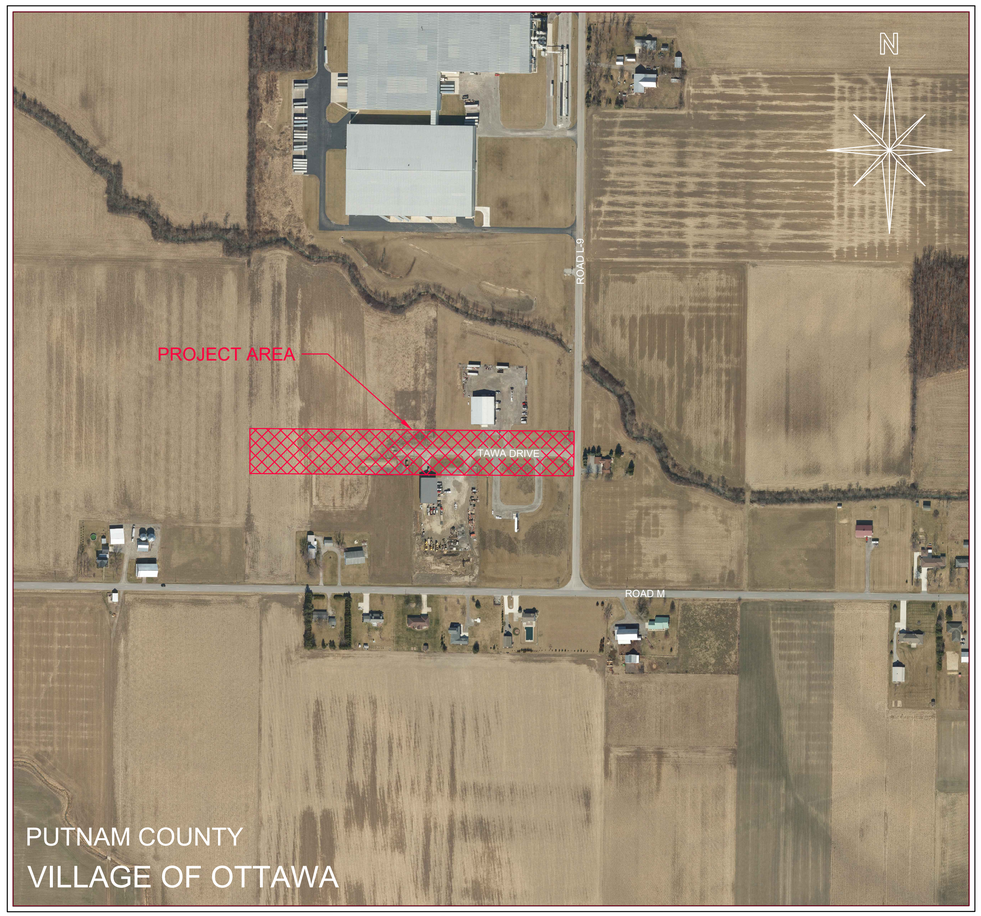
VILLAGE OF OTTAWA, OHIO
TAWA DRIVE EXTENSION

SHEET INDEX:



VICINITY MAP

APPROVED SIGNATURES

DATE	J. DEAN MEYER MAYOR, VILLAGE OF OTTAWA, OHIO
DATE	JULIE A. NIESE CLERK-TREASURER, VILLAGE OF OTTAWA, OHIO
DATE	GREGORY A. BOCKRATH P.E., P.S. BOCKRATH & ASSOCIATES ENGINEERING AND SURVEYING, LLC

2 WORKING DAYS BEFORE YOU DIG!
OHIO Utilities Protection SERVICE
www.oups.org
Call Before You Dig
CALL TOLL FREE: (800) 362-2764
NON-MEMBERS MUST BE CALLED DIRECTLY

NOTE:
ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

Bockrath & Associates
Engineering and Surveying, LLC
115 S. Fair Avenue, Suite A, Ottawa, Ohio 45875
Phone: 419.523.5789

3/25/26 FOR BIDS

TITLE SHEET
TAWA DRIVE EXTENSION
VILLAGE OF OTTAWA, OHIO, PUTNAM COUNTY, OHIO

REVISED

REVIEWED BY: GAB 10.31.24
DESIGNED BY: TR 10.31.24
JOB NUMBER: 24–135

GENERAL

IN GENERAL, ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION MATERIALS SPECIFICATIONS AND/OR THE OHIO ENVIRONMENTAL PROTECTION AGENCY. PARAGRAPH, ITEM AND SECTION NUMBERS SHOWN HEREIN AND ON THE DRAWINGS SHALL REFER TO SAID ODOT SPECIFICATIONS. ALL NOTES AND REQUIREMENTS CONTAINED HEREIN WHICH DO NOT REFER TO A PARTICULAR STATE SPECIFICATION SHALL BE CONSIDERED SUPPLEMENTARY TO SAID STATE SPECIFICATIONS.

REGULATIONS

ALL WORK MUST COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS IN ALL RESPECTS INCLUDING COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT.

BEGINNING CONSTRUCTION STAKING

LOCATION AND GRADE STAKES SHALL BE SET BY THE ENGINEER. THE CONTRACTOR WILL NOTIFY THE ENGINEER 48 HOURS PRIOR TO BEGINNING ACTUAL CONSTRUCTION AND WHEN REQUESTING ADDITIONAL STAKING.

PRIVATE PROPERTY

THE CONTRACTOR MUST AT ALL TIMES CONDUCT HIS OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY, UTILITY EASEMENTS OR WORK AGREEMENTS AS SHOWN ON THE PLANS.

MAINTAINING TRAFFIC

AT THE TIME OF CONSTRUCTION ALL PUBLIC THOROUGHFARES SHALL BE MAINTAINED AS TWO-WAY TRAFFIC, AT NO TIME SHALL TRAFFIC BE DETOURED. ALL WORK DESCRIBED ABOVE, INCLUDING ALL BARRICADES, LIGHTS, SIGNS, FLAGMEN, OR OTHER LABOR OR MATERIALS REQUIRED TO MAINTAIN SAFETY OR CONTROL TRAFFIC ACCORDING TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES IS INCLUDED FOR PAYMENT UNDER OTHER ITEM OF WORK.

MAINTAINING PUBLIC SAFETY

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND MAINTAINING ALL LIGHTS, SIGNS AND BARRICADES NECESSARY TO MAINTAIN PUBLIC SAFETY.

UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

LISTED BELOW ARE ALL THE UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS WITH THEIR RESPECTIVE OWNERS:

ELECTRIC:
PAULDING PUTNAM ELECTRIC
111 WALNUT STREET
COLUMBUS GROVE, OHIO
(419) 659-2860

NATURAL GAS:
DOMINION EAST OHIO GAS CO.
215 WEST MARKET STREET
LIMA, OHIO 45801
(419) 226-4700

WATER AND SEWER:
VILLAGE OF OTTAWA
WATER/SEWER DEPARTMENT
OTTAWA OHIO

TELEPHONE:
CENTURYLINK
122 SOUTH ELIZABETH STREET
LIMA, OHIO 45801
(800) 362-2764

CABLE TELEVISION:
TIME WARNER CABLE
3100 ELIDA ROAD
LIMA, OHIO 45801
(491) 331-1111

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S DATUM.

WORK LIMITS

THE WORK LIMITS FOR THIS PROJECT SHALL BE ASSUMED TO BE ALL AREAS WITHIN THE EXISTING RIGHT-OF-WAY UNLESS OTHERWISE NOTED.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEERS FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE. CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

SAFETY REQUIREMENTS

THE CONTRACTOR AND SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR TO INITIATE AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

PERMITS

THE OWNER WILL OBTAIN ALL NECESSARY PERMITS NECESSARY FOR THIS PROJECT.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE (TO INCLUDE BUT NOT LIMITED TO ALL LABOR, MATERIALS AND EQUIPMENT) FOR THE PERTINENT BID ITEM.

UNTREATED SEPTIC CONNECTIONS

THIS PLAN MAKES NO PROVISIONS FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY UNTREATED SEPTIC DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM. ANY PIPE CARRYING UNTREATED SEPTIC FLOW SHALL BE PLUGGED WITH CLASS C CONCRETE AT THE RIGHT-OF-WAY LINE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN THE CONTRACT PRICE (TO INCLUDE BUT NOT LIMITED TO ALL LABOR, MATERIALS AND EQUIPMENT) FOR ITEM 203 EXCAVATION.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDITIONS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE ENGINEER.

THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES (AND SUBSEQUENT UTILITY CROSSINGS) PRIOR TO THE CONSTRUCTION AND/OR PLACEMENT OF ANY STORM SEWER STRUCTURES OR CONDUIT. IF A CONFLICT IS ANTICIPATED THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR THEIR PROJECT REPRESENTATIVE IMMEDIATELY. UPON DISCOVERY AND ANALYSIS, THE ENGINEER MAY ADJUST THE FLOW LINE OR MODIFY THE DEPTH OF THE STRUCTURE, OR CONDUIT, TO MITIGATE THE DISCOVERED CONFLICT.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE ENGINEER.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND NO ADDITIONAL COST TO THE PROJECT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE (TO INCLUDE BUT NOT LIMITED TO LABOR, MATERIALS AND EQUIPMENT) SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 OR 604 ITEMS. NO ADDITIONAL COMPENSATION WILL BE AWARDED FOR ANY ADJUSTMENTS TO THE STORM SEWER CONDUIT OR STRUCTURES.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

EROSION CONTROL

THE OWNER SHALL BE RESPONSIBLE FOR THE DEVELOPMENT, AND APPROVAL OF THE EROSION CONTROL PLAN AND PERTINENT PERMITS APPLYING TO SAID PLAN. ALL COSTS ASSOCIATED WITH THE DEVELOPMENT, CREATION, SUBMISSION (OF PLANS AND PERMITS), AND FEES SHALL BE ASSUMED BY THE OWNER.

EROSION CONTROL ITEMS SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY. THE ENGINEER OR CONTROLLING AGENCY RESERVES THE RIGHT TO CHECK BEARING OF STREET SUBGRADE AND TEST DENSITY OF TRENCH BACKFILL FOR STORM, SANITARY AND WATERLINE SYSTEMS. THE CONTRACTOR IS TO NOTIFY THE ENGINEER 72 HOURS PRIOR TO COMMENCEMENT OF WORK.

MISCELLANEOUS WORK

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF THE SAME SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS RELATED ITEMS.

VILLAGE OF OTTAWA GENERAL NOTES

GENERAL

In general, all work and materials shall be in accordance with the Ohio Department of Transportation "Construction and Material Specifications" and/or the Ohio Environmental Protection Agency. Paragraph, item and section numbers shown herein and on the drawings shall refer to said O.D.O.T. specifications. All notes or requirements contained herein which do not refer to a particular state specification shall be considered supplementary to said state specifications.

REGULATIONS

All work must comply with applicable federal, state and local regulations in all respects, including compliance with the Occupational Health and Safety Act.

BEGINNING CONSTRUCTION & STAKING

Location and grade stakes shall be set by the Engineer. The Contractor will notify the Engineer 48 hours prior to beginning actual construction and when requesting additional staking.

PRIVATE PROPERTY

The Contractor must at all times conduct his operations within the owners property, public right-of-way, utility easements, or work agreements as shown on the plans.

MAINTAINING TRAFFIC

At the time of construction all public thoroughfares shall be maintained as two-way traffic, at no time shall traffic be detoured.

All work described above, including all barricades, lights, signs, flagmen, or other labor or materials required to safely maintain or control traffic according to the Ohio Manual of Uniform Traffic Control Devices is included for payment under other items of work.

TREES

No trees or shrubs will be disturbed unless shown in the plans or directed by the owner. Any trees or shrubs damaged without such permission will be repaired or replaced at the sole expense of the Contractor.

MAINTAINING PUBLIC SAFTETY

The Contrator shall be responsible for furnishing and maintaining all lights, signs and barricades necessary to maintain public safety.

VILLAGE OF OTTAWA STORM SEWER NOTES

GENERAL

All storm sewer construction shall adhere to ODOT specification Item Number 603 in the lastest revision of the Construction and Material Specifications manual of ODOT

CONDUIT MATERIAL

Storm Sewer Conduit shall be ADS N-12 Smooth Wall Corrugated Polyethylene Pipe with Soil-tight fittings, or equal. Minimum Trench width shall conform to manufacturer's specifications.

Minimum diameter of pipe shall be 12 inches, unless otherwise approved by the Village. (ie.) connecting existing smaller diameter storm sewer conduit.

BEDDING

All conduit shall be bedded with #57 or #67 aggregate (minimum 6 inches) and backfilled with the same to a minimum of 6 inches of cover over the top of the conduit or more as called for in the plans or as directed by the village.

EXISTING TILE HOOKUPS

All existing storm sewers currently connected to the an existing storm sewer shall be connected to the proposed storm sewer. Any drainage tile damaged by the contractor/developer shall be replaced by the contractor/developer to a condition equal to or better than its origianal condition.

All field or storm drains which are encountered during construction shall be provided with unobstructed outlets or plugged as approved and directed by the village.

VILLAGE OF OTTAWA WATER LINE NOTES

WATERLINE PIPE

All 8" lines shall be P.V.C. and meet AWWA specification C909, Class 150, SDR-18.

