# DIAMOND WILL ROAD ALLEY AND **DIVISION STREET WATER MAIN IMPROVEMENTS**

VILLAGE OF DIAMOND, GRUNDY COUNTY, ILLINOIS

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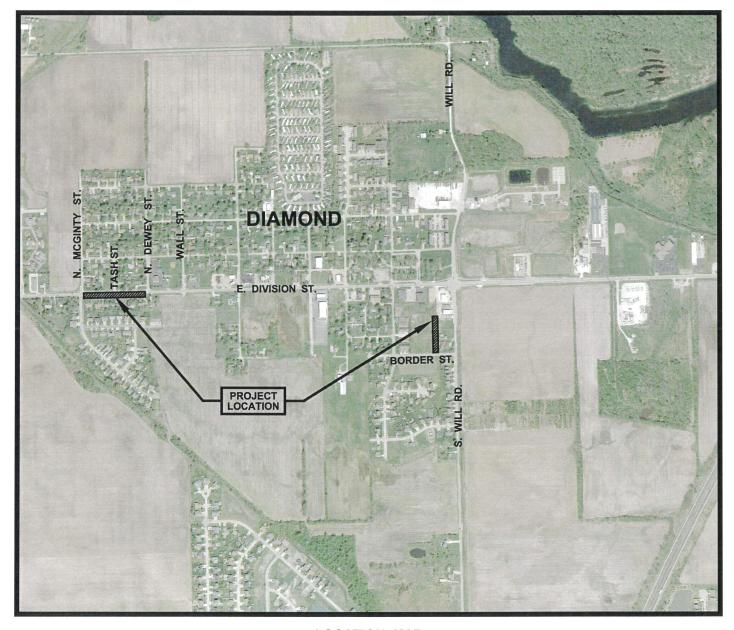
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**LOCATION MAP** 

# **BENCHMARKS**

CHISELED "X" LIGHT POLE BASE NW CORNER RT. 113/WILL ELEV=558.38

RAILROAD SPIKE IN POWER POLE AT SOUTHWEST CORNER OF BORDER ST AND WILL RD. ELEV=562.67

BM-3 CHISELED "□" CONC. BASE LIGHT POLE NE CORNER RT. 113 AND TASH ST. ELEV=561.20

CHISELED "\\_" CONC. BASE NW COR. RT. 113 AND DEWEY ST. ELEV=562.51

CHISELED " $\square$ " CONC. BASE LIGHT POLE NW COR. RT. 113 AND MCGINTY ST. ELEV=559.40



PERU MORRIS OTTAWA MENDOTA ILLINOIS

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DRAWN BY: CDG	REVISIONS				
DICAWIN BI. CDG	LEVEL	BY	DATE	DESCRIPTION	1
CHECKED BY: MWP					
DATE: 02/2023					4

LOCATION OF PROJECT INDICATED THUS:

### SURVEYOR / ENGINEER:

CHAMLIN & ASSOCIATES, INC. 4152 PROGRESS BLVD PERU, IL. 61354 PHONE: (815) 223-3344



CURRENT AS OF: 09/13/2023 SCALE: AS NOTED FILE NO.: 9965.00 Y-

SHEET 1

#### GENERAL NOTES

THE CHAMLIN & ASSOCIATES "SPECIFICATIONS" SHALL GOVERN THE CONSTRUCTION OF THIS THIS PROJECT.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE PLANS AND SPECIFICATIONS, NISIT THE WORK SITE, BE INFORMED OF THE WORK INVOLVED, BE INFORMED OF FEDERAL, STATE, AND LOCAL LOAS, LOCAL CODE REQUIREMENTS, ORDINANCES, RULES AND REGULATIONS, AND ANY OTHER ITEMS WHICH MAY AFFECT THE COST AND/OR TIME TO COMPLETE THE PROJECT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER SHOULD ANY DISCREPANCIES BE NOTICED BETWEEN THE PLANS, SPECIFICATIONS, OR WORKSITE.

THE LOCATION OF EXISTING UNDERGROUND OR OVERHEAD UTILITIES IF SHOWN ON THE PLANS IS FOR THE CONVENIENCE OF THE BIDDER ONLY. THE OWNER AND/OR ENGINEER ASSUMES NO RESPONSIBILITY WHATSOEVER WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH UTILITIES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER PROTECTION OF ALL EXISTING PUBLIC OR PRIVATE ROADWAYS, STRUCTURES, AND UTILITIES PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO SAID ROADWAYS, STRUCTURES, AND UTILITIES. ANY ROADWAY, STRUCTURE, OR UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

ALL FIELD DRAINAGE TILE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OR REROUTED TO A LOCATION DETERMINED BY THE ENGINEER.

WHEN SURVEY CONTROL POINTS ARE SET BY THE ENGINEER TO ESTABLISH THE HORIZONTAL AND VERTICAL CONTROL REQUIRED FOR THE CONSTRUCTION OF THE VARIOUS CONTRACT ITEMS OF WORK, THE ENCINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE CONTROL FOR THE CONTROL FOR

THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL CONTROL POINTS OR REFERENCE STAKES SET BY THE ENGINEER. SHOULD THE CONTRACTOR DISTURB ANY CONTROL POINT OR REFERENCE STAKE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER, THE ENGINEER MAY DEDUCT THE DIRECT ENGINEERING COST INCURRED IN THE RE-ESTABLISHMENT OF THE CONTROL POINT OR REFERENCE STAKE FROM COMPENSATION DUE THE CONTRACTOR.

EACH CONTRACTOR SHALL ASSUME ALL LIABILITY, FINANCIAL OR OTHERWISE, IN CONNECTION WITH HIS/HER CONTRACT AND SHALL PROTECT AND HOLD HARMLESS THE OWNER AND ENGINEER FROM ANY AND ALL DAMAGES OR CLAIMS THAT MAY ARISE DUE TO INCONVENIENCE, DELAY, OR LOSS EXPERIENCED BY THE CONTRACTOR CAUSED BY THE PRESENCE AND OPERATION OF OTHER CONTRACTORS AND/OR UTILITY COMPANIES WORKING WITHIN THE LIMITS OF THE PROJECT.

SOIL EROSION AND SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND DETAILS CONTAINED WITHIN THE PLANS.

PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRAFFIC FROM THE CONSTRUCTION SITE. ALL STREETS SHALL BE CLEANED DAILY OR AS NECESSARY TO KEEP CLEAN OF SEDIMENT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITIES. ADJACENT PROPERTIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION BY USE OF AN ACCEPTABLE EROSION CONTROL PRACTICE SUCH AS VEGETATIVE BUFFER STRIPS OR SEDIMENT

FOR CONSTRUCTION SITES WITH ONE (1) ACRE OR MORE OF DISTURBANCE, ALL CONTRACTORS AND SUB-CONTRACTORS MILL BE REQUIRED TO CERTIFY A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP, IF NECESSARY, AND ALL PERMITS PETAINING TO SOIL AND EROSION CONTROL WILL BE PREPARED AND SUBMITTED BY THE OWNER/ENGINEER.

