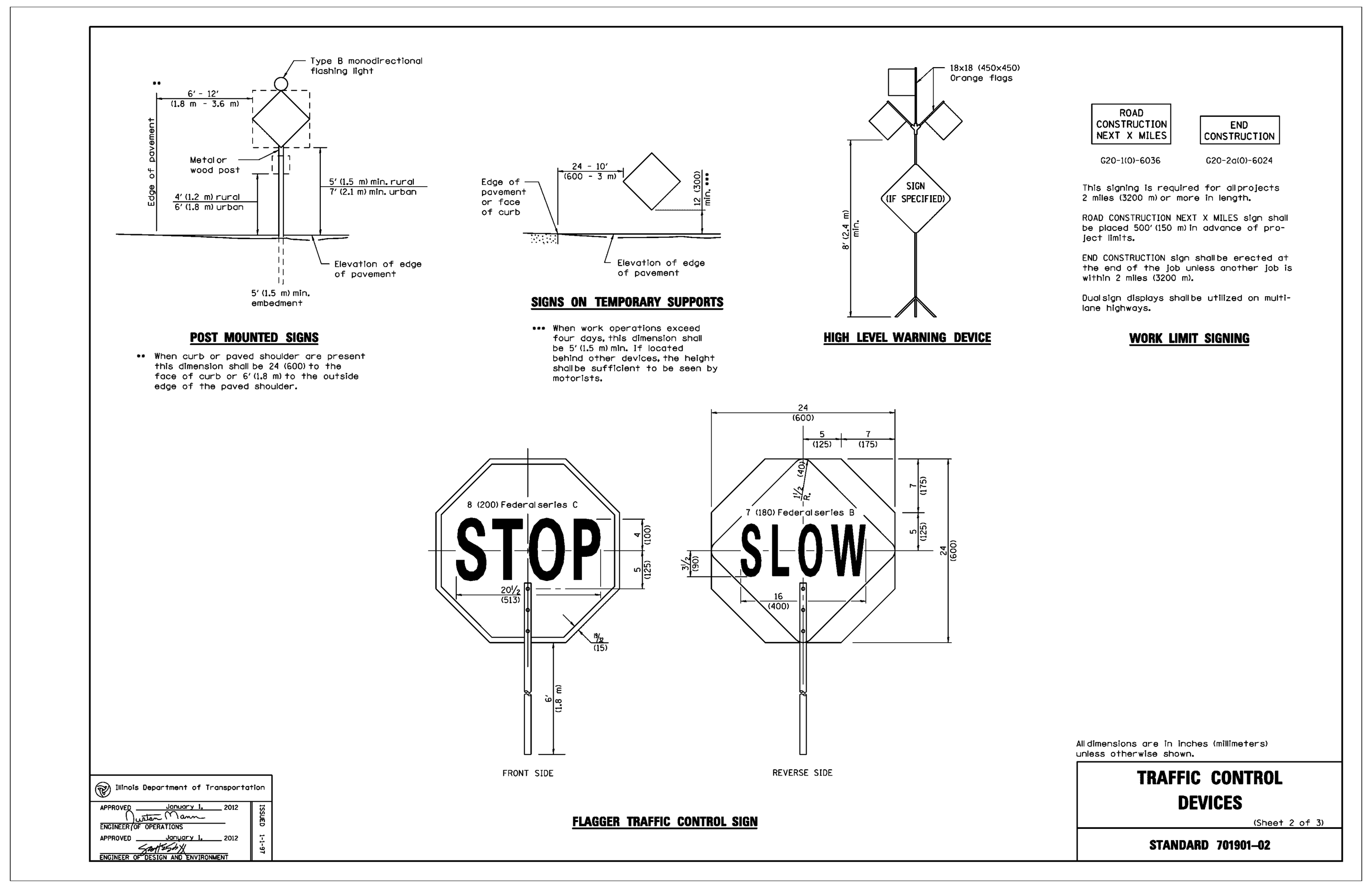
PUBLIC SIDEWALK STANDARDS

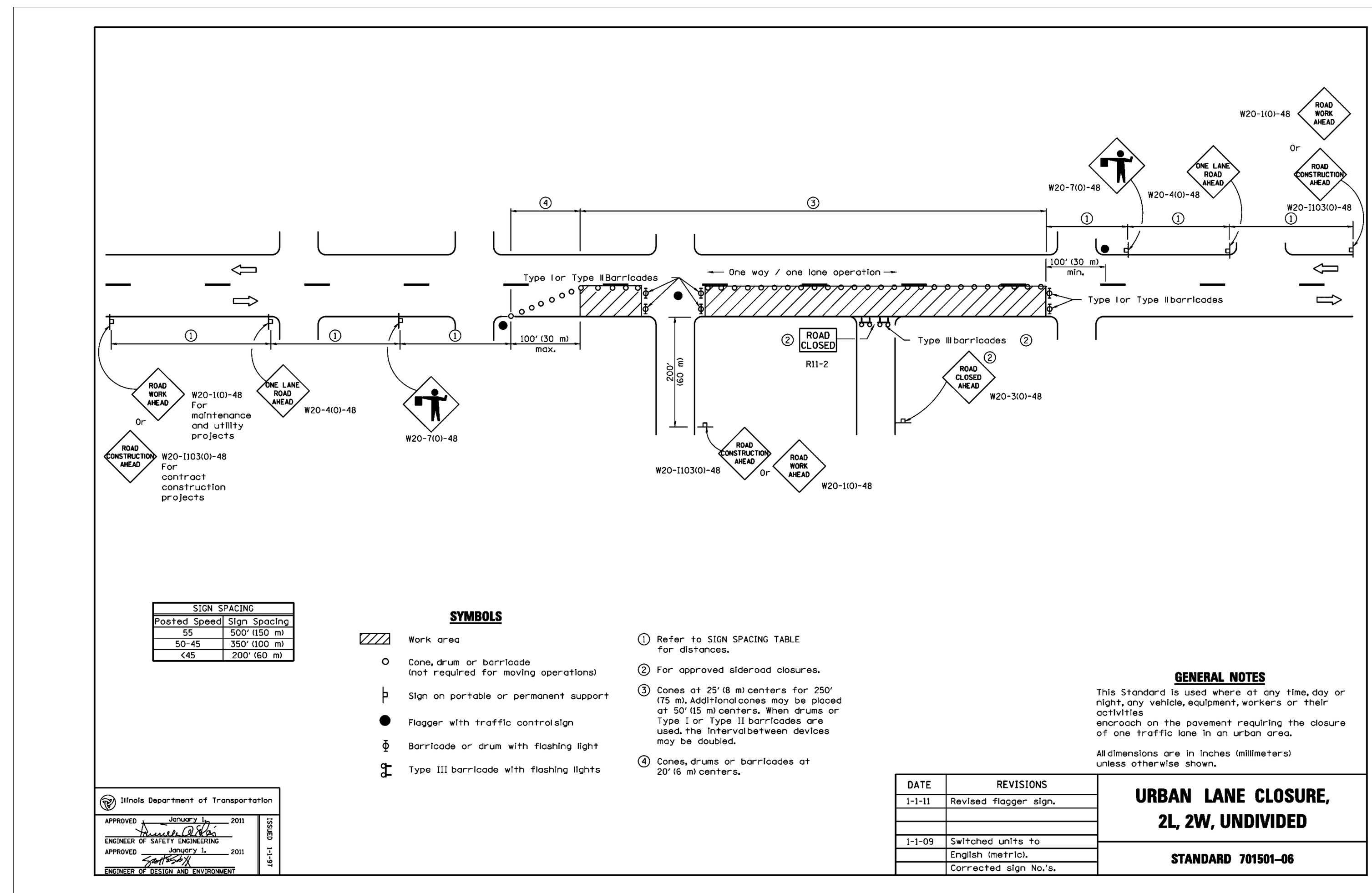
VILLAGE OF WHEELING SPECIFICATIONS AND DETAILS | FILE LOCATION N:\ENGINEERING\STANDARDS\ROADWAY