All 16"lines shall be P.V.C. and meet AWWA specification C900, Class 150, SDR-18.

Wherever an 18" vertical or 10' horizontal clearance cannot be maintained between a sanitary sewer main and a water line, the sanitary sewer will be constructed with concrete encasement or pressure rated pipe 10' on either side of the conflict. No entry or contact with sanitary manholes will be permitted by any line.

Maintain a 4 1/2 foot of cover minimum for all water lines, except as shown on the Plans.

Gate valves shall open left and conform to AWWA C-500; hydrants shall open right and conform to AWWA C-502, and meet the Village of Ottawa Standards.

Valve boxes shall be the adjustable type and be approved three piece 5 1/2" shaft, screw type or cast cover with cast iron pipe shell.

Water line fittings shall be ductile iron and meet AWWA specifications.

PIPE EMBEDMENT

Water line embedment shall include the material placed beneath (4" minimum), around, and, six (6) inches above the barrel of the new pipe. The material shall consist of No. 67 Stone, the cost of which shall be included in the price of the water line.

GRANULAR BACKFILL

Granular backfill material will conform to O.D.O.T. Item 411. Granular backfill will be used whenever the water line is located under or within two (2) feet of pavement, drives or parking areas. The materials shall be compacted in six (6) inch layers. The cost of all granular backfill will be per bid item, Granular Backfill.

TESTING AND STERILIZATION

Water line testing shall conform to AWWA C-605 and C-651 for pressure and sterilization testing, respectively. A 24-hour notification to the Village Utilities Director is required prior to any testing. Testing will be done under the supervision of the Engineer and the Village of Ottawa personnel.

Tracing tape is required to be buried along with the water main.

All cast iron and ductile iron fittings laid underground are required to be wrapped in protective polyethylene material.

All water service connections from existing wells must be disconnected and properly terminated prior to connecting the service line from the public main to the residence.

At the conclusion of the project, As-Built drawings are required and shall be submitted to the Engineer and the Village of Ottawa.

SANITARY SEWER PIPE

The following materials will be permitted for sanitary sewer pipe: PVC conforming to ASTM D-3034, SDR-35 with joints conforming to ASTM-3212.

SANITARY SEWER CONNECTIONS

Roof drains, foundation drains and other clean water connections to the sanitary sewer system are prohibited.

MANHOLES

Foundations shall be precise or poured in place concrete. Manhole sections shall have an internal diameter of forty-eight (48) inches, wall thickness five (5) inches and laying length in multiples of sixteen (16) inches meeting ASTM C-478 specification. Joints shall be of tongue and groove type to permit laying up with an O ring gasket, meeting ASTM C-443 specification. Manhole steps on sixteen (16) inch center to center spacing shall be cast into the section in such a manner as to provide a continuous vertical ladder the full depth of the manhole. The top or dome section shall be a straight side type, covering from the forty-eight (48) inch manhole a diameter to a twenty-four (24) inch opening. A concrete invert shall be provided in the bottom of each manhole having a thickness at the sewer line equal to the radius of the sewer pipe and sloping slightly upward toward the manhole walls. Manhole frames and covers shall be Neenah R-1782, or equal with Sanitary Sewer cast into the cover. Flexible rubber boots shall be cast in the walls at the factory and be used to connect pipes to manholes. SANITARY MANHOLE TESTING SHALL CONFORM TO ASTM C-1244.

PIPE EMBEDMENT

Pipe embedment shall include the material placed beneath (4 inch minimum), around and six (6) inches above the barrel of the new pipe. The material shall consist of No. 67 stone, the cost of which shall be included in the price of the pipe. If a trenching machine is used for excavation and a rounded trench bottom of undisturbed earth is provided with the adequate grade, the stone bedding may be omitted.

GRANULAR BACKFILL

Granular backfill material will conform to O.D.O.T. Item 411, Granular or Backfill will be used wherever the pipe or manhole is located under or within two (2) feet of pavement, drives or parking areas. The materials shall be compacted in six (6) inch layers. The Cost of all granular backfill will be per bid item Granular Backfill.

LEAKAGE TESTING

The Contractor will test all new sanitary sewer lines after backfilling and settling of the trenches has occurred. Testing shall be under the supervision of the Engineer.

The Owner may choose the exact method, time and location of each individual test, but the entire system will be tested prior to acceptance.

The Contractor will furnish all equipment and labor required for the test. The Contractor may conduct his own testing prior to backfilling, if he desires, but the results are only for his information and will not be accepted by the Engineer.

If test requirements are not met, or if there is any visible leakage in manholes regardless of test results, the Contractor will make the necessary repairs and retest the line without cost to the Owner.

All testing of sewer lines will be done using a low pressure air test, unless otherwise ordered by the Engineer.

LOW PRESSURE AIR TEST SHALL CONFORM TO ASTM F-1417 FOR PLASTIC PIPE

Pressure gauges will have minimum graduations of 0.1 PSI and an accuracy of +/- 0.04 PSI. Adjustments for groundwater pressure will be made by adding 0.433 PSI for each foot of groundwater above the pipe invert and will be confirmed by the Engineer.

The line will then be pressurized to about 4.0 PSI plus any adjustment for ground water and held for two minutes. The air supply will then be shut off and the time between the pressure dropping from 3.5 to 2.5 PSI G (or equivalent for ground water presence) will be measured.

The permissible time allocation for the 1.0 PSI G pressure drop will be calculated of the basis of the diameter and length of main sewer tested. No adjustment shall be made for service connections included in the test.

The air test for the test section shall be considered acceptable if the time elapsed for the 1.0 PSI G pressure drop is at least the time, in minutes, indicated in the following table:

LENGTH OF MAIN LINE TESTED

Diameter	100'	200'	300'	400'
6" or 8"	4	4	4	5.25
10"	4.75	4.75	6	8

Time for intermediate lengths is to be interpolated

Safety precautions must be observed by the Contractor during air testing, recognizing the danger from plugs blowing out. No one will be allowed in the manholes during the testing.

If an infiltration test is ordered, the minimum allowable head is four feet. If this head cannot be met with existing groundwater, the trench will be bulkheaded and flooded by the Contractor. The v-notch weir or other measuring device must be approved by the Engineer.

All pipe must meet the infiltration requirement of 100 gallons per inch diameter per mile, regardless of the method of testing used. The Engineer may order infiltration tests of sections of pipe already tested by other methods if he deems it necessary. No visible leakage will be permitted, regardless of testing.

Payment for testing is included with payment for the pipe installation.

DEFLECTION TESTING

PVC pipe must be tested for deflection after trench setline has occurred, 30 days minimum after backfilling.

Deflection tests can be run by use of electronic equipment approved by the Engineer. If such equipment is not available, the deflection test can run using rigid balls or mandrels having diameters equal to 95% of the inside diameter of the undeformed pipes.