IT WILL BE THE CONTRACTOR/SUB-CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT AND FOLLOW

WHEN REQUESTED BY THE OWNER, THE ENGINEER SHALL PROVIDE CONSTRUCTION INSPECTION TO ASCERTAIN THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE DESIGN INTENT. THE ENGINEER'S UNDERTRAINING SHALL NOT RELIEVE THE CONTRACTOR FROM THE CONTRACTOR'S OBLIGATION TO PERFORM WORK IN CONFORMITY WITH THE PLANS AND SPECIFICATIONS AND IN A WORKMANLIKE MANNER, SHALL NOT MAKE THE ENGINEER AN INSURER OF THE CONTRACTOR'S PERFORMANCE: AND SHALL NOT IMPOSE UPON THE ENGINEER ANY SHALL NOT MAY TO ENSURE THAT THE WORK IS PERFORMADE IN A SAFE MANNER. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR SAFETY FOR THIS PROJECT.

BEFORE ACCEPTANCE AND SUBSEQUENT FINAL PAYMENT, ALL WORK SHALL BE INSPECTED AN APPROVED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT SHALL BE MADE ONLY AFTER ALL OF THE CONTRACTOR'S WORK HAS BEEN APPROVED AND INSPECTED.

TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH APPLICABLE PORTIONS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2022 AND THE LATEST EDITION OF THE "ILLINOIS MANUAL FOR UNIFORM TRAFFIC CONTROL FOR STREETS AND HIGHWAYS". THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR USE OF APPROPRIATE ILLINOIS DEPARTMENT OF TRANSPORTATION HIGHWAY STANDARDS PERTAINING TO TRAFFIC CONTROL FOR THE ENTIRE TRANSPORTATION HIGHWAY STANDARDS PERTAINING TO TRAFFIC CONTROL FOR THE ENTIRE DUE TO INADEQUATE TRAFFIC CONTROL. SIGNAGE, PAVEMENT MARKINGS, MAINTENANCE, AND INSPECTION SHALL BE INCLUDED IN THE TRAFFIC CONTROL SCHOOLS.

THE ILLINOIS DEPARTMENT OF TRANSPORTATION HIGHWAY STANDARDS NOTED ON THE COVER SHEET WILL BE CONSIDERED A PART OF THE PLANS AND WILL APPLY TO THE WORK DESCRIBED HERBIN. COPIES OF THE APPLICABLE HIGHWAY STANDARDS ARE APPENDED TO THE SPECIFICATION FOR THE CONVENIENCE OF THE BIDDER.

SAW CUTTING FOR THIS PROJECT WILL BE INCIDENTAL IN ALL CASES. THIS SHALL INCLUDE FULL DEPTH SAW CUTTING ALONG ALL EDGES FOR REMOVAL OF PAYEMENTS, SIDEWALK, ETC. IT SHALL ALSO INCLUDE SUBSEQUENT SAW CUTTING TO PROVIDE CLEAN EDGES FOR PAVING WORK AND SCORING OF CONCRETE PAYEMENTS AS REQUIRED FOR CONTROL JOINTS. WHERE SAW CUTS ARE INDICATED ON THE DRAWINGS OR DETAILS OR NOTES, THESE SAW CUTS ARE MANDATORY. FAILURE TO MAKE THE REQUIRED SAW CUTS WILL ENTITLE OWNER TO MAKE A DEDUCTION EQUAL TO \$5 PER LINEAR FOOT MEASURED ALONG THE LENGTH OF THE REQUIRED SAW CUT THAT WAS NOT PERFORMED. THIS DEDUCTION WILL BE MADE FROM THE FINAL AMOUNT DUE TO

FOR THE SAKE OF SAFETY, TRAFFIC CONTROL, AND STREET INTEGRITY, THE OWNER AND ENGINEER WILL HAVE FINAL SAY ON TRUCKING ROUTES DURING THE CONSTRUCTION OF THE PROLECT. THE CONTRACTOR SHALL LIMIT TRUCKING MOVEMENTS TO THOSE AREAS SPECIFIED BY THE OWNER AND ENGINEER AS THE WORK PROGRESSES THROUGHOUT THE JOB.

DEWATERING OF THE EXCAVATION DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE CONTRACT.

ALL EXCAVATED SPOILS AND MILLINGS SHALL BE DISPOSED OF LEGALLY AND SAFELY OFFSITE BY THE CONTRACTOR AS WORK PROGRESSES. NO TEMPORARY STOCKPILE LOCATION FOR SPOILS WILL

UNDERGROUND WORK OF THIS PROJECT SHALL START AT EITHER THE WEST OR EAST END OF THE PROJECT AND SHALL GENERALLY PROGRESS TOWARDS THE OTHER END IN AN ORDERLY FASHION. IN NO CASE SHALL WORK ON THE ENTIRE PROJECT CEASE FOR MORE THAN 5 CALENDAR DAYS PER MONTH WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER.

ANY DISTURBED CURB RAMPS OR SIDEWALK SHALL BE REPLACED TO CURRENT IDOT STANDARDS.

EROSION CONTROL SHALL CONSIST OF THE FOLLOWING ITEMS AND SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE:

- 2. TEMPORARY EROSION CONTROL SEEDING SHALL BE INSTALLED ON ALL SLOPES STEEPER THAN 4:1 WHEN FINAL SEEDING AND EROSION CONTROL BLANKET WILL NOT BE INSTALLED UNTIL THE CONCLUSION OF THE CONSTRUCTION.
- 3. TEMPORARY CONCRETE WASHOUT FACILITY -EARTHEN TYPE
- 4. EROSION CONTROL BLANKET ON FINAL SEEDED SLOPES STEEPER THAN 4:1

ALL EXISTING VALVE AND SERVICE BOXES THAT WILL BECOME ABANDONED FOLLOWING THE NEW CONSTRUCTION SHALL BE REMOVED AND THE VALVES CLOSED PRIOR TO COMPLETING RESTORATION WORK, FILL VOIDS WITH HAND COMPACTED FA-6. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE WATER MAIN AND SERVICE CONSTRUCTION.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES: BITUMINOUS MAT PRIME COAT & TACK COAT RESIDUAL ASPHALT RATES:

OVER AGGREGATE SURFACE

OVER MILLED HOT-MIX ASPHALT OR CONCRETE SURFACE0.05 LBS/SQ FT

TACK COAT: BETWEEN HOT-MIX ASPHALT LIFTS 0.025 LBS/SQ F/IN
HOT-MIX ASPHALT ELVELING BINDER COURSE AND BASE COURSELBS/SQ YD/IN
HOT-MIX ASPHALT SURFACE COURSE
112 LBS/SQ YD/IN

MIXTURE USE (S)	HMA SURFACE	HMA BINDER COURSE
PG GRADE	PG64-22	PG64-22
MAX % RAP/RAS ALLOWABLE BY WEIGHT	25%	25%
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 9.5	IL 19.0
FRICTION AGGREGATE	MIXTURE C	
DENSITY TEST METHOD	CORES/ NUCLEAR	SATISFACTION OF THE ENGINEER

\*\* IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

IRON AND STEEL PRODUCTS USED ON THIS PROJECT SHALL BE PRODUCED IN THE UNITED STATES. THE CONTRACTOR AND HIS SUB-CONTRACTORS AND SUPPLIERS SHALL MAINTAIN APPROPRIATE RECORD-KEEPING TO SATISFY REQUIREMENTS OF AMERICA'S WATER INFRASTRUCTURE ACT OF 2018.