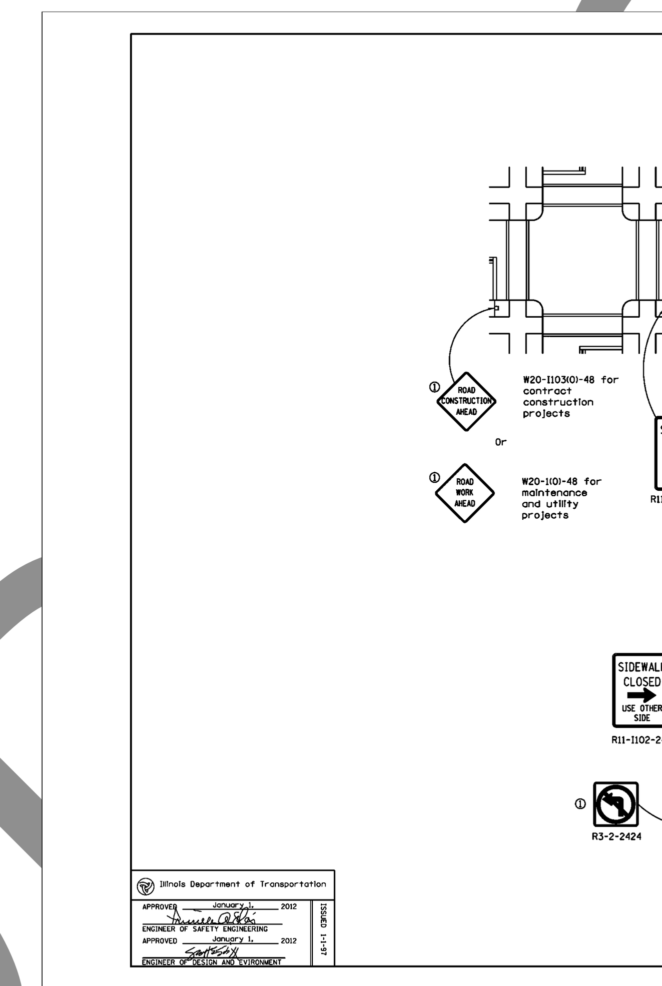
REVISIONS	
S.W.	02-09-06 AS PER R.G.
K.R.G.	9-11-06 AS PER T.W.M.
C.J.C.	11-27-07 AUTOCAD FILE
C.J.C.	08-08-08 AS PER K.R.G.