Mandrels must have an odd number of fins. No mandrel will have less than nine fins. Mechanical pulling devices are not allowed for either mandrel or rigid balls.

The Engineer may require additional testing for deflection before expiration of the one year maintenance bond. This test is in addition to that conducted prior to conditional acceptance. Conduit deflection tests must be conducted prior to conditional acceptance. Conduit deflected more than 5 percent must be corrected to the satisfaction of the Engineer, at the expense of the Contractor.

Payment for deflection testing is included in the payment for the pipe.

SANITARY SEWER FITTINGS

All cost of the wyes, tees, bends and plugs required in the main lines sanitary sewer or in the house sewer laterals shall be included in the bid for each pertinent sanitary sewer fitting. All sewer connections shall be made with manufactured fittings.

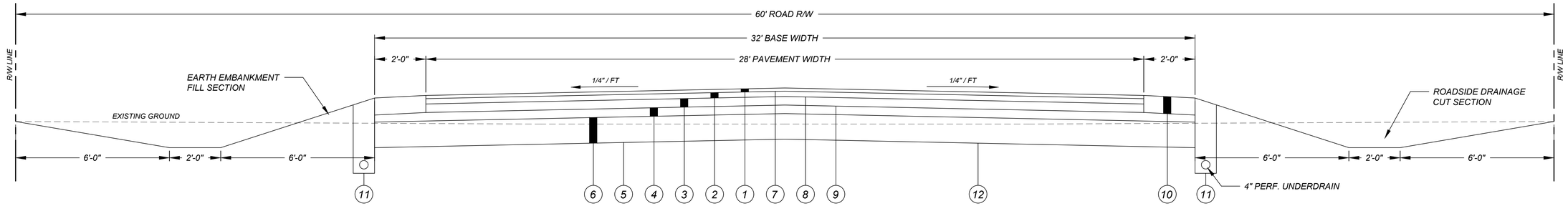
Bockrath & Associates
Engineering and Surveying, LLC
115 S. Fair Avenue, Suite A, Ottawa, Ohio 45875
Phone: 419.523.5789

3/25/26 FOR BIDS

GENERAL NOTES
TAWA DRIVE EXTENSION
VILLAGE OF OTTAWA, OHIO, PUTNAM COUNTY, OHIO

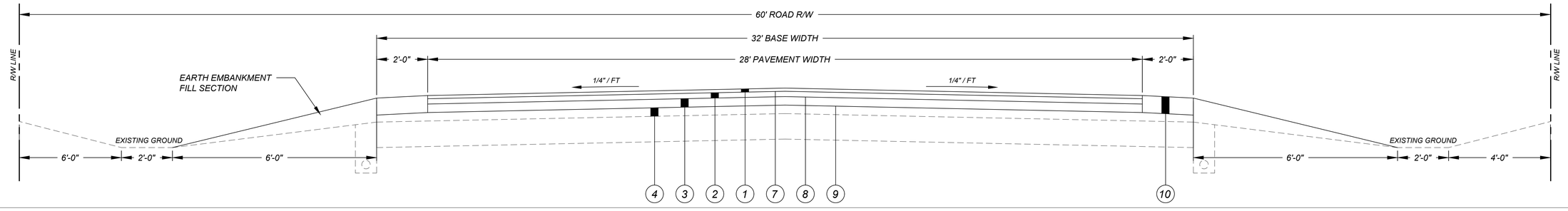
REVISED	

REVIEWED BY: GAB 10.31.24
DESIGNED BY: TR 10.31.24
JOB NUMBER: 24-135



TYPICAL SECTION

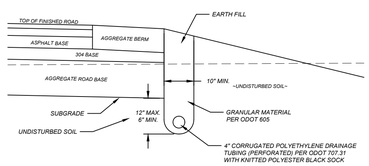
STA. 2+46.11 TO STA. 6+00



TYPICAL SECTION

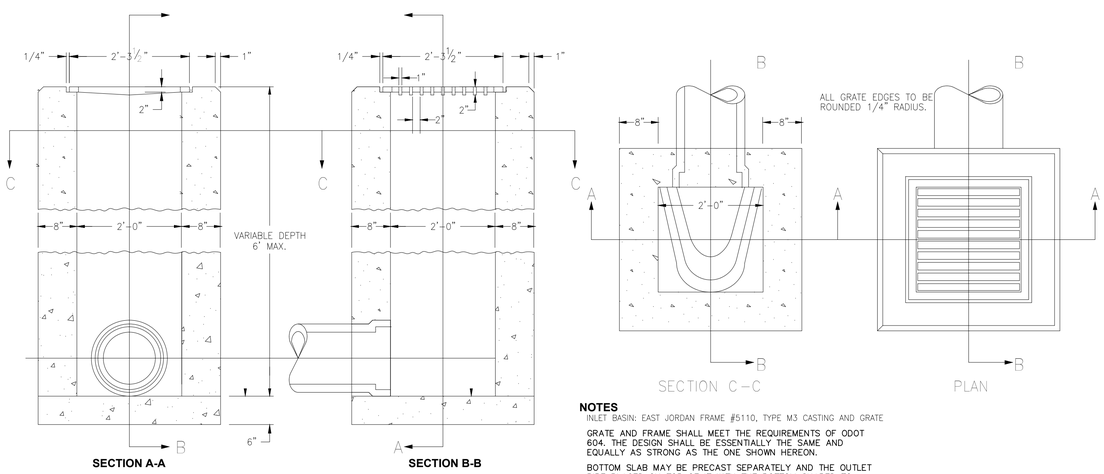
STA. 6+00 TO STA. 13+00

1. ITEM 448 - 1-1/2" ASPHALT CONCRETE, SURFACE TYPE I, PG 64-22
2. ITEM 448 - 2-1/2" ASPHALT CONCRETE, INTERMEDIATE TYPE II, PG 64-22
3. ITEM 301 - 4" ASPHALT BASE, PG 64-22
4. ITEM 304 - 4" AGGREGATE BASE
5. ITEM 204 - SUBGRADE COMPACTION
6. ITEM 304 SPEC - 12" GRADED CRUSHED CONCRETE BASE
7. ITEM 407 - TACK COAT SURFACE (0.04 GAL./SY)
8. ITEM 407 - TACK COAT INTERMEDIATE (0.075 GAL./SY)
9. ITEM 408 PRIME COAT (0.40 GAL./SY)
10. ITEM 411 - 8" AGGREGATE BERM
11. ITEM 605 - 4" SHALLOW UNDERDRAIN
12. MIRAFI 500X OR APPROVED EQUAL



UNDERDRAIN DETAIL

NON-CURBED ROADWAY



NOTES

INLET BASIN: EAST JORDAN FRAME #5110, TYPE M3 CASTING AND GRATE

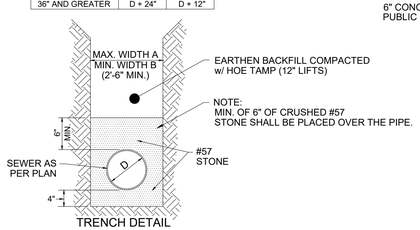
GRATE AND FRAME SHALL MEET THE REQUIREMENTS OF ODOT 604. THE DESIGN SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THE ONE SHOWN HEREON.