- I. PVC WATER MAIN PIPE WATER MAIN PIPE SHALL BE PVC PIPE OF THE SIZE INDICATED ON THE PLANS AND SHALL CONFORM TO AWWA C900, DRIB, CLASS 235. PVC PIPE JOINTS SHALL BE PUSH-PON JOINTS WITH FLEMBLE LLASTOMERIC SEALS PER ASTM D3139 AND F477. THE RESTRAINED JOINT SYSTEM SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:

   NORTH AMERICAN SPECIALTY PRODUCTS: CERTA—LOC C900 RJ

   NORTH AMERICAN SPECIALTY PRODUCTS: CERTA—LOC C900 RJB

   JM EAGLE: EAGLE LOC 900
- 2. WATER MAIN FITTINGS. WATER MAIN FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS OF THE TYPE AND SIZE INDICATED ON THE PLANS AND SHALL CONFORM TO AWWA C115. FITTINGS SHALL BE BITUMHOUS COATED PER AWWA C110 AND CEMENT LINED PER AWWA C104.
- RESTRAINED GLANDS. ALL WATER MAIN MECHANICAL JOINT VALVES AND FITTINGS SHALL BE EQUIPPED WITH MEGA-LUG TYPE RESTRAINING GLANDS. RESTRAINING GLANDS SHALL BE MANUFACTURED BY EBAA-IRON OR APPROVED EQUAL.
- 4. WATER MAIN VALVES AND BOXES. WATER MAIN VALVES AND BOXES TO BE INSTALLED AS INDICATED ON THE PLANS SHALL BE RESILIENT—WEDGE GATE VALVES WITH NON-RISING STEMS AND TRIPLE O-RING STEM SEALS AND SHALL CONFORM TO AWWA C515. GATE VALVES SHALL BE MECHANICAL JOINT. GATE VALVES SHALL BE MUELLER A-2361. VALVE BOXES SHALL BE DUCTILE/CAST IRON; TWO—PIECE, SCREW—TYPE ADJUSTABLE; 5—¼\* SHAFT; AND SHALL HAVE A LID MARKED "WATER". VALVE BOXES SHALL BE PROVIDED WITH A RUBBER LEVELING/CENTERING GLAND TO BE PLACED IN THE BOTTOM OF THE VALVE BOX TO ENSURE THAT THE OPERATING NUT IS CENTERED IN THE VALVE BOX TO ENSURE THAT THE OPERATING NUT IS CENTERED IN THE VALVE BOX TO ENSURE THAT THE OPERATING NUT IS CENTERED IN THE VALVE BOX TO ENSURE THAT THE OPERATING NUT IS CENTERED IN THE VALVE BOX TO BE OUTLY OF THE VALVE BOX TO ENSURE THAT THE OPERATING NUT IS CENTERED IN THE VALVE BOX TO BE FOUND. HIS PROVINCE MAY SES SHALL BE FOUND. EQUAL. INSERTION VALVES SHALL BE QUIKVALVE BY ROMAC INDUSTRIES OR INSTA-VALVE 250 PATRIOT BY HYDRA-STOP OR ENGINEER-APPROVED EQUAL.
- 5. FIRE HYDRANTS. FIRE HYDRANTS SHALL HAVE THREE (3) NOZZLES, TWO (2) 2-1/2" HOSE NOZZLES AND ONE (1) 5" STORZ NOZZLE AND MEET THE REQUIREMENTS OF AWMA 502. FIRE HYDRANTS SHALL BE 5-1/4" MWELLER SUPER CENTURION 250 WITH 6" MECHANICAL JOINT BASE. SUBSTITUTIONS WILL NOT BE PERMITTED. THE FIRE HYDRANT FAY ITEM SHALL NOLLUBE THE INSTALLATION OF BLOCKING AND COARSE AGGREGATE PLUS FABRIC TO BE INSTALLED AND WIND THE BARREL DRAIN AS INDICATED

#### 6. UNDERGROUND PIPE MARKERS.

- o. PLASTIC RIBBON TAPE: BRIGHT COLORED, CONTINUOUSLY PRINTED, MINIMUM 6 INCHES WIDE BY 4 MIL THICK, MANUFACTURED FOR DIRECT BURIAL SERVICE. CAUTION TAPE SHALL BE WARKED "CAUTION WATER MAIN BELOW" AND INSTALLED 24 INCHES ABOVE THE WATER MAIN PIPE.
- D. TRACER WIRE: #10 AWG SOLID STEEL CORE WITH COPPER METALLURGICALLY BONDED TO IT AS MANUFACTURED BY COPPERHEAD INDUSTRIES OR EQUAL. TRACER WIRE SHALL BE ATTACHED TO THE WATER MAIN PIPE WITH TAPE OR OTHER ADDRESSYE. TRACER WIRE SHALL BE PROVIDED FOR BOTH YOU AND DUTILE IRON PIPING AND SHALL BE CONTINUOUS THROUGH CASING PIPES. TERMINATE TRACER WIRE AT HYDRANTS IS SURFACE ACCESS BOX USING SNAKEPIT BY COPPERHEAD OR ENGINEER—APPROVED EQUAL. SPLICES SHALL BE MADE IN ACCESS BOXES OR USING SNEED SHALL BE FOR DIRECT BURY.
- CONCRETE THRUST BLOCKING SHALL BE PROVIDED AT ALL WATER MAIN TEES AND BENDS. THRUST BLOCKS MAY BE EITHER POURED—IN-PLACE CONCRETE OR PRE-CAST CONCRETE BLOCKS OF A SIZE SATISFACTORY TO THE ENGINEER.