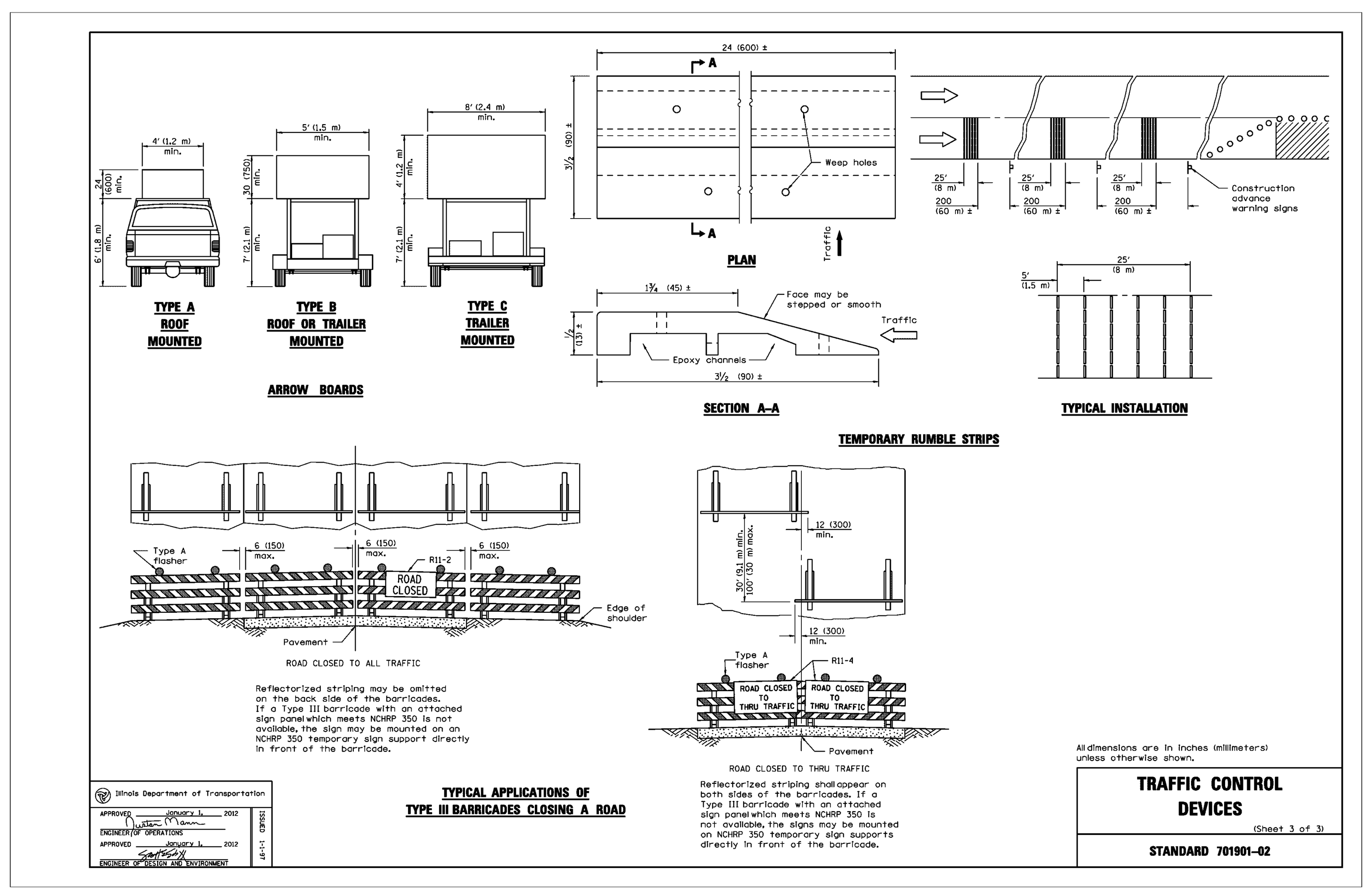


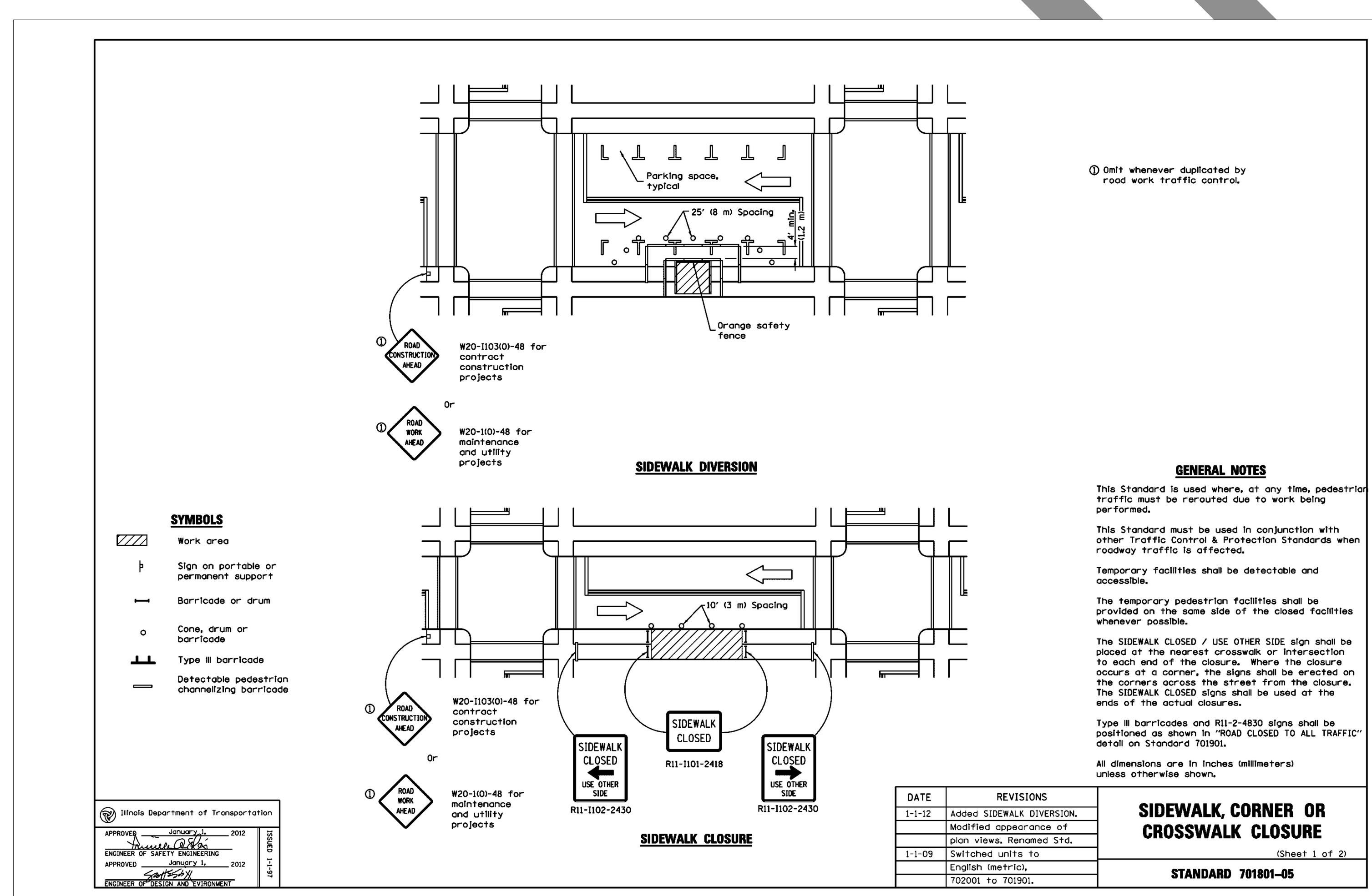
Plot Date: Mar 06, 2017 - 1:25pm Plotted By: jason-h
File Name: P:\2016\16039\Drawings\Final Engineering\16039-TITLE-NOTES-DETAILS-2016.dwg

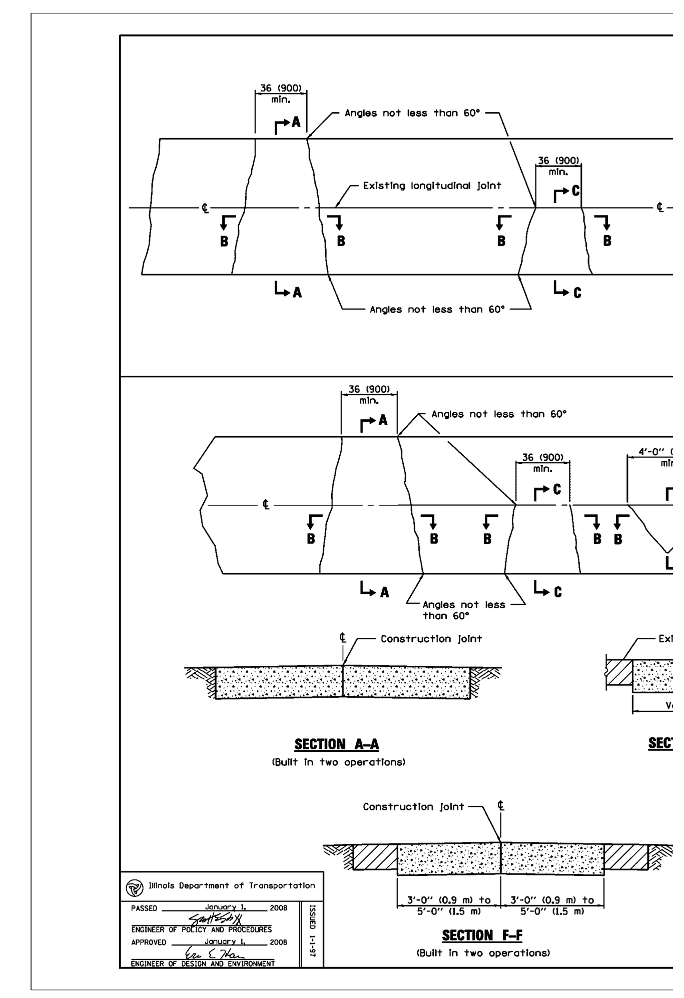

Type B monodirectional flashing light
6' - 12' (1.8 m - 3.6 m)
Edge of pavement
Metal or wood post
5' (1.5 m) min. rural
7' (2.1 m) min. urban
4' (1.2 m) rural
6' (1.8 m) urban
Elevation of edge of pavement
5' (1.5 m) min. embedment
POST MOUNTED SIGNS
** When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.
Edge of pavement or face of curb
24 - 10' (600 - 3 m)
12 (300) min. ***
Elevation of edge of pavement
SIGNS ON TEMPORARY SUPPORTS
*** When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen by motorists.
18x18 (450x450) Orange flags
SIGN (IF SPECIFIED)
8' (2.4 m) min.
HIGH LEVEL WARNING DEVICE
ROAD CONSTRUCTION NEXT X MILES
G20-1(0)-6036
END CONSTRUCTION
G20-2a(0)-6024
This signing is required for all projects 2 miles (3200 m) or more in length.
ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.
END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).
Dual sign displays shall be utilized on multi-lane highways.
WORK LIMIT SIGNING
8 (200) Federal series C
STOP
7 (180) Federal series B
SLOW
FRONT SIDE
REVERSE SIDE
All dimensions are in inches (millimeters) unless otherwise shown.
Illinois Department of Transportation
APPROVED January 1, 2012
ENGINEER OF OPERATIONS
APPROVED January 1, 2012
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97
FLAGGER TRAFFIC CONTROL SIGN
TRAFFIC CONTROL DEVICES
(Sheet 2 of 3)
STANDARD 701901-02

