

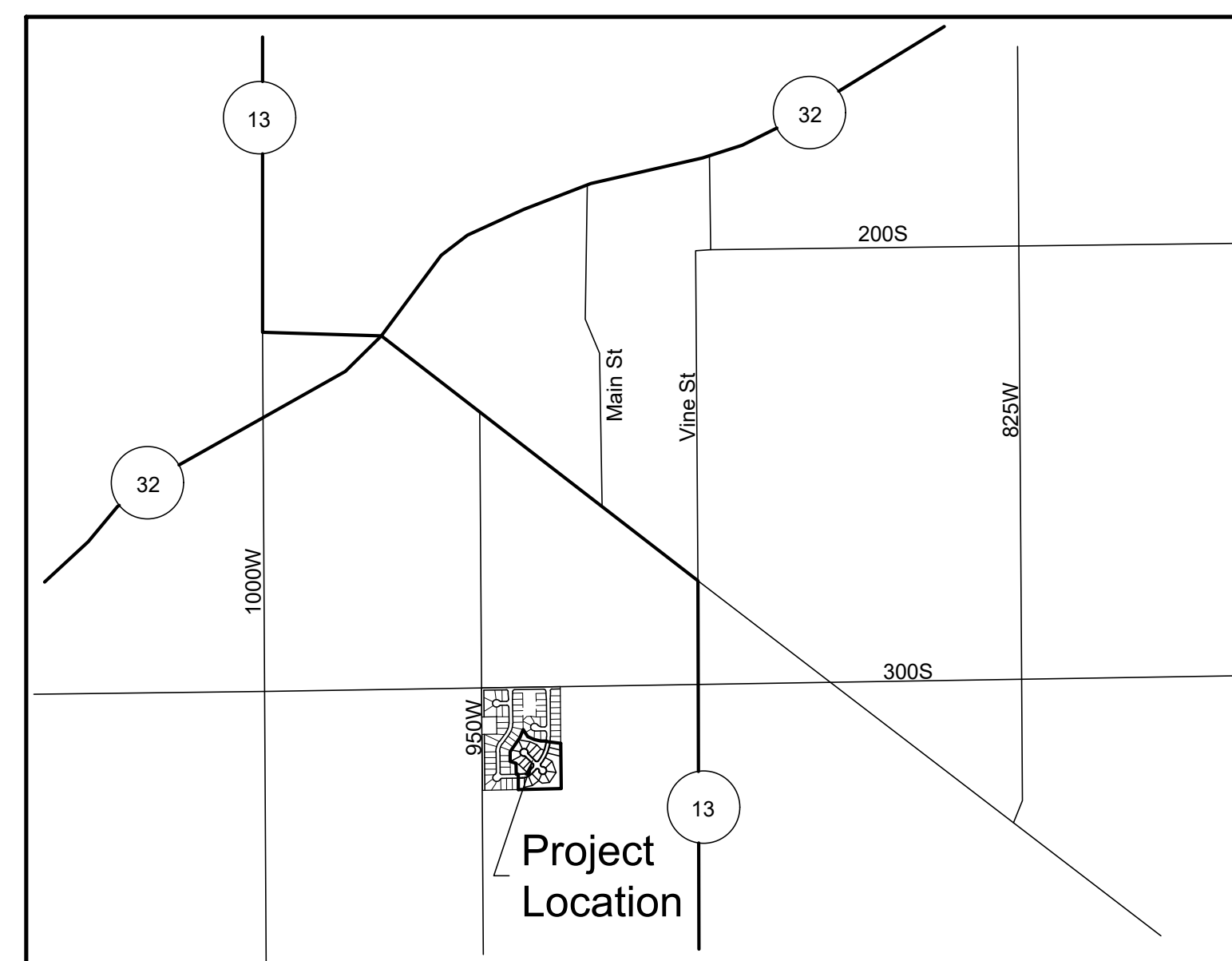
# MONTGOMERY FARMS, PHASE 4

*A subdivision of the Northwest Quarter of the Northeast Quarter of Section 33,  
Township 19 North, Range 6 East, Madison County, Indiana.*

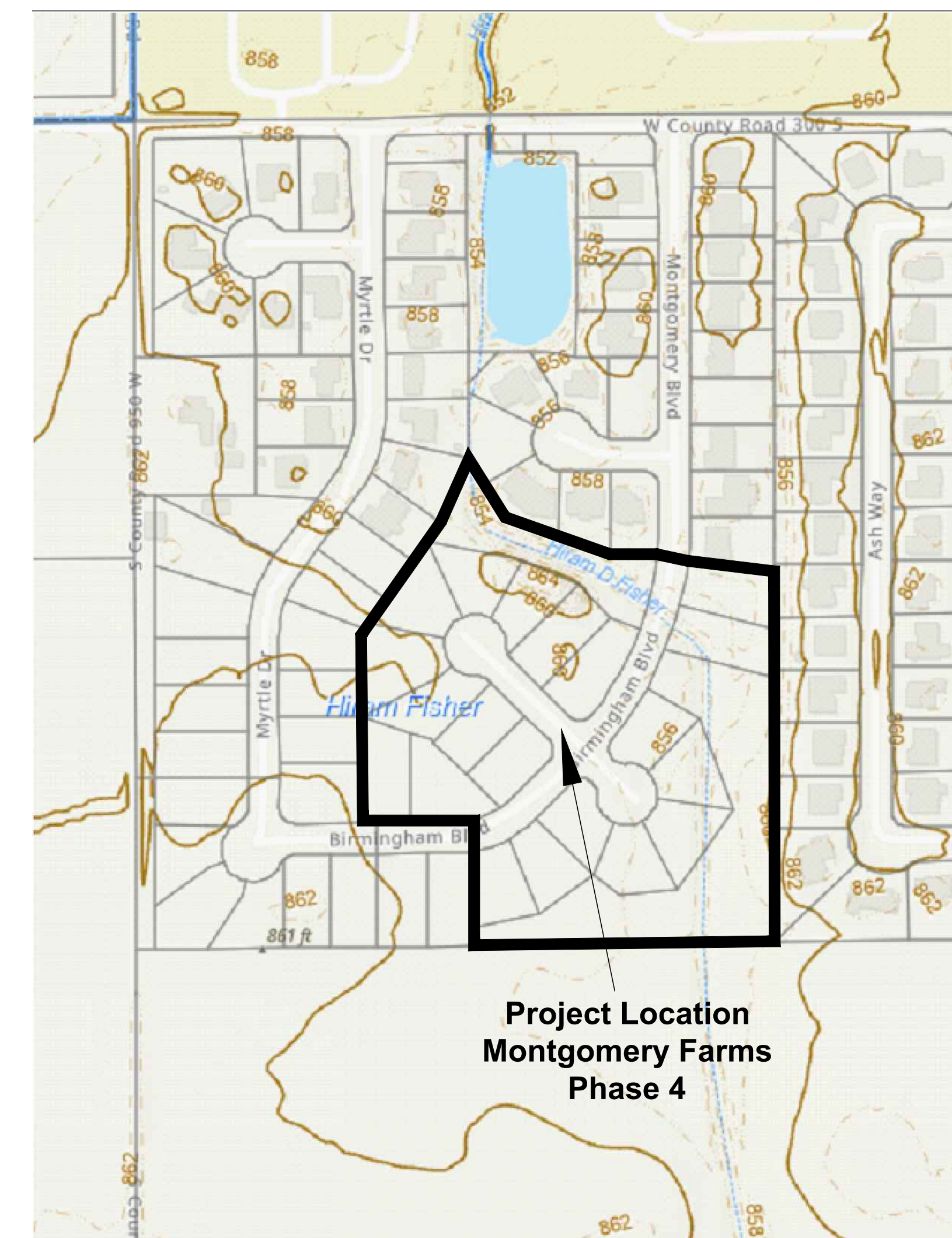
*Developer:  
Oakmont Development Co. II, LLC  
9601 Coldwater Road  
Fort Wayne, IN 46825  
Tel: 260/489-2000*