BOTTOM SLAB MAY BE PRECAST SEPARATELY AND THE OUTLET PIPE PLACED ON TOP OF IT WITH THE BOTTOM SHAPED TO DRAIN.

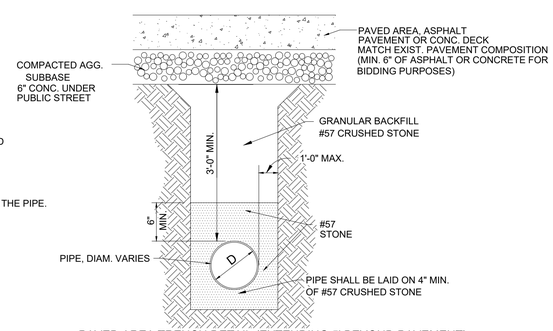
CONTRACTOR MAY USE PRECAST CATCH BASINS WITH KNOCK-OUT PANELS.

CATCH BASIN 2-2-B

PIPE SIZE	A	B
UP TO 33"	D + 16"	D + 12"
36" AND GREATER	D + 24"	D + 12"



TRENCH DETAIL



PAVED AREA TRENCH DETAIL (EXTENDING 5' BEYOND PAVEMENT)

TRENCH DETAILS

Bockrath & Associates
Engineering and Surveying, LLC
115 S. Fair Avenue, Suite A, Ottawa, Ohio 45875
Phone: 419.523.5789

3/25/26 FOR BIDS

TYPICAL SECTION
TAWA DRIVE EXTENSION
VILLAGE OF OTTAWA, OHIO, PUTNAM COUNTY, OHIO

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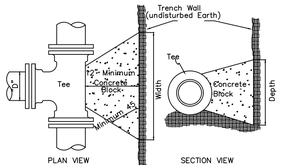
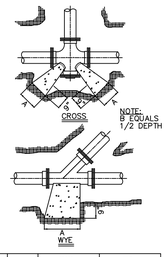


PLAN VIEW SECTION VIEW

"D"	WIDTH	DEPTH
4"	2'-6"	1'-0"
6"	3'-3"	1'-6"
8"	4'-3"	2'-0"
10"	5'-3"	2'-6"
12"	6'-0"	3'-0"
16"	8'-0"	4'-0"
20"	9'-9"	5'-0"
24"	11'-6"	6'-0"

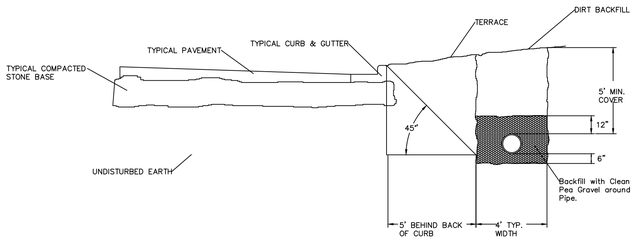
NOTES:
Concrete shall be kept a sufficient distance from joint for removel of all joints accessories including bolts and shall be of a mix not leaner than one part cement to two and one half parts sand and five parts stone and having a compressive strenght of not less than 2000 psi after 28 days.



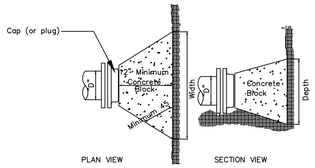
TYPE	SIZE	CROSS		WYE	
		A	B	A	B
2000 PSF SOIL	6"	11"	13"	10"	12"
	8"	15"	17"	14"	16"
	10"	18"	22"	15"	20"
	12"	21"	26"	18"	23"
	14"	24"	30"	21"	27"
	16"	28"	33"	24"	30"
	20"	33"	42"	27"	43"
	24"	40"	46"	32"	50"

NOTE: Based on 150 psi static pressure plus AWWA water hammer.
All bearing surfaces to be carried to undisturbed ground.

OTTAWA CONSTRUCTION STANDARDS, BLOCKING DETAILS



OTTAWA CONSTRUCTION STANDARDS, TYPICAL BACKFILL DETAIL

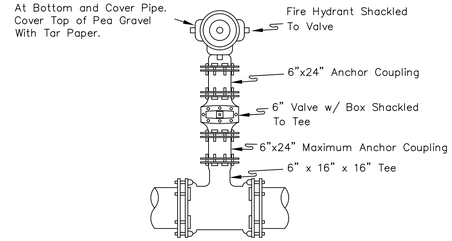


PLAN VIEW SECTION VIEW

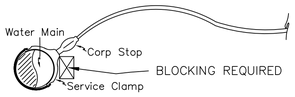
"D"	WIDTH	DEPTH
4"	2'-6"	1'-0"
6"	3'-3"	1'-6"
8"	4'-3"	2'-0"
10"	5'-3"	2'-6"
12"	6'-0"	3'-0"
16"	8'-0"	4'-0"
20"	9'-9"	5'-0"
24"	11'-6"	6'-0"

NOTES:
Concrete shall be kept a sufficient distance from joint for removel of all joints accessories including bolts and shall be of a mix not leaner than one part cement to two and one half parts sand and five parts stone and having a compressive strenght of not less than 2000 psi after 28 days.

WATERLINE CAP DETAIL



OTTAWA CONSTRUCTION STANDARDS, FIRE HYDRANT ASSEMBLY



1. A service clamp shall be used for connection onto the main.
2. The corporation stop shall be positioned at a 45\176 angle to the horizontal above the spring line, unless otherwise specified.
3. An upward bend shall be made in the service pipe, as shown above to protect the service pipe when the excavation settles.
4. When live tapping PVC water mains, a shell cutter shall be used & the PVC coupon must be removed with the cutter.
5. Only approved materials shall be used in the installation.
6. The excavation shall be filled with Clean Pea Gravel to a point 6" above the upward bend in the service pipe.