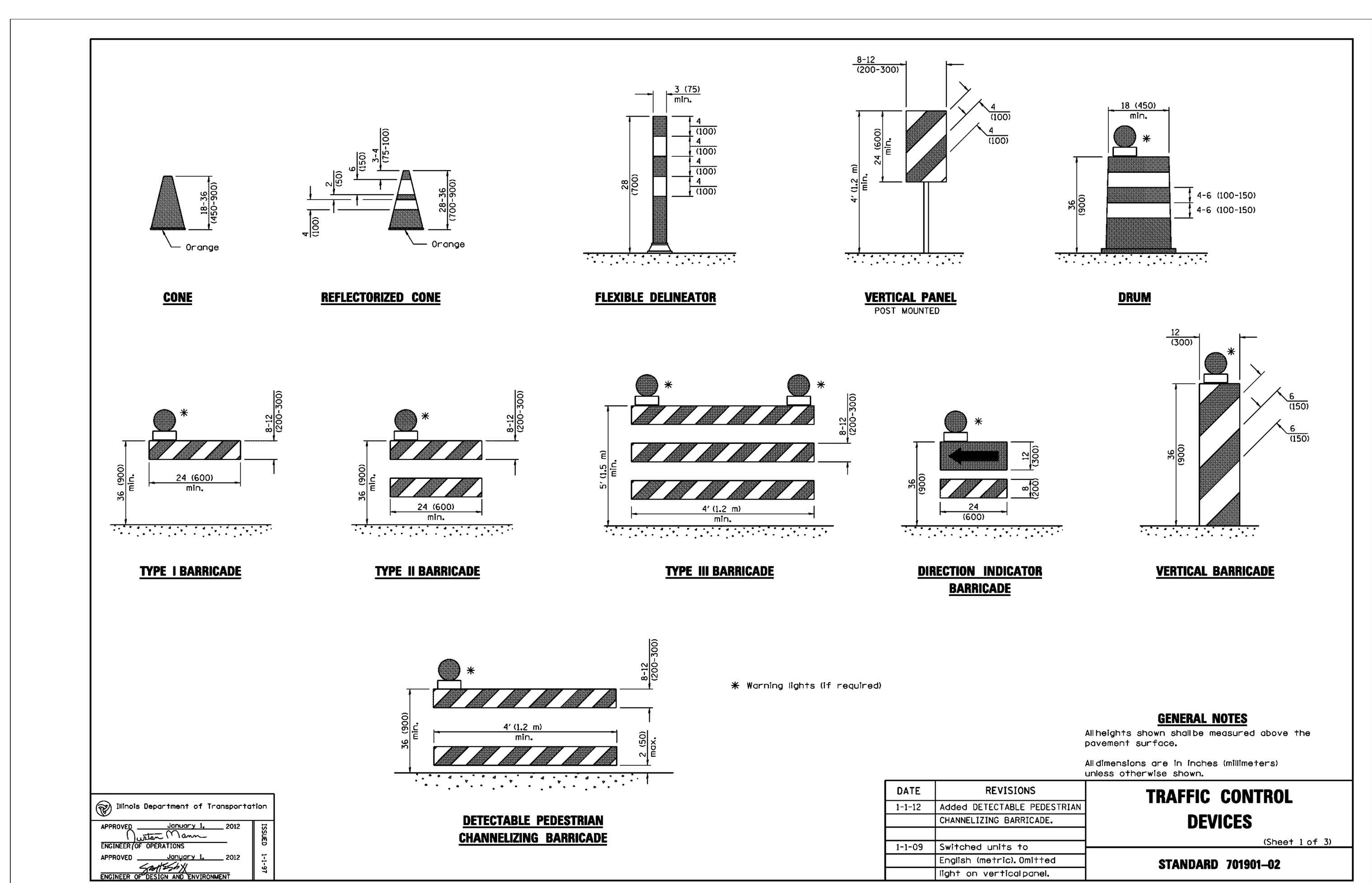

W20-1(0)-48
ROAD WORK AHEAD
ROAD CONSTRUCTION AHEAD
ONE LANE ROAD AHEAD
W20-7(0)-48
W20-4(0)-48
W20-I103(0)-48
Type I or Type II Barricades
One way / one lane operation
100' (30 m) min.
Type I or Type II barricades
100' (30 m) max.
200' (60 m)
ROAD CLOSED
R11-2
Type III barricades
ROAD CLOSED AHEAD
W20-3(0)-48
W20-1(0)-48 For maintenance and utility projects
W20-I103(0)-48 For contract construction projects
SIGN SPACING
Posted Speed | Sign Spacing
55 | 500' (150 m)
50-45 | 350' (100 m)
<45 | 200' (60 m)
SYMBOLS
Work area
Cone, drum or barricade (not required for moving operations)
Sign on portable or permanent support
Flagger with traffic control sign
Barricade or drum with flashing light
Type III barricade with flashing lights
① Refer to SIGN SPACING TABLE for distances.
② For approved sideroad closures.
③ Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
④ Cones, drums or barricades at 20' (6 m) centers.
GENERAL NOTES
This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.
All dimensions are in inches (millimeters) unless otherwise shown.
DATE | REVISIONS
1-1-11 | Revised flagger sign.
1-1-09 | Switched units to English (metric). Corrected sign No.'s.
Illinois Department of Transportation
APPROVED January 1, 2011
ENGINEER OF SAFETY ENGINEERING
APPROVED January 1, 2011
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97
URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
STANDARD 701501-06