*Surveyor - Planner:  
Sauer Land Surveying, Inc.  
14033 Illinois Road, Suite C  
Fort Wayne, IN 46814  
Tel: 260/469-3300*

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Location Map



Project Location  
Montgomery Farms  
Phase 4

Statement of Proposed Land Use:

This project proposes to finishing the prior platted Montgomery Farms Subdivision with Phase 4, consisting of 20 residential parcels and a wet storm water control pond (retention pond). The project will include the looping of the roadway for the existing subdivision.

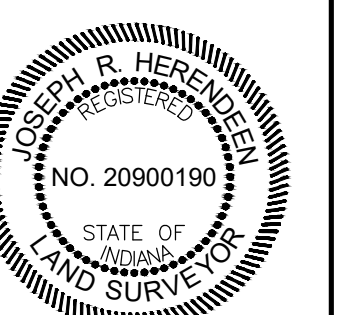
Contacts:

Public Utilities, Streets & Planning:  
Town of Lapel  
825 North Main Street  
Lapel, IN 46051  
(765) 534-3157

Site Drainage, SWPPP & Rule 5:  
Madison County Surveyor  
16 East 9th Street  
Anderson, IN 46016  
(765) 641-9638

HOLEY MOLEY SAYS.  
"DON'T  
DIG  
BLIND"  
1-800-382-5544  
CALL TOLL FREE  
1-800-428-5200

*Joseph D. Fisher*  
Indiana Professional Surveyor







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 1-800-428-5200

*Scott A. Strahely*  
 Indiana Professional Engineer



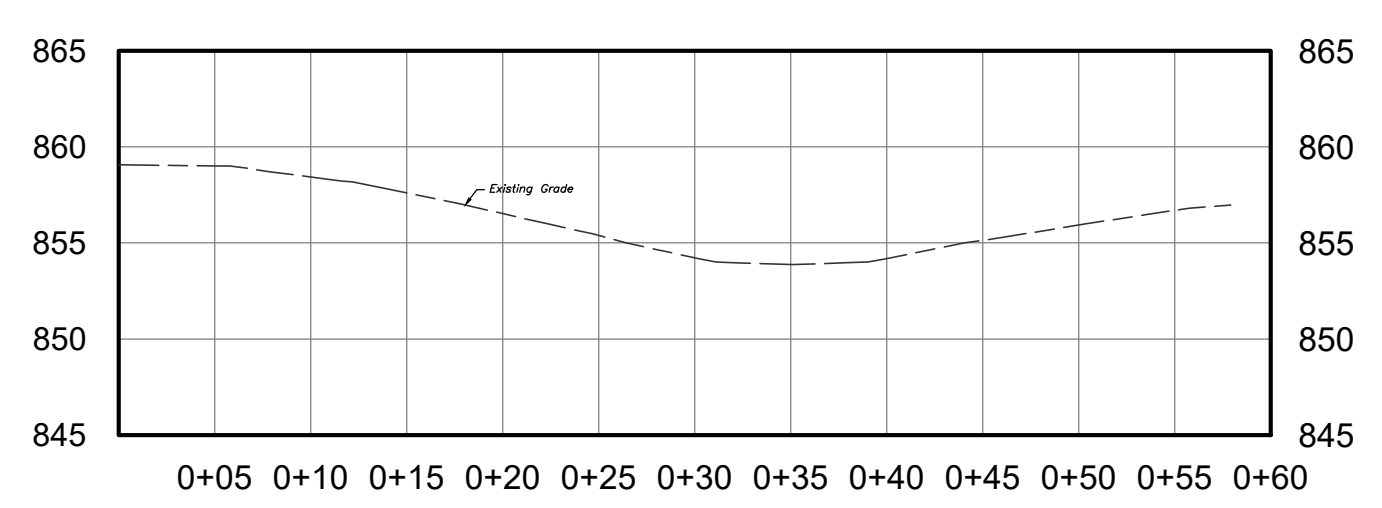
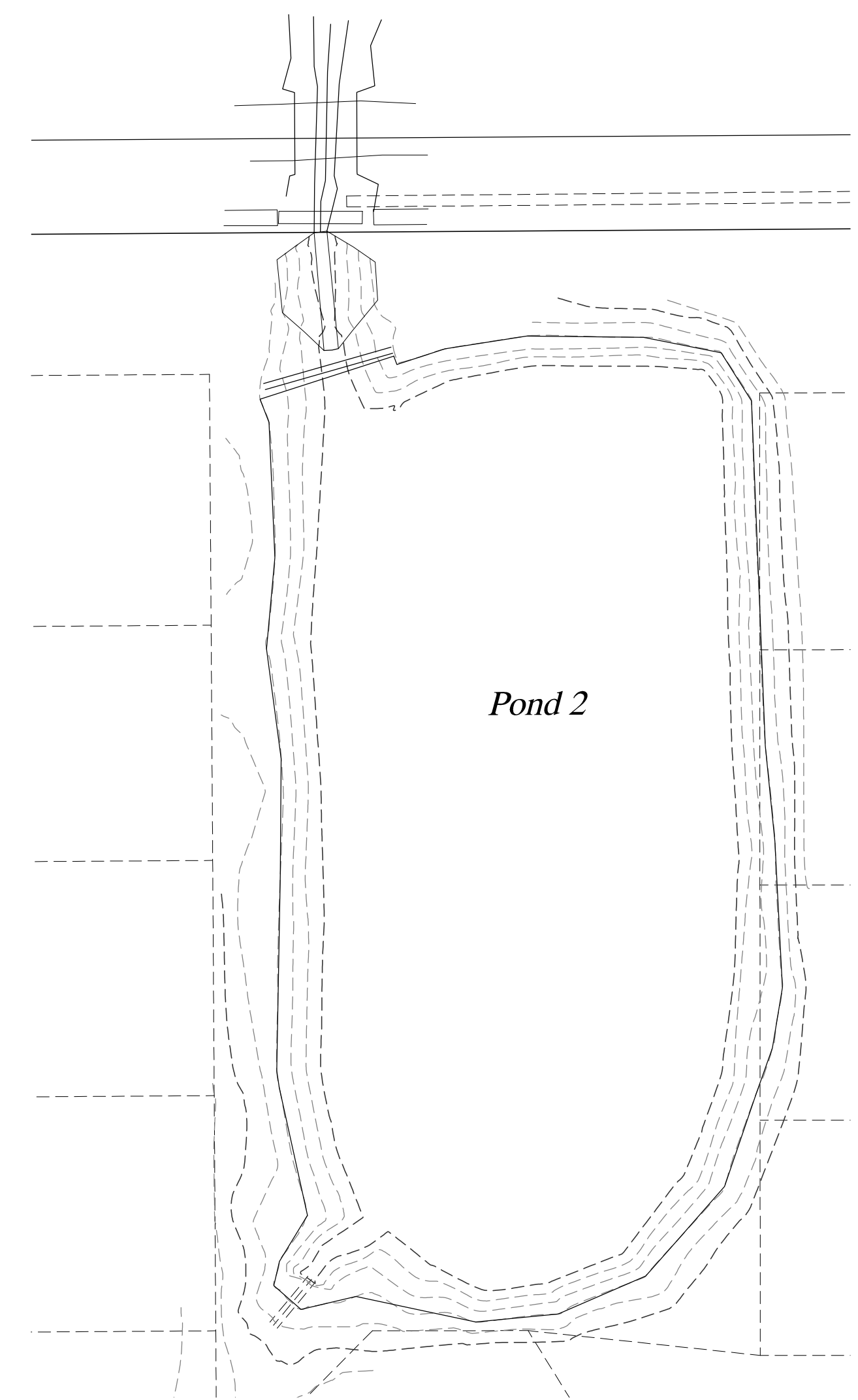
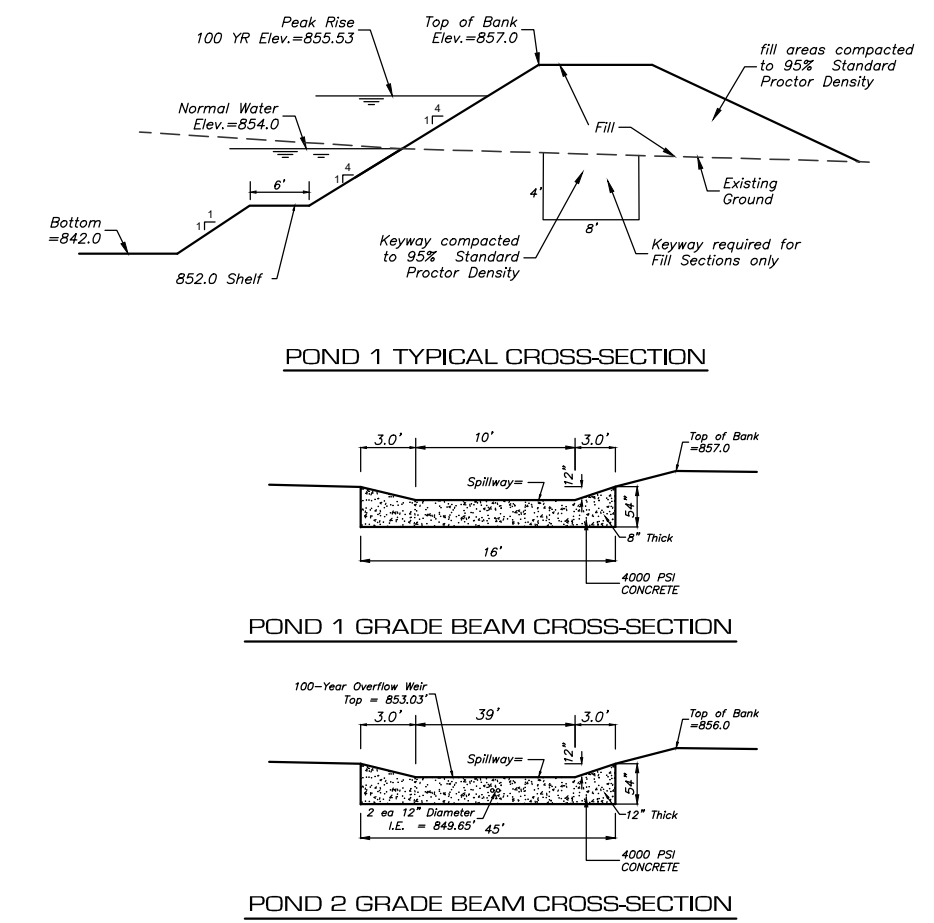
SCALE IN FEET:  
 0 40 80

**MONTGOMERY FARMS, PHASE 4**

*Existing Conditions Plan*

Revisions:	For:	Oakmont Development Co. II, LLC
	By:	Sauer Land Surveying, Inc. 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301
	Date:	March 1, 2022
	Scale:	1"=40'
	Sheet No.	2 of 13

- Notes:**
1. Contractor Shall locate all utilities prior to Construction and Notify Engineer of any Discrepancies.
  2. All erosion control practices shall be in accordance with the latest edition of the Indiana Storm Water Quality Manual and the NRCS Field Office Technical Guide.



Section A-A

- Legend:**
- 839.5 — Proposed Elevations
  - - - Existing Contours
  - - - Proposed Contours
  - - - Proposed Overflow Swale
  - - - Proposed Swale
  - - - Existing Storm Sewer
  - - - Proposed Storm Sewer