#### 8. DISINFECTION OF WATER MAINS

- o. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MAIN BEING FLUSHED AND DISINFECTED. ANY ADDITIONAL SERVICE/MAIN TAPS (WHIPS), FITTINGS, VALVES, ETC., REQUIRED FOR FLUSHING, DISINFECTION. AND TESTING SHALL BE INCIDENTAL TO THE WATER MAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ALL WATER SAMPLES AND DELIVERY TO THE TESTING LABORATORY. THE COSTS OF TESTING SHALL BE PAID FOR BY THE CONTRACTOR.
- b. AS A MINIMUM THE CONTRACTOR SHALL COLLECT BACTERIOLOGICAL SAMPLES AT THE ENDS OF RUNS AND AT 1,200 FOOT INTERVALS ALONG THE WATER MAIN. THE LOCATIONS OF SAMPLING POINTS SHALL BE AS DIRECTED BY THE RUGINEER.
- c. THE MAINS SHALL BE FLUSHED PRIOR TO DISINFECTION IN ACCORDANCE WITH SECTION 41-2-15A OF THE "WATER AND SEWER SPECIFICATIONS" AND DISINFECTED IN ACCORDANCE WITH SECTION 41-2-15B THROUGH I.
- d. AFTER FINAL FLUSHING AND BEFORE PIPELINE IS CONNECTED TO THE EXISTING SYSTEM OR PLACED IN SERVICE, EMPLOY AN APPROVED INDEPENDENT LABORATORY TO TEST SAMPLES AND ISSUE A BACTERIOLOGICAL REPORT.

#### 9. TESTING

- o. PRESSURE AND LEAKAGE TESTING UNLESS APPROVED OTHERWISE, THE LEAKAGE TESTING SHALL BE PERFORMED ACCORDING TO ARTICLE 41—2.14, PARTS A, B & C OF THE "WATER AND SEWER SPECIFICATIONS." MINIMUM TEST PRESSURE SHALL BE 120 PSI FOR THIS PROJECT.
- b. PROVIDE PERSONNEL AND EQUIPMENT, AND ARRANGE FOR AND PAY THE COST OF, ALL REQUIRED TESTS AND INSPECTIONS REQUIRED. WHERE TEST SHOWS MATERIALS OR WORKMANSHIP TO BE DEFICIENT, REPLACE OR REPAIR AS NECESSARY, AND REPEAT THE TESTS UNTIL THE SPECIFIED STANDARDS ARE ACHIEVED.
- 10. THE OWNER WILL OPERATE ANY EXISTING VALVES REQUIRED TO COMPLETE TH TESTING AND DISINFECTION. A MINIMUM OF 24 HOURS' NOTICE MUST BE GIVEN TO THE OWNER PRIOR TO BEGINNING THESE PROCESSES.
- 11. WATER MAIN CASING PIPE: WATER MAIN QUALITY CASING PIPE SHALL MEET THE REQUIREMENTS FOR WATER MAIN PIPE AS DESCRIBED IN THE PREVIOUS SECTION WITH THE EXCEPTION THAT DR 25, CLASS 165 SHALL BE PERMITTED. THE INSIDE DIAMETER SHALL BE A MINIMUM OF 2° GREATER THAN THE LARGEST OUTSIDE DIAMETER OF CARRIER PIPE JOINTS OR COUPLINGS.

#### 12. CASING SPACERS:

ISING SPACERS:
CASING SPACERS SHALL BE A TWO-PIECE SHELL AND MADE FROM T-304
STAINLESS STEEL OF A MINIMUM 14 GAUGE THICKNESS. SHELL SECTIONS SHALL
BE LINED WITH A 0.090' THICK, RIBBED PVC EXTRUSION. RUNNERS SHALL BE
ULTRA-HIGH MOLECULAR WEIGHT POLYETHYLENE TO PROVIDE A LOW COEFFICIENT
OF FRICTION. RUNNERS SHALL BE MECHANICALLY BOLTED TO THE RISER. RISERS
SHALL BE MADE OF 10 GAUGE T-304 STAINLESS STEEL. ALL RISERS SHALL BE
MIG WELDED TO THE SHELL. CASING SPACERS SHALL BE MODEL CCS AS
MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING, OR ENGINEER
APPROVED EQUAL.

- 13. CASING END SEALS: CASING END SEALS SHALL BE PULL-OVER TYPE CONSTRUCTION AND MADE FROM NEOPRENE WITH T-304 STAINLESS STEEL BANDS FOR SECURING THE ENDS OF THE END SEAL TO THE CASING PIPE AND CARRIER PIPE. CASING END SEALS SHALL BE WODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING OR ENGINEER APPROVED EQUAL.
- 14. WATER SERVICE PIPE SHALL BE POLYETHYLENE PIPE MEETING ASTM D2737, COPPER TUBE SIZE SDR 9, 200 PSI RATED. ALL PIPE SHALL BE TYPE APPROVED BY NSF AND BEAR THE NSF SEAL OF APPROVAL. FITTINGS SHALL BE CAST COPPER MEETING ASME B16,18 OR WROUGHT COPPER MEETING ASME B16,22. JOINTS SHALL BE MADE WITH COMPRESSION. CONNECTIONS. WATER SERVICE PIPE SHALL BE PROVIDED WITH TRACER WIRE OF THE SAME TYPE AS REQUIRED FOR THE WATER MAIN. SERVICE TRACER WIRE OF THE SAME TYPE AS REQUIRED FOR THE WATER MAIN. SERVICE TRACER WIRES SHALL BE TERMINATED WITHIN THE CORRESPONDING CUMB BOX. WATER SERVICE PIPING SHALL BE 1" DIAMETER UNILESS A LARGER SIZE SERVICE IS INDICATED ON THE DRAWMING. WATER SERVICES SHALL BE PROVIDED WITH PLASTIC RIBBON WARNING TAPE OF THE SAME TYPE AS REQUIRED FOR THE WATER MAIN.
- 15. CORPORATION STOPS SHALL BE MUELLER COMPANY MODEL 300 BALL TYPE OR APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL CORPORATION STOPS SHALL BE 1°. THE INLET END SHALL BE AWWA TAPER (MUELLER "CC") THREAD. THE OUTLET END SHALL BE A COMPRESSION CONNECTION.
- 16. SERVICE SADDLES SHALL BE MUELLER BR2S OR BR2W OR ENGINEER APPROVED EQUAL SERVICE SADDLES SHALL HAVE A BRASS BODY, WITH STAINLESS STEEL STRAPS AND O-RING SEAL. OUTLET SHALL BE MUELLER "CC" THREAD SIZED TO MATCH CORPORATION STOP. SADDLES SHALL BE DESIGNED FOR A WORKING PRESSURE OF 200 PSI MINIMUM.
- 17. CURB STOPS SHALL BE MUELLER COMPANY MODEL 300 BALL TYPE OR APPROVED EQUIAL. CURB STOP SHALL BE 1" UNLESS NOTED OTHERWISE ON THE DRAWINGS. CURB STOPS SHALL BE COMPRESSION INLET AND OUTLET AND BE DESIGNED FOR 300 PSI WORKING PRESSURE MINIMUM. SET CURB STOPS ON CONCRETE BLOCKING HAVING A MINIMUM AREA OF 1 SQ. FT. AS MEASURED LOOKIN DOWN. SET BOX COVER FLUSH WITH FINISHED GRADE.
- 18. CURB BOXES SHALL BE MUELLER MODEL H-10385 ARCH STYLE CURB BOX WITH EXTENSION ROD, OR APPROVED EQUAL. BASE SHALL BE SIZED TO FIT CURB VALVE TO BE USED AT EACH LOCATION. CURB BOXES SHALL BE A CAST IRON MERTING ASTM A48, CLASS 35; TWO PIECE, ADJUSTABLE, UPPER SECTION SHALL BE MADE OF STEEL PIPE. THE LID SHALL BEAR THE INSCRIPTION: "WATER" AND SHALL BE SECURED WITH A BRASS, PENTAGONAL SCREW.
- 19. EXISTING SERVICES ARE OF UNKNOWN SIZE AND MATERIAL. TO THE EXTENT POSSIBLE, ALL SERVICE LINE CONNECTIONS BETWEEN EXISTING AND PROPOSED PIPING/TUBING SHALL BE MADE USING CAST COPPER OR BRASS COMPRESSION FITTINGS.
- 20. TRENCH BACKFILL FOR WATER MAIN AND WATER SERVICE INSTALLATIONS SHALL BE FINE AGGREGATE MEETING IDOT GRADATION FA 6. TRENCH BACKFILL SHALL BE PROVIDED UNDER OR WITHIN 2 FEET OF EXISTING OR PROPOSED PAVEMENTS, CURBS, SIDEWALKS, OR DRIVEWAYS. TRENCHES SHALL BE BACKFILLED AND COMPACTED PER ARTICLE 550.07 OF THE IDOT STANDARD SPECIFICATIONS.

#### SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITIY
1	CONNECT TO EXISTING WATER MAIN	EACH	2
2	WATER MAIN, 8"	L.F.	1188
3	WATER MAIN, 6"	L.F.	18
4	GATE VALVE AND BOX, 8"	EACH	5
5	GATE VALVE AND BOX, 6"	EACH	3
6	45° BEND, 8"	EACH	4
7	90° BEND, 8"	EACH	1
8	TEE, 8" X 8"	EACH	2
9	TEE, 8" X 6"	EACH	3
10	FIRE HYDRANT, 6"	EACH	3
11	SERVICE RECONNECT, DIRECTIONAL BORE, COMPLETE	EACH	6
12	SERVICE RECONNECT, COMPLETE	EACH	10
13	TRENCH REPAIR	S.Y.	235
14	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	76
15	DISCONNECT AND ABANDON 1/2" W.M.	EACH	5
16	EXPLORATORY EXCAVATION	HR	16

DRAWN BY: CG LEVEL HECKED BY: MWP DATE: 09/2022

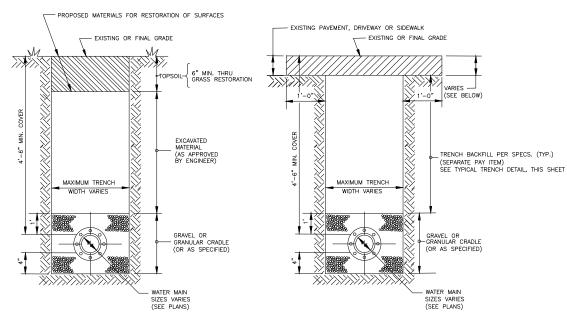


PERU MORRIS OTTAWA MENDOTA ILLINOIS

DIAMOND WILL ROAD ALLEY AND DIVISION STREET WATER MAIN IMPROVEMENTS **SEPTEMBER 2023** 

**GENERAL NOTES &** SUMMARY OF QUANTITIES **BIDDING PLANS** 

CURRENT AS OF: 09/13/2	023	
SCALE: AS NOTED	SHEET	2
FILE NO.:9965.00 Y-	OF	10



#### **GRASS AND FIELD AREAS**

GRASS TRENCH RESTORATION 

AND POTASSIUM FERTILIZER NUTRIENTS. PROVIDE 6" TOPSOIL AND MULCH PER SPECS.

#### PAVED AREAS

[ 1 1/2" HMA SURFACE COURSE, PER SPECS. (TYPICAL) HMA PAVEMENT HMA PAVEMENT
TRENCH RESTORATION 2 1/2" HMA BINDER COURSE, PER SPECS. (TYPICAL)
8" AGGREGATE BASE COURSE, TYPE B

HMA DRIVEWAY PAVEMENT  $\int 2^n$  HMA SURFACE COURSE, PER SPECS. (TYPICAL) TRENCH RESTORATION 8" AGGREGATE BASE COURSE

PCC PAVEMENT TRENCH RESTORATION =  $\left\{ \begin{array}{l} 6\text{" P.C.C. PAVEMENT} \\ 4\text{" AGGREGATE BASE COURSE} \end{array} \right.$ 

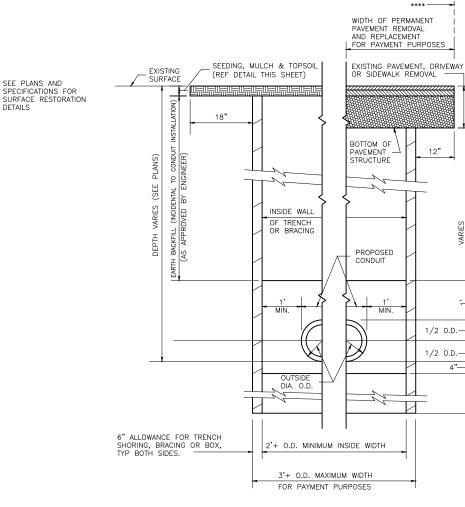
PCC SIDEWALK TRENCH RESTORATION 4" P.C.C. SIDEWALK 4" AGGREGATE BASE COURSE

NOTE:

AGGREGATE PAVEMENT TRENCH RESTORATION  $-\,8"$  AGGREGATE SURFACE COURSE, TYPE B

ALL RESTORATION METHODS WILL BE MEASURED BY THE LINEAR FOOT, REGARDLESS OF TRENCH WIDTH. TRENCH BACKFILL SHALL BE PAID FOR SEPARATELY AS NOTED PER DETAIL THIS SHEET, WHERE APPLICABLE.

### TYPICAL WATER MAIN TRENCHES



TYPICAL TRENCH DETAIL

\*\*INDICATES ELIGIBLE FOR PAYMENT AS SELECT FOUNDATION MATERIAL \*\*\*INITIAL BACKFILL IS INCIDENTAL TO CONDUIT INSTALLATION

OR MATE

- FOUNDATION: WHERE SOIL CONDITIONS WARRANT AND PRE-APPROVED BY ENGINEER. \*\*

PAVEMENT RESTORATION PER DETAIL THIS SHEET

AGGREGATE PAVEMENT TRENCH RESTORATION

DRIVEWAY PAVEMENT TRENCH RESTORATION

8" AGG. SURFACE COURSE, TYPE B

6" P.C.C. DRIVEWAY 4" AGG. BASE COURSE, TYPE B

SIDEWALK TRENCH RESTORATION 4" P.C.C. SIDEWALK 4" AGG. BASE COURSE, TYPE B

ΩR

BLE FOR TRENCH B

BACKFILL

HAUNCHING

NOTE: TRENCH BOX SHALL NOT EXTEND BELOW TOP OF PIPE, HOWEVER IT SHALL NOT EXCEED 2 FEET FROM THE BOTTOM OF THE TRENCH.