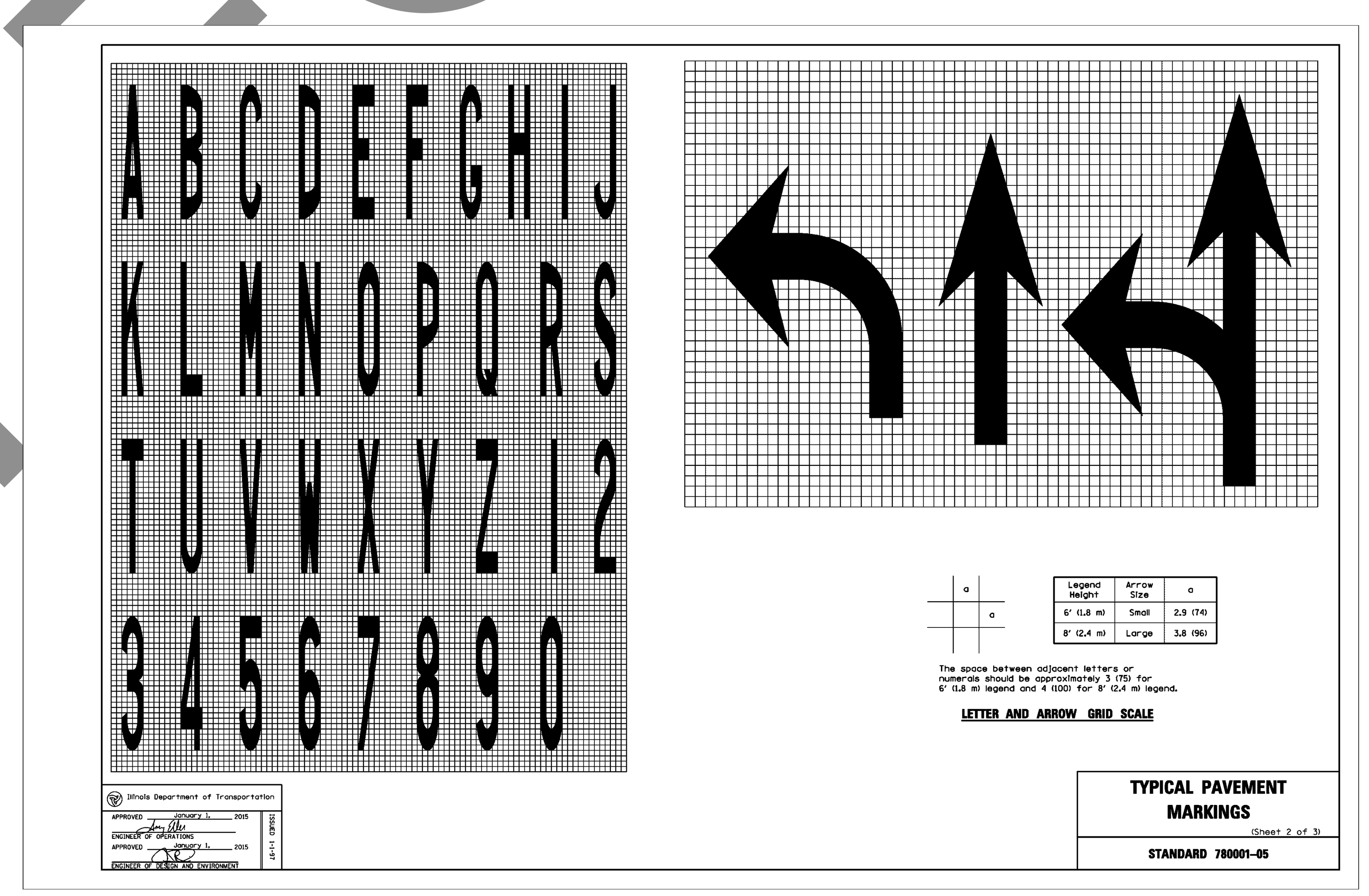

W20-I103(0)-48 for contract construction projects
Or
W20-1(0)-48 for maintenance and utility projects
SIDEWALK CLOSED USE OTHER SIDE
R11-I102-2430
R3-2-2424
Illinois Department of Transportation
APPROVED January 1, 2012
ENGINEER OF SAFETY ENGINEERING
APPROVED January 1, 2012
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