OTTAWA CONSTRUCTION STANDARDS, SERVICE BRANCH CONNECTION TO WATER MAIN

Bockrath & Associates
Engineering and Surveying, LLC
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Phone: 419.523.5789

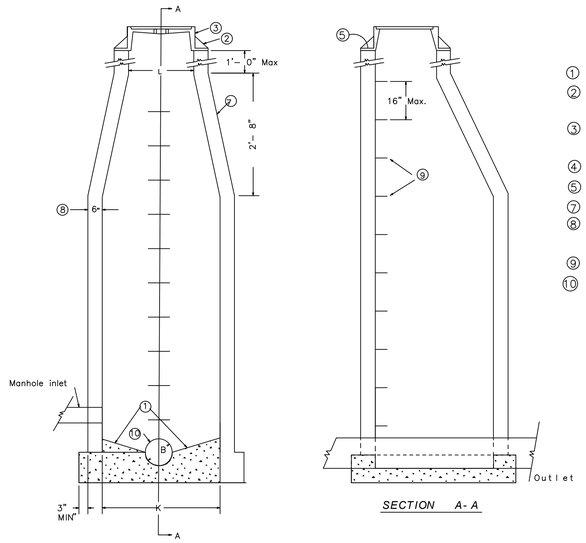
3/25/26 FOR BIDS

DETAILS - WATER LINE
TAWA DRIVE EXTENSION
VILLAGE OF OTTAWA, OHIO, PUTNAM COUNTY, OHIO

REVISED	

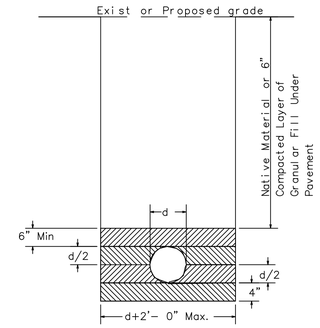
REVIEWED BY: GAB 10.31.24
DESIGNED BY: TR 10.31.24
JOB NUMBER: 24-135

MANHOLE DETAIL



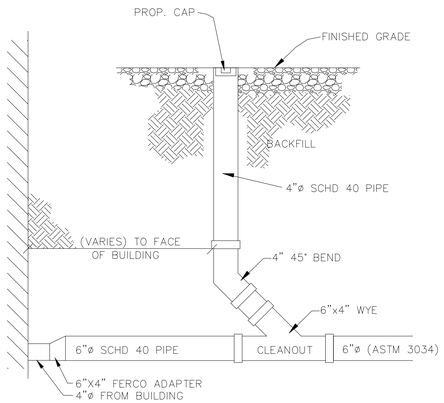
① Alternate methods of construction.
② Precast adjusting rings to set frame and cover at finish grade. Adjust 1'– 0" maximum.
③ Standard manhole castings – Neenah R–1782, without perforation. Lid shall be marked "SANITARY".
④ Minimum of 5" concrete encasement.
⑤ Conseal CS–102 Sealant or Equivalent
⑦ Height = 2'– 8" for 4' diameter manhole.
⑧ Precast manhole sections shall be A.S.T.M. C–478 with O–ring joints conforming to A.S.T.M. C–443.
⑨ Steps shall be Neenah R–1980–C or equal.
⑩ Rubber water tight boot to be cast into manhole by manufacturer.

OTTAWA CONSTRUCTION STANDARDS.
MANHOLE DETAIL (PRE-CAST CONCRETE MANHOLE CONSTRUCTION)



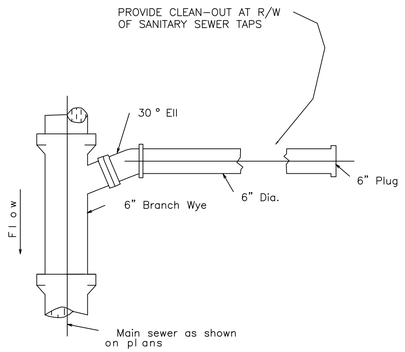
Bedding and backfill material shall be placed in compacted layers as indicated and shall be coarse sand or gravel not exceeding 3/4" in size.

OTTAWA CONSTRUCTION STANDARDS.
SANITARY SEWER BEDDING & BACKFILL

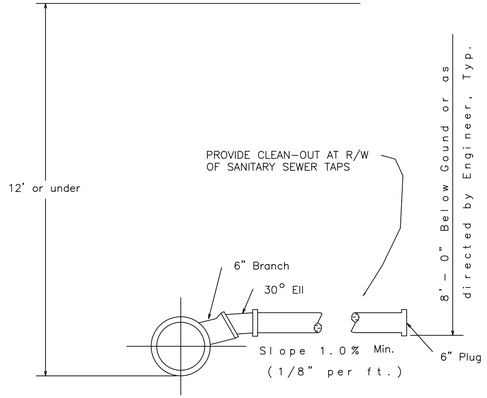


ALL JOINTS SHALL BE WATER TIGHT

CLEANOUT DETAIL



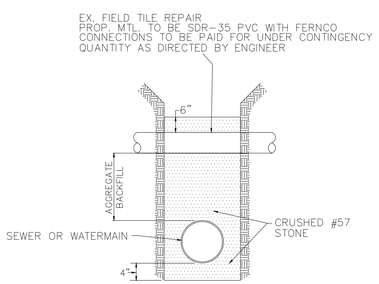
PLAN



SECTION

To Be Used Where Main Sewers Are 12' or Less in Depth.

OTTAWA CONSTRUCTION STANDARDS.
TYPE -1 HOUSE CONNECTION (MODIFIED)



STORM SEWER TRENCH AT FIELD TILE CROSSING

NOT TO SCALE

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115 S. Fair Avenue, Suite A, Ottawa, Ohio 45875
Phone: 419.523.5789

3/25/26 FOR BIDS

DETAILS - SANITARY SEWER

TAWA DRIVE EXTENSION

VILLAGE OF OTTAWA, OHIO, PUTNAM COUNTY, OHIO

REVISED

REVIEWED BY: GAB 10.31.24
DESIGNED BY: TR 10.31.24
JOB NUMBER: 24–135

2.491 ACRES (SOUTH OF TAWA DRIVE)

8.377 ACRES (NORTH OF TAWA DRIVE)

VILLAGE OF OTTAWA
6.91 ACRES
PN. 32-101640.0000

VILLAGE OF OTTAWA
N 00°48' 06" E 229.40'
OTTAWA TWP.