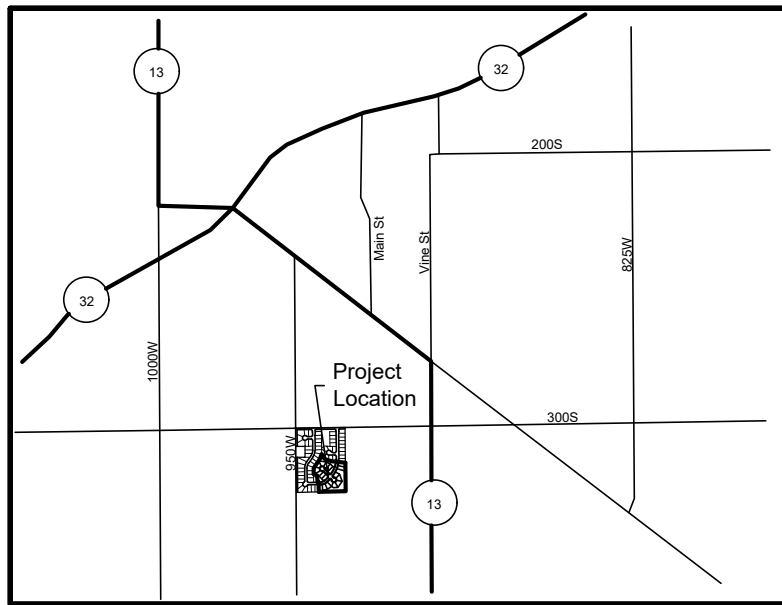


SCALE IN FEET:  
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<p>HOLEY MOLEY SAYS. "DON'T DIG BLIND"</p> <p>1-800-382-5544 CALL TOLL FREE 1-800-428-5200</p>	

<p>Revisions: 07/07/2022 - Rev. per CWE comm. 08/12/2022 - Rev. per MCD8 comm.</p>	<p>For: <b>Oakmont Development Co. II, LLC</b></p>	<p>Scale: <b>1"=40'</b></p>
<p>By: <b>Sauer Land Surveying, Inc.</b> 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301</p>	<p>Date: <b>March 1, 2022</b></p>	<p>Sheet No. <b>3 of 13</b></p>

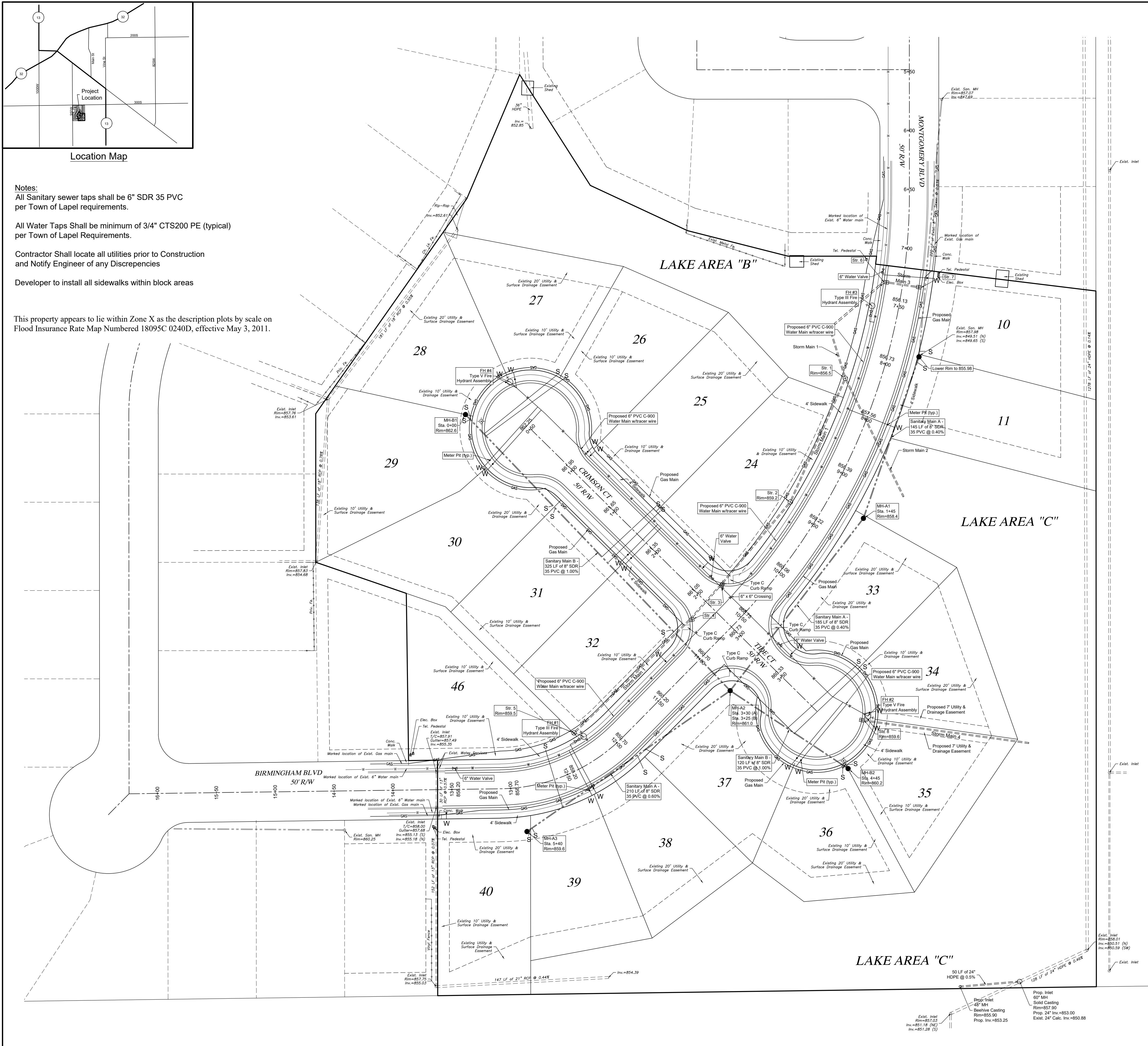




Location Map

**Notes:**  
 All Sanitary sewer taps shall be 6" SDR 35 PVC per Town of Lapel requirements.  
 All Water Taps Shall be minimum of 3/4" CTS200 PE (typical) per Town of Lapel Requirements.  
 Contractor Shall locate all utilities prior to Construction and Notify Engineer of any Discrepancies  
 Developer to install all sidewalks within block areas  
 This property appears to lie within Zone X as the description plots by scale on Flood Insurance Rate Map Numbered 18095C 0240D, effective May 3, 2011.