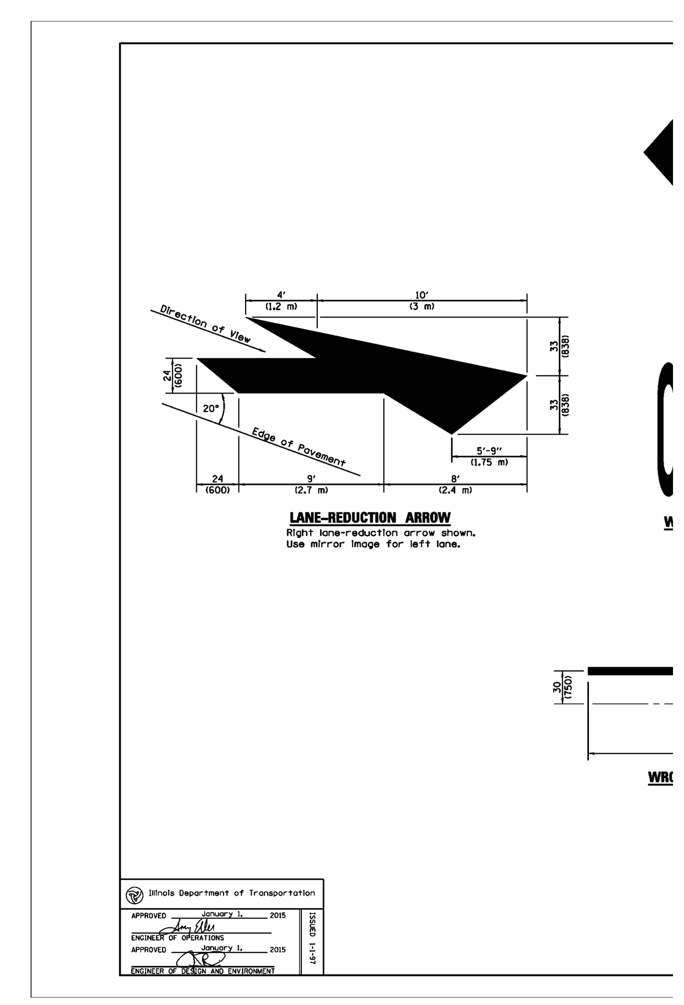

4' (1.2 m) min.
5' (1.5 m) min.
8' (2.4 m) min.
TYPE A ROOF MOUNTED
TYPE B ROOF OR TRAILER MOUNTED
TYPE C TRAILER MOUNTED
ARROW BOARDS
24 (600) ±
Weep holes
PLAN
1¾ (45) ±
Face may be stepped or smooth
Traffic
Epoxy channels
3½ (90) ±
SECTION A-A
Construction advance warning signs
TYPICAL INSTALLATION
TEMPORARY RUMBLE STRIPS
Type A flasher
6 (150) max.
R11-2
ROAD CLOSED
Edge of shoulder
Pavement
ROAD CLOSED TO ALL TRAFFIC
Reflectorized striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.
12 (300) min.
30' (9.1 m) min. 100' (30 m) max.
R11-4
ROAD CLOSED TO THRU TRAFFIC
ROAD CLOSED TO THRU TRAFFIC
Reflectorized striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.
TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD
All dimensions are in inches (millimeters) unless otherwise shown.
Illinois Department of Transportation
APPROVED January 1, 2012
ENGINEER OF OPERATIONS
APPROVED January 1, 2012
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97
TRAFFIC CONTROL DEVICES
(Sheet 3 of 3)
STANDARD 701901-02

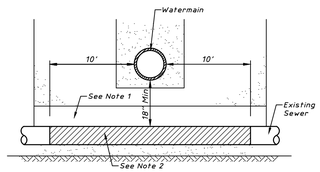

Parking space, typical
25' (8 m) Spacing
4' min. (1.2 m)
Orange safety fence
① Omit whenever duplicated by road work traffic control.
W20-I103(0)-48 for contract construction projects
Or
W20-1(0)-48 for maintenance and utility projects
SIDEWALK DIVERSION
SYMBOLS
Work area
Sign on portable or permanent support
Barricade or drum
Cone, drum or barricade
Type III barricade
Detectable pedestrian channelizing barricade
10' (3 m) Spacing
SIDEWALK CLOSED
R11-1101-2418
SIDEWALK CLOSED USE OTHER SIDE
R11-I102-2430
SIDEWALK CLOSURE
GENERAL NOTES
This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.
This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.
Temporary facilities shall be detectable and accessible.
The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.
The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection to each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.
Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.
All dimensions are in inches (millimeters) unless otherwise shown.
DATE | REVISIONS
1-1-12 | Added SIDEWALK DIVERSION. Modified appearance of plan views. Renamed Std.
1-1-09 | Switched units to English (metric). 702001 to 701901.
Illinois Department of Transportation
APPROVED January 1, 2012
ENGINEER OF SAFETY ENGINEERING
APPROVED January 1, 2012
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97
SIDEWALK, CORNER OR CROSSWALK CLOSURE
(Sheet 1 of 2)
STANDARD 701801-05


36 (900) min.
Angles not less than 60°
Existing longitudinal joint
Angles not less than 60°
Construction joint
SECTION A-A
(Built in two operations)
Construction joint
3'-0" (0.9 m) to 5'-0" (1.5 m)
SECTION F-F
(Built in two operations)
Illinois Department of Transportation
PASSED January 1, 2008
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2008
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