2 FEET FROM THE BOTTOM OF THE TRENCH.

\*\*\*\*AN ADDITIONAL SAW CUT WILL BE REQUIRED FOLLOWING TRENCHING AND BEFORE RESTORATION OF PAVEMENT TO CORRECT ANY DAMAGE DURING TRENCHING FOLLOWING THE INITIAL SAW CUT. ALL SAW CUTTING IS CONSIDERED INCIDENTAL TO CONDUIT INSTALLATION OR RESTORATION PAY ITEMS. INITIAL SAW CUT PRIOR TO TRENCHING AND ADDITIONAL SAW CUT PRIOR TO RESTORATION SHALL BE CONSIDERED MANDATORY FOR THIS PROJECT. SAW CUTS SHALL BE MADE FULL DEPTH OF PAVEMENT STRUCTURE. CONTRACTOR WILL BE PERMITTED TO MAKE THE REQUIRED SAW CUTS USING AN ASPHALT MILLING MACHINE IF DESIRED. SAW CUTTING MAY BE OMITTED WHERE PAVEMENT WILL BE REMOVED OVER FULL WIDTH OF EXISTING ROADWAY.

### NOTES TO TYPICAL TRENCH DETAIL

BEDDING AND HAUNCHING ARE INCIDENTAL TO CONDUIT INSTALLATION.

TRENCH BACKFILL WILL BE PAID FOR BY LINEAL FOOT AS MEASURED ALONG THE CENTERLINE OF THE WATER MAIN PIPE BEING INSTALLED NO MATTER THE ACTUAL TRENCH WIDTH. THE INABILITY OF THE CONTRACTOR'S TRENCH SHORING, BRACING, OR BOX TO STABILIZE THE SIDES OF THE TRENCH WILL NOT BE GROUNDS FOR PAYMENT OF ADDITIONAL QUANTITY OF TRENCH BRACKFILL

THE WIDTH OF PERMANENT PAVEMENT REMOVAL AND REPLACEMENT SHOWN IN THE ABOVE THE WIDTH OF PERMANENT PAVEMENT REMOVAL AND REPLACEMENT SHOWN IN THE ABOVE TYPICAL TRENCH DETAIL WILL APPLY TO SIDEWALK, AGGREGATE BASE COURSE, DRIVEWAY PAVEMENT, AND HMA BINDER BASE COURSE PATCH. REMOVAL AND REPLACEMENT WILL BE PAID FOR BY LINEAL FOOT AS MEASURED ALONG THE CENTERLINE OF THE TRENCH, NO MATTER THE ACTUAL TRENCH WIDTH. SHOULD THE CONTRACTOR DAMAGE CURB AND GUTTER, SIDEWALK, PCC BASE COURSE, DRIVEWAY PAVEMENT, OR HMA PAVEMENT BEYOND THE MAXIMUM WIDTH SHOWN, THE CONTRACTOR SHALL EXTEND THE REMOVAL AND REPLACEMENT WIDTH AS REQUIRED BY THE ENGINEER, BUT NO MORE THAN 12" WIDER THAN THE DAMAGED WIDTH, AT NO ADDITIONAL COST TO THE OWNER. TO THE OWNER.

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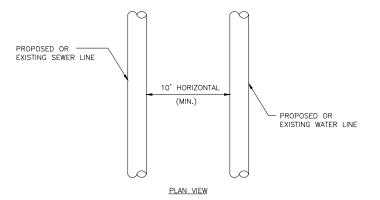
DIAMOND WILL ROAD ALLEY AND **DIVISION STREET WATER MAIN IMPROVEMENTS SEPTEMBER 2023** 

**BIDDING PLANS** 

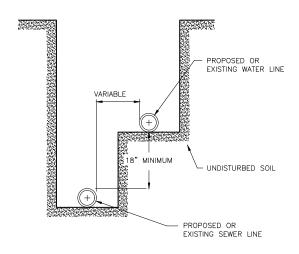
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#### **CASING DETAIL** NOT TO SCALE

WHEN PROPOSED SEWER (OR WATER) IS LOCATED 10 FEET OR MORE FROM EXISTING WATER (OR SEWER), NO SPECIAL CONSTRUCTION REQUIRED. SEE SECTION 41-2.01B (1)



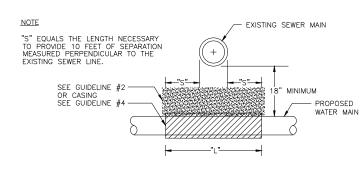
WHEN PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 10 FEET FROM EXISTING WATER (OR SEWER), DETAILS BELOW SHALL APPLY. SEE SECTION 41-2.01B (2)



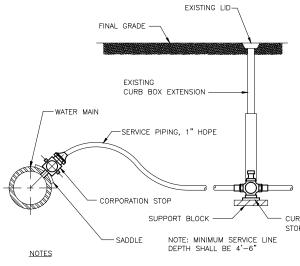
## **WATER AND SEWER** SEPARATION REQUIREMENTS

NOT TO SCALE

- OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
- 2. IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF EXISTING SEWER LINE TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
- 3. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
- 4. USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED WATER MAIN AND SEAL ENDS OF CASING.



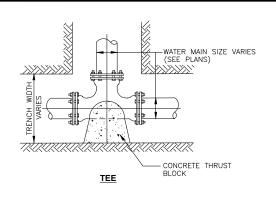
WATER AND SEWER SEPARATION DETAIL NOT TO SCALE

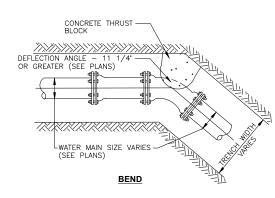


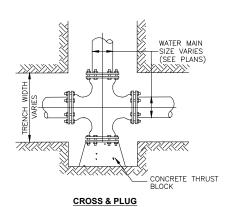
- 1. SUPPLY AND INSTALL SADDLE, CORPORATION STOP, AND SERVICE PIPE.
- 2. TYPICALLY, PUSH PIPE UNDER ROADWAY AND SIDEWALKS.
  IF OPEN CUT, SERVICE PIPE COST SHALL INCLUDE THIS REPAIR
- 3. EXCAVATE FOR WATER SERVICE ONLY AFTER APPROVAL BY ENGINEER.
- 4. EXISTING CURB STOP TO BE INSPECTED BY ENGINEER AND REUSED OR REPLACED.
- 5. ANY MISCELLANEOUS FITTINGS REQUIRED TO CONNECT TO EXISTING SERVICE ARE INCIDENTAL.