- Legend:**
- Existing Sanitary Sewer
  - Proposed Sanitary Sewer
  - Existing Water Main
  - Proposed Water Main
  - Existing Storm Sewer
  - Proposed Storm Sewer
  - Existing Gas Line
  - Existing Buried Electric
  - Existing Overhead Electric & Telecommunications
  - Existing Buried Fiber Optic
  - Existing Buried Telecommunications
  - Existing Buried Cable Lines
  - Proposed Light Pole



SCALE IN FEET:  
 0 40 80

*Scott A. Strahely*  
 Indiana Professional Engineer  
 No. 12100340  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

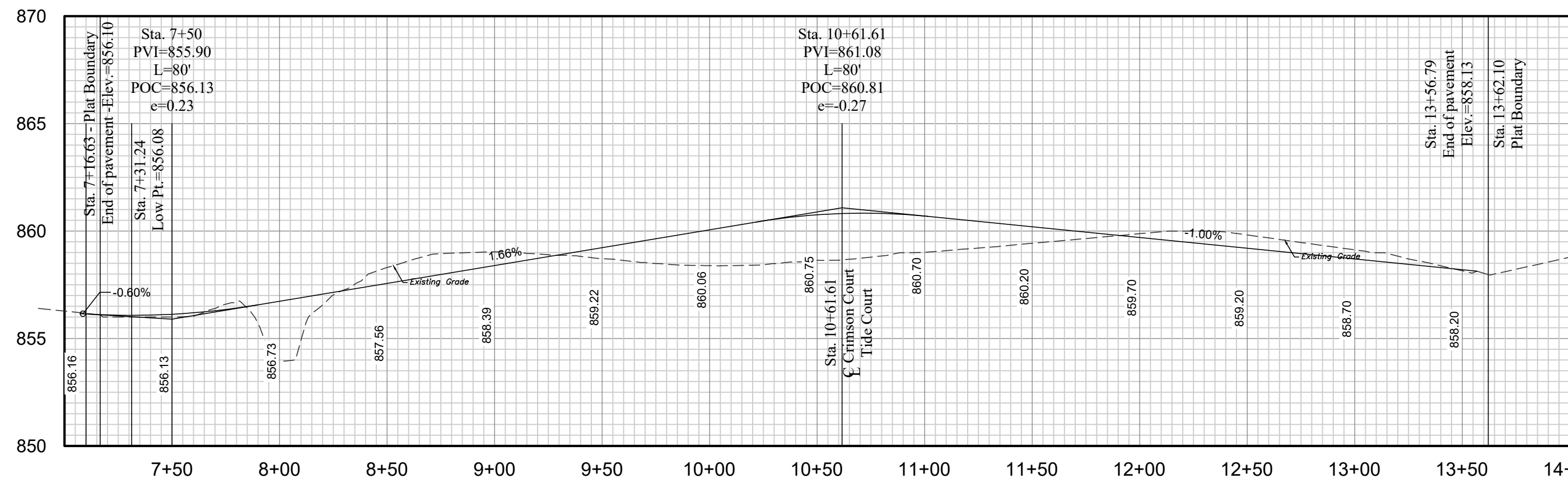
**MONTGOMERY FARMS, PHASE 4**

**Utility & Walk Plan**

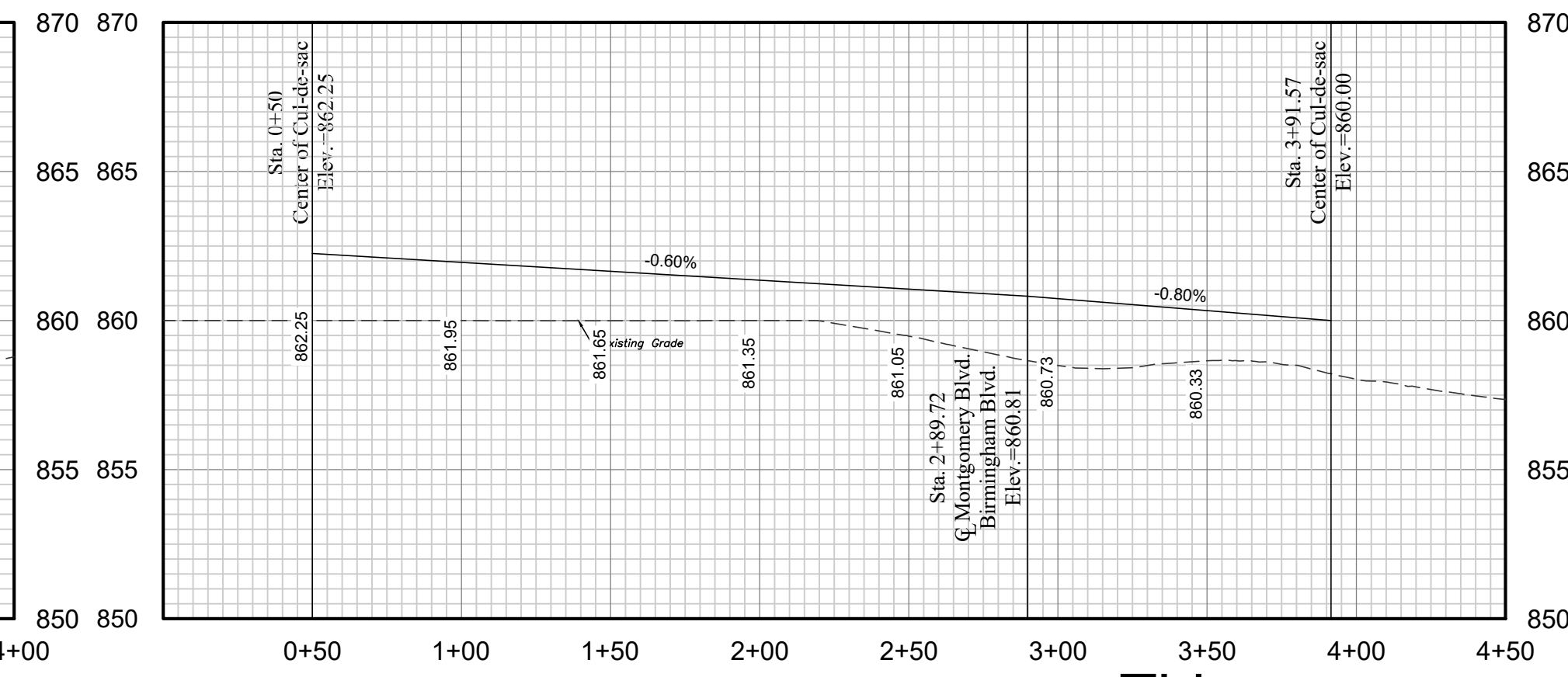
Revisions: 07/05/2022 - Gas main rev. 07/07/2022 - Easement labels added. per CWE comm.	For: <b>Oakmont Development Co. II, LLC</b>	Scale: <b>1"=40'</b>
By: <b>Sauer Land Surveying, Inc.</b> 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Date: <b>March 1, 2022</b>	Sheet No. <b>4 of 13</b>