FLANDERS DAVID WAYNE & REBECCA A
(PARCEL NO. 1)
1.524 ACRES
PN. 30-064080.0200

OTTAWA TWP.
N 00°48'06" E 229.40'
199.40'
VILLAGE OF OTTAWA

INLOT 1686
3.674 ACRES
HOHENBRINK EXCAVATING, LLC
PN. 32-357000.0000

INLOT 1685
3.305 ACRES
PT. PN. 32-101620.0000
PT. PN. 32-101630.0000

INLOT 1627
3.000 ACRES
PB 85 - PG 220
HOHENBRINK EXCAVATING, LLC
PN. 32-309000.0000

INLOT 1613
4.000 ACRES
PB 84 - PG 39
LAKESIDE PROPANE, LLC
PN. 32-295000.0000

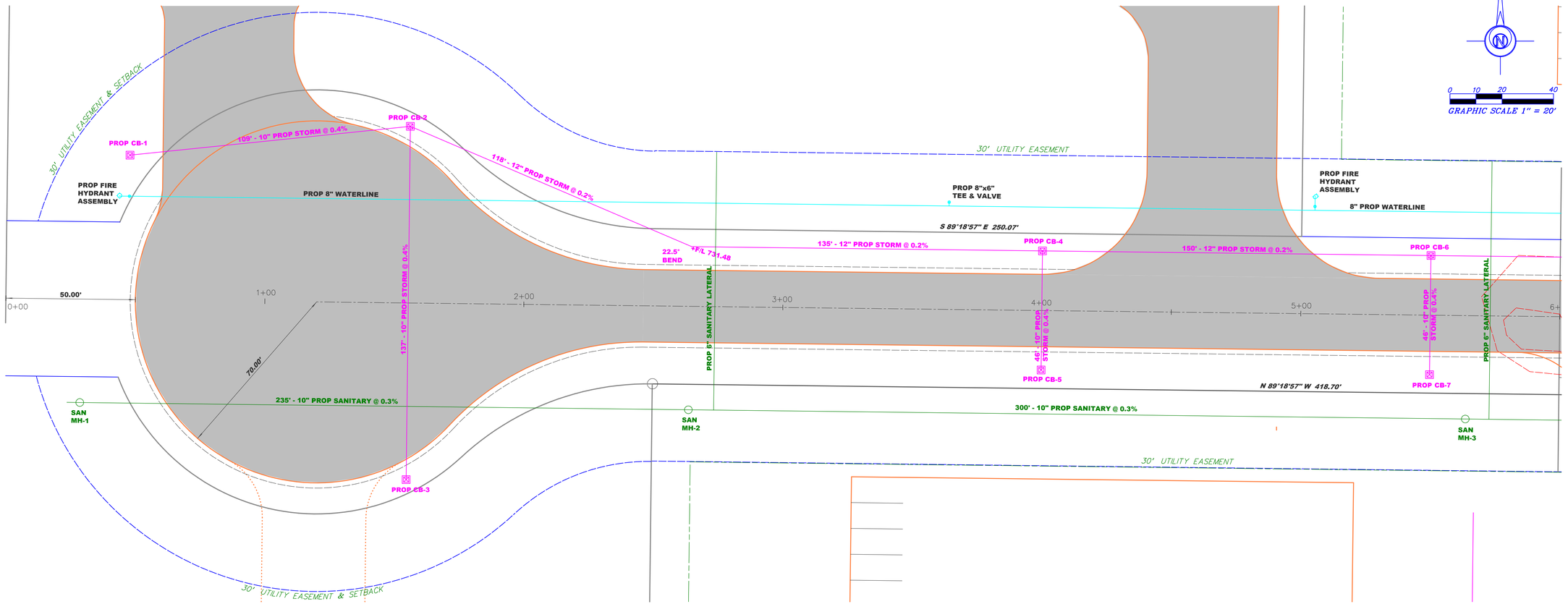
INLOT 1612
5.998 ACRES
PB 84 - PG 3
BRAD STOEPFEL REAL ESTATE HOLDINGS LLC
PN. 32-294000.0000

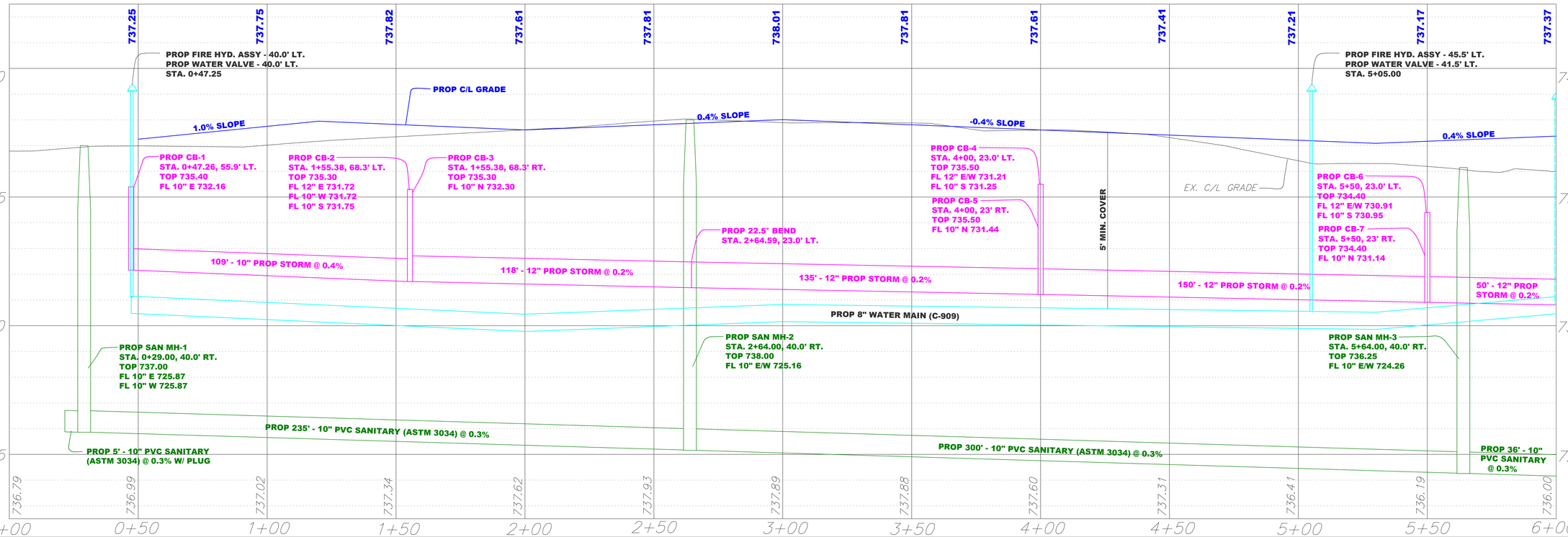
1.228 ACRES - DEDICATED AS PUBLIC R/W

PROPOSED STONE
PROPOSED BUILDING
5' WALK
EXISTING BUILDING
~STONE~

CORP LINE
SOUTH LINE, SS T.4, S2G. 34
C/L ROAD 'M'
PAVEMENT EDGE
DITCH
WATERLINE
SANITARY
OH ELECTRIC
C/L DITCH

496.37'
781.91'
N 00°40'47" E 357.47'
297.47'
N 00°40'47" E 576.59'
S 00°40'47" W 527.73'
497.73'
S 00°40' 47" W 528.27'
498.27'
S 00°40'47" W 648.04'
588.04'
N 89°19'54" W 177.38'
177.42'
N 89°11'54" W 262.41'
262.41'
S 89°11'54" E 289.31'
S 89°18'57" E 600.07'
N 89°18'57" W 600.07'
416.70'
250.00'
428.84'
416.80'
S 61°10'05" E 225.58'
N 63°10'35" E 122.39'
S 61°50'07" E 24.08'
S 89°11'54" E 262.41'
60.00'
30.00'
167.80'
210.00'
260.07'
142.40'
75.00'
50.00'
625.00'
625.00'
625