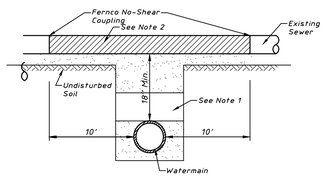

18-36 (450-900)
Orange
CONE
REFLECTORIZED CONE
FLEXIBLE DELINEATOR
VERTICAL PANEL
POST MOUNTED
DRUM
TYPE I BARRICADE
TYPE II BARRICADE
TYPE III BARRICADE
DIRECTION INDICATOR BARRICADE
VERTICAL BARRICADE
* Warning lights (if required)
DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE
GENERAL NOTES
All heights shown shall be measured above the pavement surface.
All dimensions are in inches (millimeters) unless otherwise shown.
DATE | REVISIONS
1-1-12 | Added DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE.
1-1-09 | Switched units to English (metric). Omitted light on vertical panel.
Illinois Department of Transportation
APPROVED January 1, 2012
ENGINEER OF OPERATIONS
APPROVED January 1, 2012
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97
TRAFFIC CONTROL DEVICES
(Sheet 1 of 3)
STANDARD 701901-02


A B C D E F G H I J
K L M N O P Q R S
T U V W X Y Z 1 2
3 4 5 6 7 8 9 0
Legend Height | Arrow Size | a
6' (1.8 m) | Small | 2.9 (74)
8' (2.4 m) | Large | 3.8 (96)
The space between adjacent letters or numerals should be approximately 3 (75) for 6' (1.8 m) legend and 4 (100) for 8' (2.4 m) legend.
LETTER AND ARROW GRID SCALE
Illinois Department of Transportation
APPROVED January 1, 2015
ENGINEER OF OPERATIONS
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97
TYPICAL PAVEMENT MARKINGS
(Sheet 2 of 3)
STANDARD 780001-05


Direction of View
Edge of Pavement
4' (1.2 m)
10' (3 m)
33 (838)
20°
5'-9" (1.75 m)
24 (600)
9' (2.7 m)
8' (2.4 m)
LANE-REDUCTION ARROW
Right lane-reduction arrow shown. Use mirror image for left lane.
30 (750)
Illinois Department of Transportation
APPROVED January 1, 2015
ENGINEER OF OPERATIONS
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97



WATERMAIN ABOVE SEWER



WATERMAIN BELOW SEWER

REQUIREMENTS

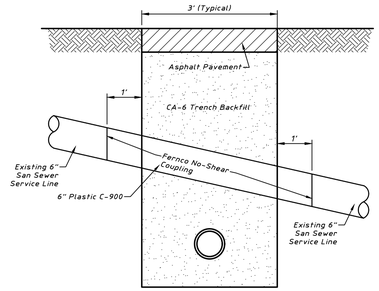
1. Backfill to one (1) foot over top of pipe with select excavated material (Class IV) and compact for 10 feet on either side of watermain. Class IV material, per ASTM D2321, to be compacted to 95% of standard proctor maximum density.

2. a.) If sewer is sanitary, replace existing sewer as indicated with SDR 26 P.V.C. pipe conforming to ASTM 2241 and ASTM D3139, with joint gaskets conforming to ASTM F-477, or ductile iron pipe conforming to ANSI A-21.51, with push-on joints conforming to AWWA C111.

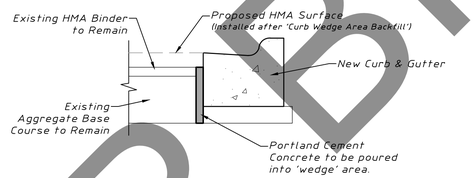
b.) If sewer is storm, replace existing sewer as indicated with Class IV RCP conforming to ASTM C-76 with joints conforming to ASTM C-443, and rubber gaskets conforming to ASTM C-361.

3. Point loads shall not be allowed between sewer or watermain.

4. Provide adequate support for proposed watermain to prevent damage due to settlement of sewer trench.

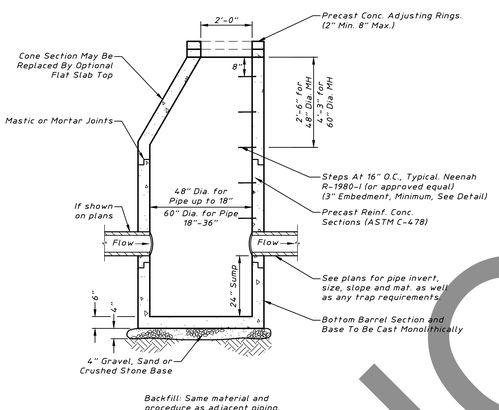


6" SANITARY SEWER SERVICE LINE REPAIR DETAIL

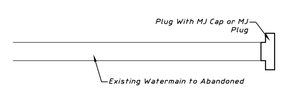


Notes:
1. This work shall only be provided in areas where existing bituminous pavement (surface, binder, or base) is to remain adjacent to a location of curb and gutter removal and replacement.
2. 'Gap' or 'wedge' area will occur between existing edge of pavement and new gutter flag.
3. Portland cement concrete shall be poured within the 'wedge' area up to the top of the final design binder course elevation that will allow for uniform placement of 2" HMA surface course.

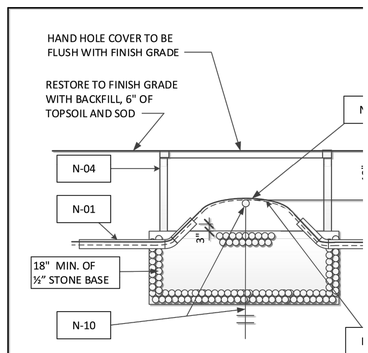
CURB WEDGE AREA BACKFILL



CATCH BASIN - TYPE A



WATERMAIN ABANDONMENT DETAIL



SECTION A-A
INITIAL BOX
INSTALLATION DETAIL

NOT FOR BIDDING