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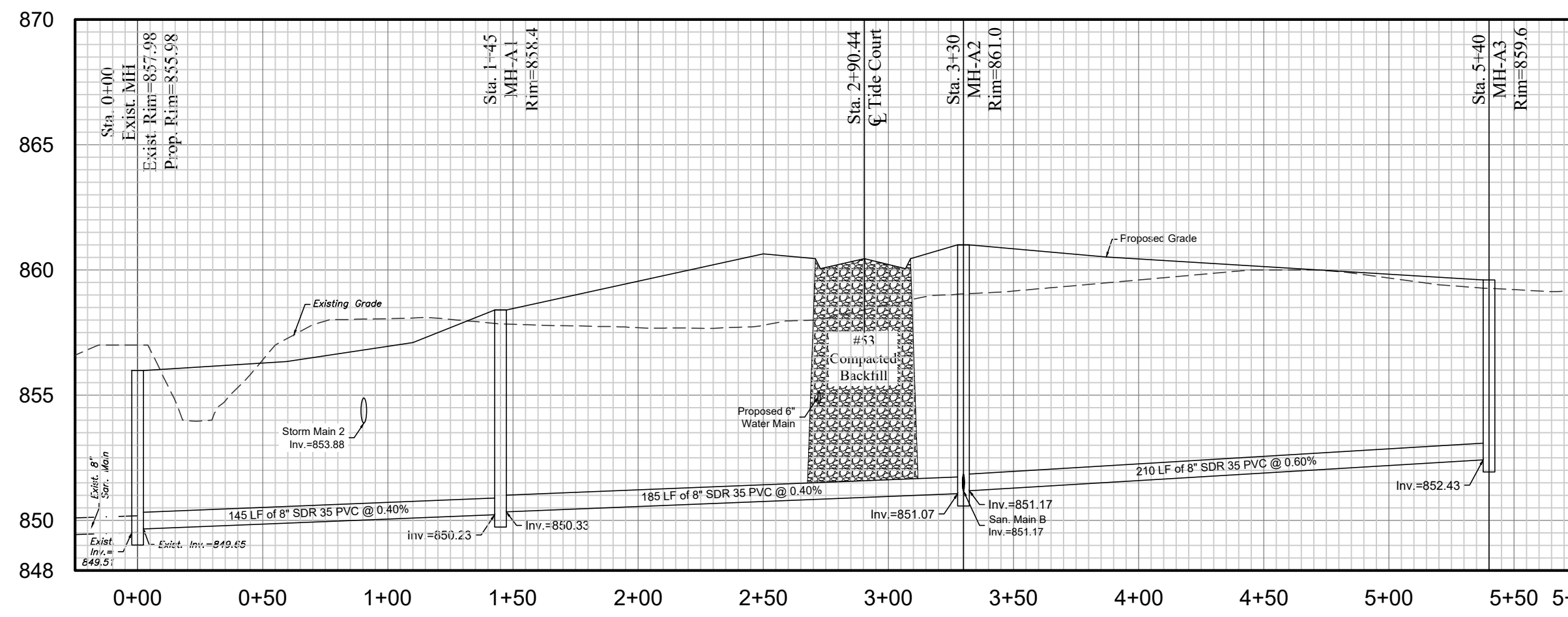