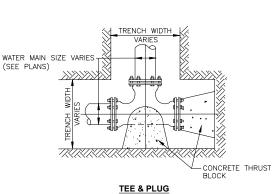
# **TYPICAL WATER SERVICE**

NOT TO SCALE









WATER MAIN FITTING BLOCKING DETAILS

# DUCTILE IRON PIPE TYPICAL WATER MAIN **CROSSING UNDER A SEWER** NOT TO SCALE

VARIES

20'+ PIPE DIA. MIN.

-45° BEND

DUCTILE IRON PIPE

#### GUIDELINES

1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L". COMPACT THE LENGTH OF

SEWER

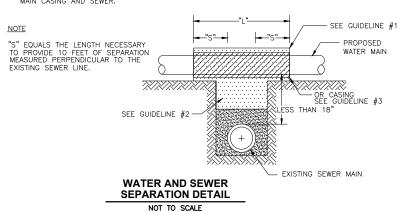
GRADE LINE

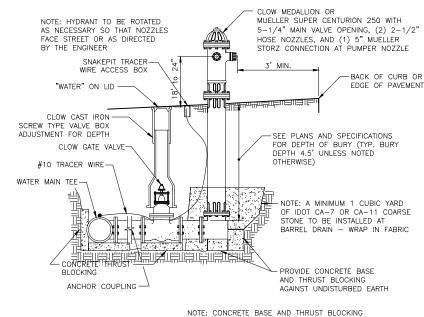
1-45° BEND

DUCTILE IRON PIPE

1-45° BEND -

- 2. IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF EXISTING SEWER LINE TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
- 3. USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED WATER MAIN AND SEAL ENDS OF CASING.
- 4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN WATER MAIN CASING AND SEWER.





SHALL NOT BLOCK NOR OBSTRUCT HYDRANT DRAIN.

### **FIRE HYDRANT DETAIL**

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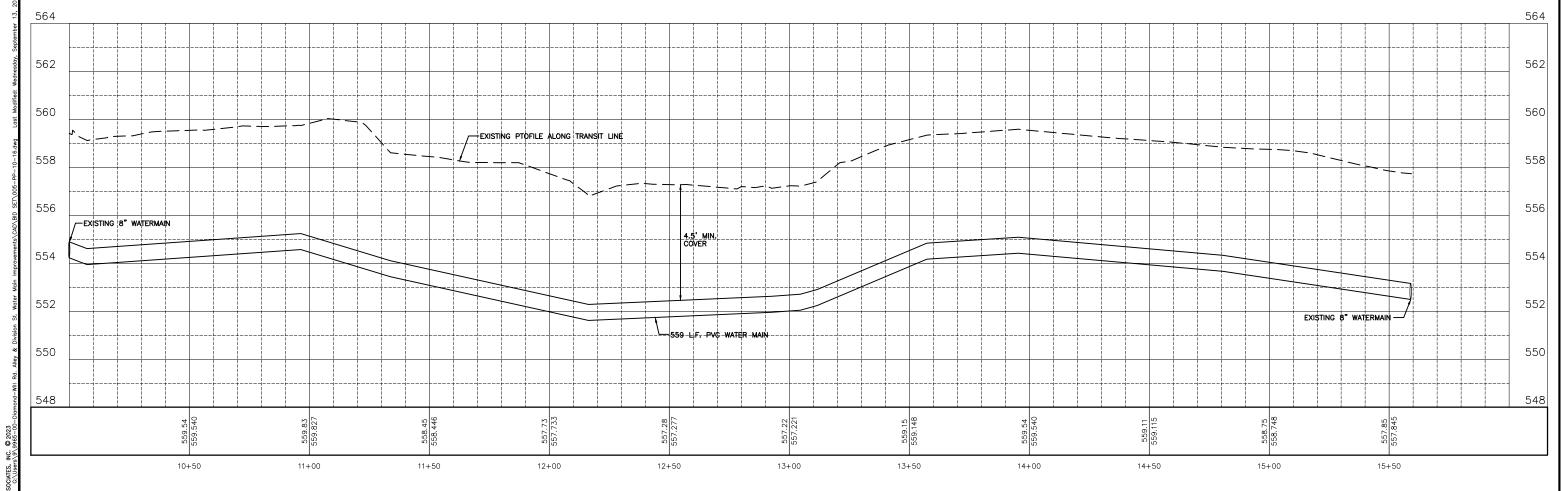
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DIAMOND WILL ROAD ALLEY AND **DIVISION STREET WATER MAIN IMPROVEMENTS** SEPTEMBER 2023

**DETAILS** 

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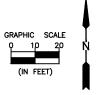
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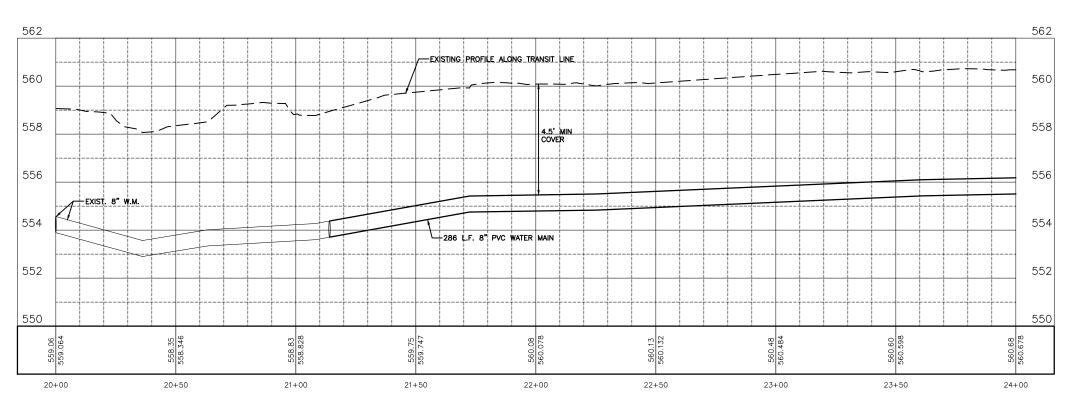
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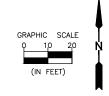
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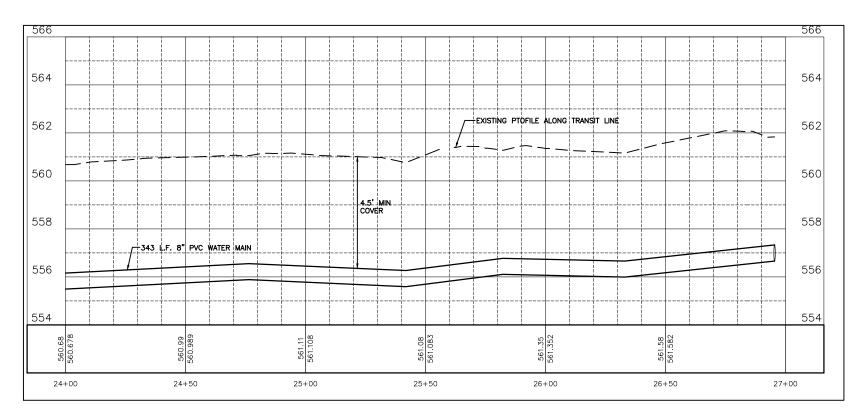
DIAMOND WILL ROAD ALLEY AND DIVISION STREET WATER MAIN IMPROVEMENTS SEPTEMBER 2023