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3/25/26 FOR BIDS

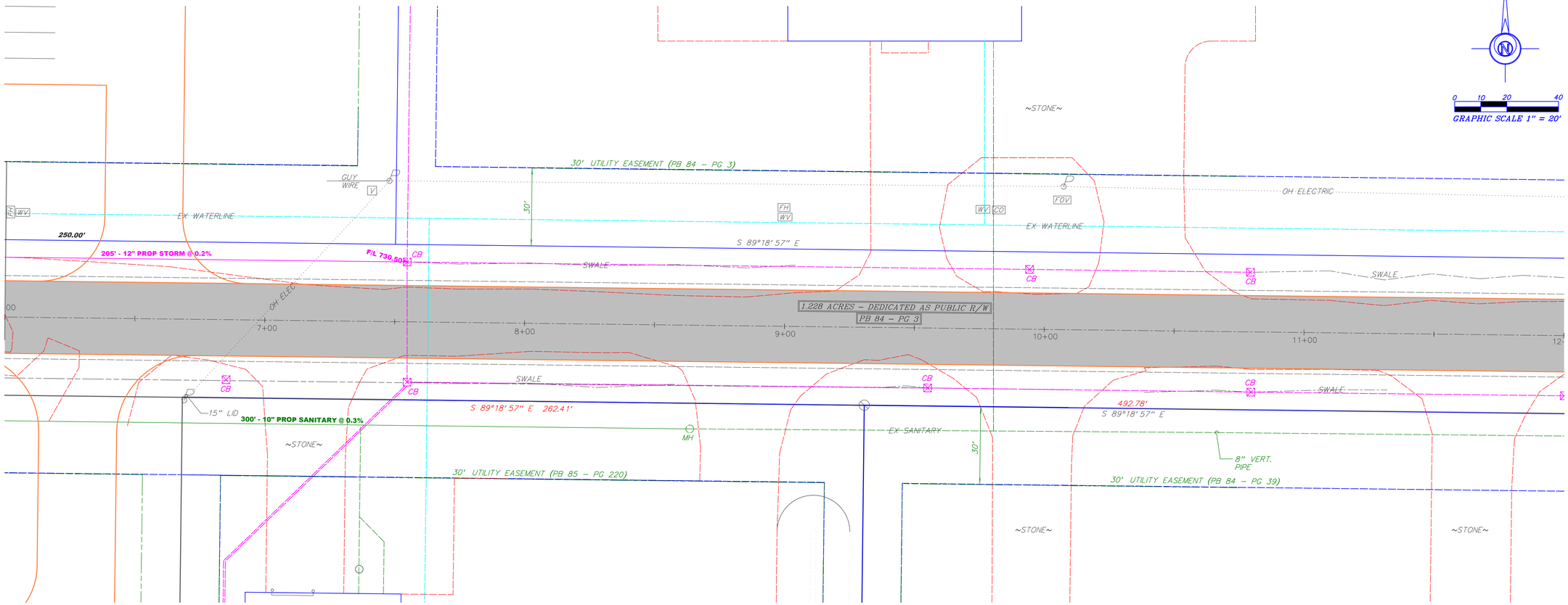
PLAN & PROFILE
TAWA DRIVE EXTENSION
VILLAGE OF OTTAWA, PUTNAM COUNTY, OHIO

SCALE 1" = 20'

JOB #24-135

DRAWN BY KMB 10/25/24

SHEET - 7 OF 10 SHEETS



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3/25/26 FOR BIDS

PLAN & PROFILE
TAWA DRIVE EXTENSION
VILLAGE OF OTTAWA, PUTNAM COUNTY, OHIO

SCALE 1" = 20'

JOB #24–135

DRAWN BY KMB 10/25/24

SHEET – 8 OF 10 SHEETS

Station 3+00
117.7 SF – CUT
0.0 SF – FILL

Station 2+46.11
128.7 SF – CUT
0.0 SF – FILL

Station 2+00
177.0 SF – CUT
0.0 SF – FILL

Station 1+50
312.5 SF – CUT
0.0 SF – FILL

Station 1+20
287.0 SF – CUT
2.1 SF – FILL

Station 1+00
294.2 SF – CUT
0.0 SF – FILL

Station 0+50
62.1 SF – CUT
0.9 SF – FILL

Station 6+00
51.5 SF – CUT
5.3 SF – FILL

Station 5+50
77.1 SF – CUT
1.0 SF – FILL

Station 5+00
75.0 SF – CUT
1.2 SF – FILL

Station 4+50
118.1 SF – CUT
0.0 SF – FILL

Station 4+00
123.5 SF – CUT
0.0 SF – FILL

Station 3+50
127.6 SF – CUT
0.0 SF – FILL

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3/25/26 FOR BIDS

Cross Sections

TAWA DRIVE - STATIONS 0+50 TO 6+00

VILLAGE OF OTTAWA, PUTNAM COUNTY, OHIO

SCALE: 1"=20' (11x17)
SCALE: 1"=10' (24x36)

REVISED

DESIGNED BY KMB 10/30/24

Station 9+50
00.0 SF – CUT
5.0 SF – FILL

Station 9+00
00.0 SF – CUT
5.1 SF – FILL

Station 12+50
00.0 SF – CUT
10.8 SF – FILL

Station 8+50
00.0 SF – CUT
10.6 SF – FILL

Station 12+00
00.0 SF – CUT
8.7 SF – FILL

Station 8+00
00.0 SF – CUT
11.1 SF – FILL

Station 11+50
00.0 SF – CUT
6.7 SF – FILL

Station 7+50
00.0 SF – CUT
9.6 SF – FILL

Station 11+00
00.0 SF – CUT
11.7 SF – FILL

Station 7+00
8.5 SF – CUT
2.5 SF – FILL

Station 10+50
00.0 SF – CUT
4.2 SF – FILL

Station 6+50
7.0 SF – CUT
4.8 SF – FILL

Station 10+00
00.0 SF – CUT
6.8 SF – FILL

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3/25/26 FOR BIDS

Cross Sections

TAWA DRIVE - STATIONS 0+50 TO 6+00

VILLAGE OF OTTAWA, PUTNAM COUNTY, OHIO

SCALE: 1"=20' (11x17)
SCALE: 1"=10' (24x36)

REVISED

DESIGNED BY KMB 10/30/24