Montgomery Boulevard

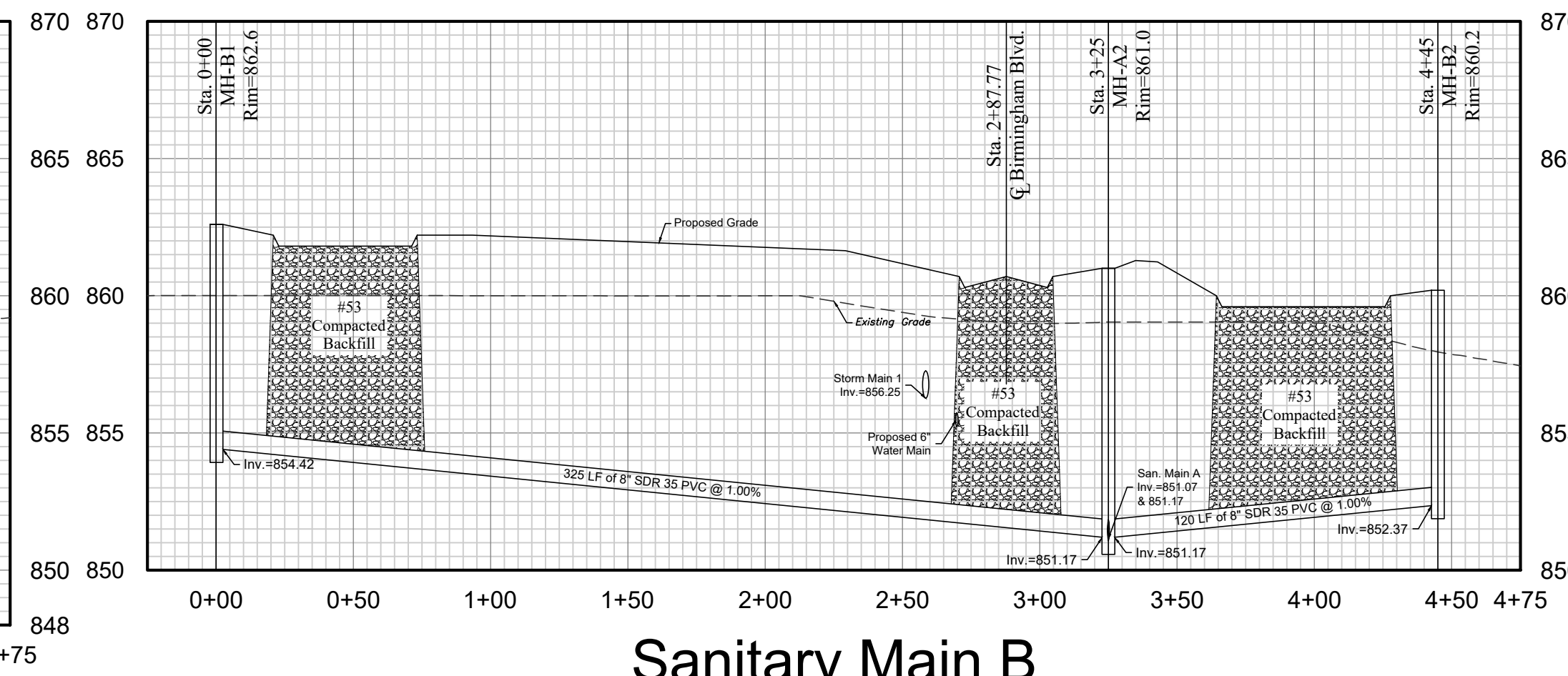


Birmingham Boulevard

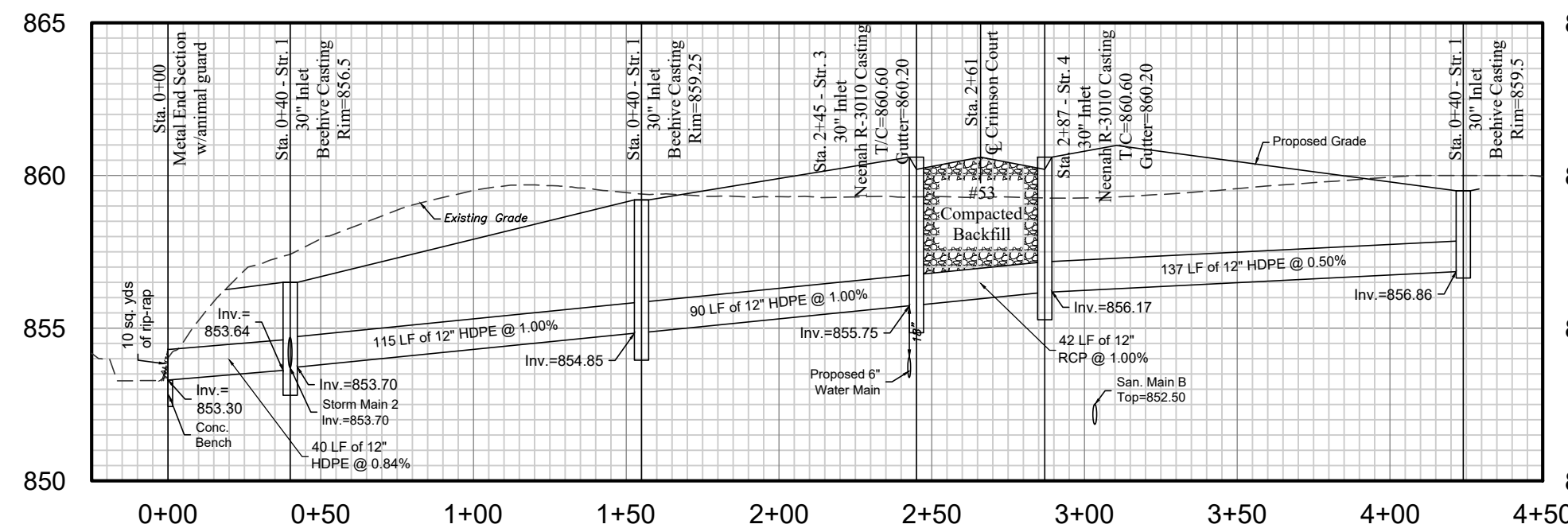
Crimson Court  
Tide Court



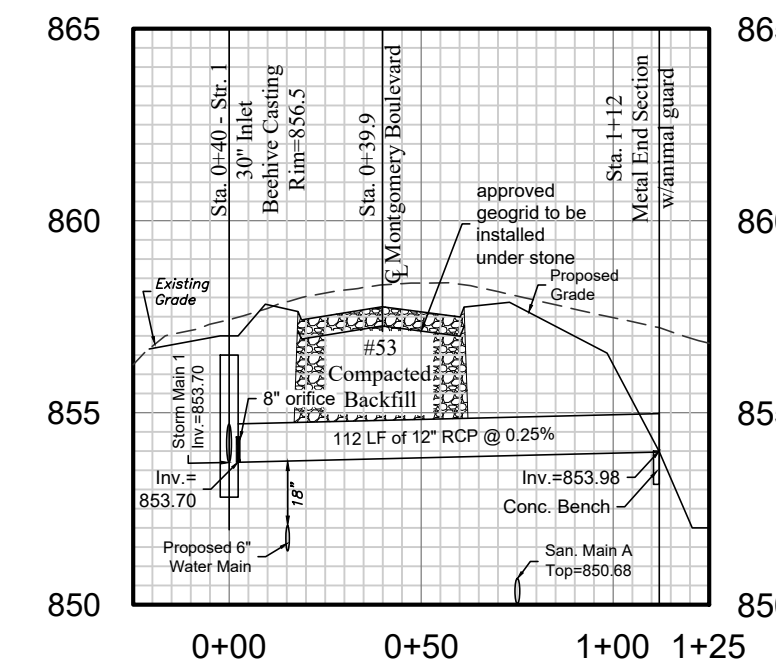
Sanitary Main A



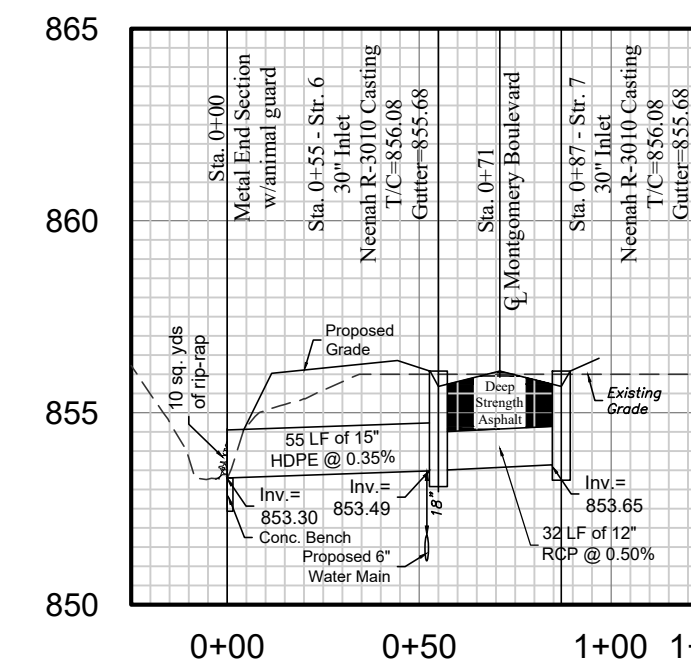