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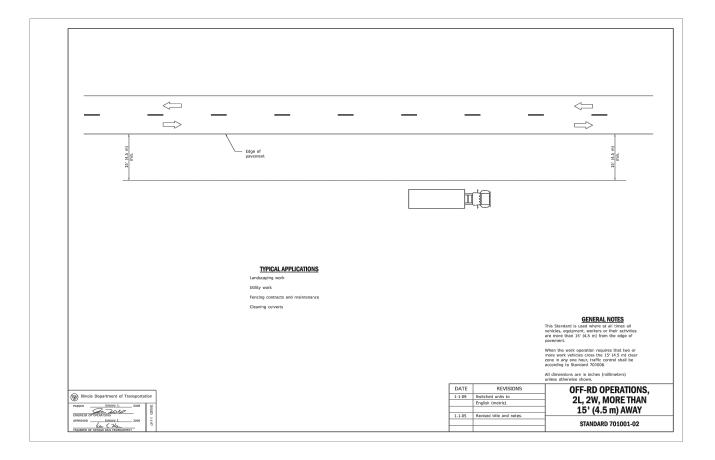
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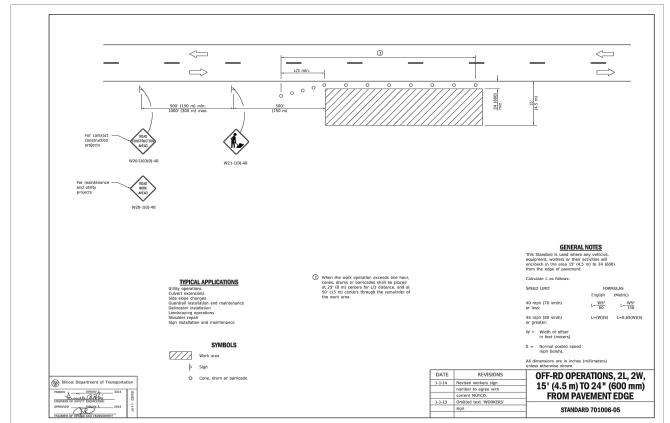
DIAMOND WILL ROAD ALLEY AND DIVISION STREET WATER MAIN IMPROVEMENTS **SEPTEMBER 2023** 

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DIAMOND WILL ROAD ALLEY AND DIVISION STREET WATER MAIN IMPROVEMENTS SEPTEMBER 2023

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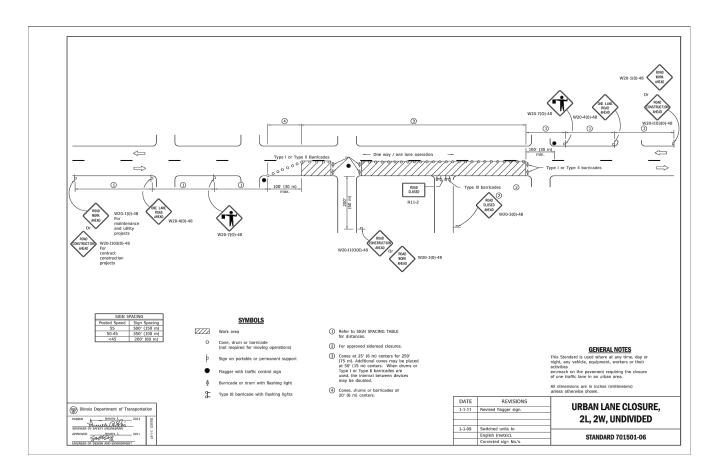
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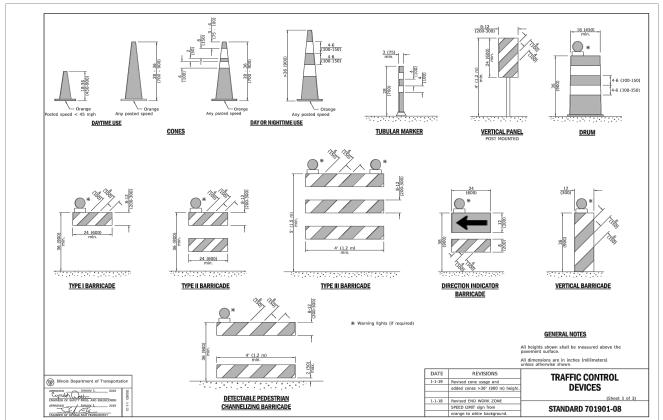
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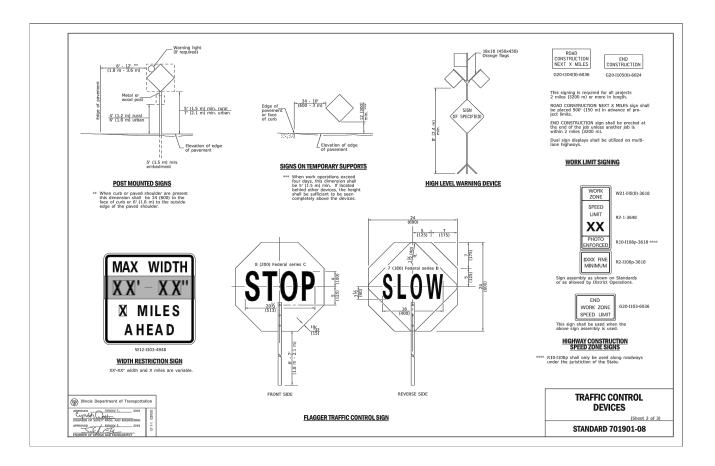


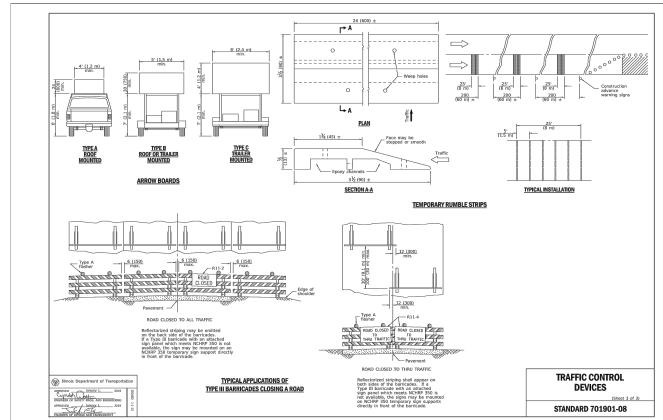


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