Sanitary Main B



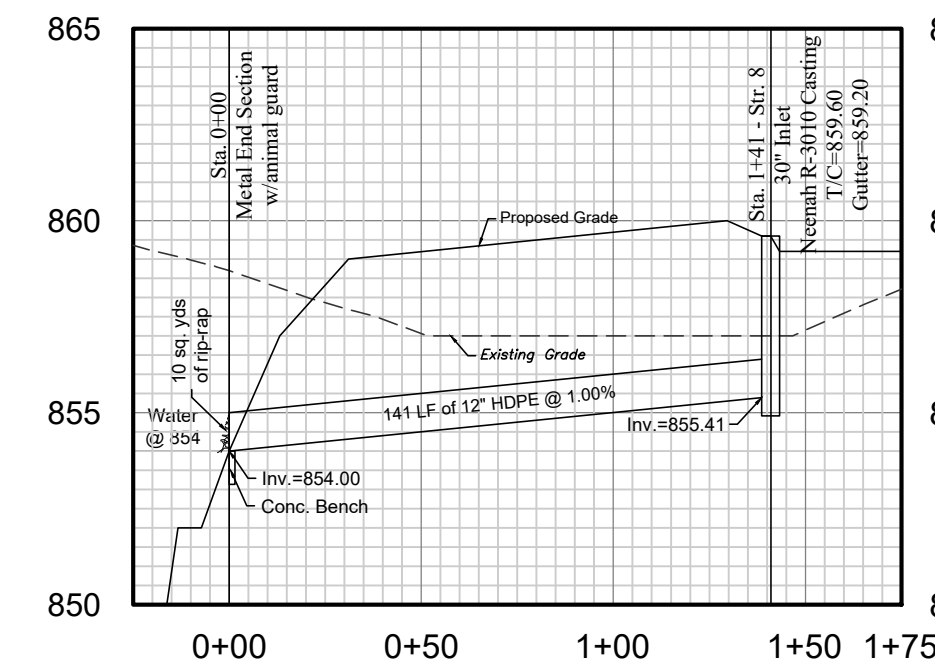
Storm Main 1



Storm Main 2



Storm Main 3



Storm Main 4

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*Scott A. Strahley*  
Indiana Professional Engineer



**MONTGOMERY FARMS, PHASE 4**

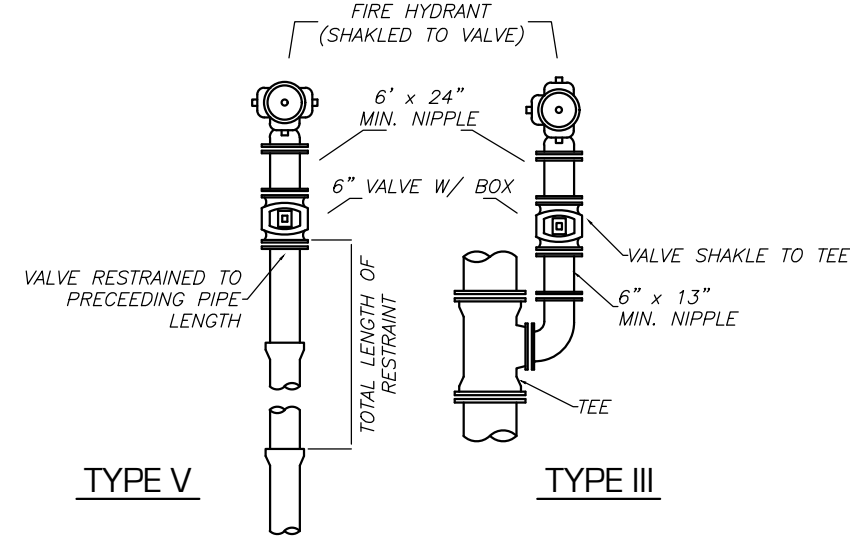
Street & Utility Profiles

Revisions: 07/07/2022 - Rev. per CWE comm. 07/14/2022 - Revised backfill per CWE comment	For: Oakmont Development Co. II, LLC	Scale: 1"=50'
	By: Sauer Land Surveying, Inc. 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Sheet No. 5 of 13
Date: March 1, 2022		

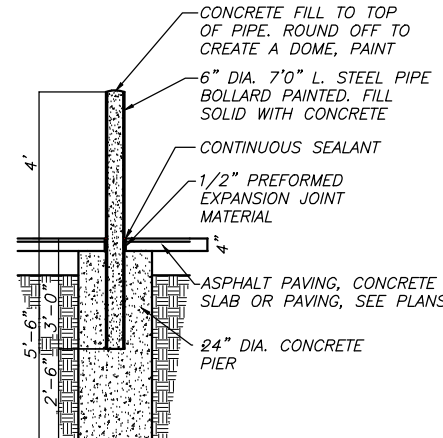
**WATER MAIN CONSTRUCTION STANDARDS & SPECIFICATIONS**

- SCOPE OF WORK
  - THE WORK REQUIRED UNDER THIS SECTION INCLUDES ALL COLD WATER DISTRIBUTION LINES, VALVES, METER PITS, HYDRANTS AND RELATED ITEMS INCLUDING EXCAVATING AND BACKFILLING NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS. THE ENDS OF WATER SERVICE LINES SHALL BE TIGHTLY PLUGGED OR CAPPED AT THE TERMINAL POINTS PENDING THE CONNECTING TO ALL SUCH LINES OF THE BUILDING PIPING AS SPECIFIED IN THE PLUMBING SPECIFICATIONS AND ARCHITECTURAL DRAWINGS. ALL HYDRANTS ARE TO BE WATEROUS WITH STORK FITTINGS PAINTED YELLOW WITH BONNET COLOR TO MATCH FLOW RATING CODE.
  - CALL WATER DEPARTMENT WITH APPROXIMATE START DATE BEFORE STARTING ANY WORK.
- MATERIALS
  - ALL WATER LINE AND FITTINGS FURNISHED AND INSTALLED ON THIS PROJECT SHALL MEET OR EXCEED THE FOLLOWING SPECIFICATIONS FOR THE TYPE LISTED: C-900 PVC, DR-1. ALL LINES SHALL HAVE TRACER WIRES ON BOTH MAIN LINES AND SERVICE LINES.
  - ALL FITTINGS SUCH AS 90S AND 45S ETC. WILL BE DUCTILE IRON, MECHANICAL JOINT, NO GLUED OR THREADED PLASTIC JOINTS. MEGALUG MECHANICAL JOINT RESTRAINTS SHALL BE USED ON FITTINGS.
  - FIRE HYDRANTS: MUELLER HYDRANT TO ANDERSON WATER UTILITY SPECIFICATIONS. HYDRANTS SHALL BE SET WITH A GROUND LINE MARK 2 INCHES ABOVE FINISHED GRADE. PUMPER NOZZLE OF HYDRANT TO FACE THE STREET. VALVES: VALVES WILL BE: MUELLER RESILIENT SEAT. ALL VALVES WILL HAVE STAINLESS STEEL BONNET AND PACKING GLAND BOLTS. ALL VALVES TO HAVE ALL THREAD ROD BETWEEN VALVE AND FITTINGS. POSI CAP TO BE INSTALLED ON VALVES.
  - VALVE BOXES: BOXES SHALL BE APPROVED STANDARD BUFFALO TYPE CAST-IRON, ADJUSTABLE SHAFT BOXES, HAVING A MINIMUM SHAFT DIAMETER OF 5-1/4 INCHES.
- APPLICATION
  - PERMITS AND CODES: THE INTENT OF THIS SECTION OF THE SPECIFICATIONS IS THAT THE CONTRACTOR'S BID ON THE WORK COVERED HEREIN SHALL BE BASED UPON THE DRAWINGS AND SPECIFICATIONS BUT THAT THE WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL FURNISH ALL NECESSARY BONDS TO GET PERMITS FOR CUTS AND CONNECTIONS. DESIGN IS SUBJECT TO UTILITY APPROVAL. CONTRACTOR WILL WARRANTY INSTALLATION FOR A PERIOD OF ONE YEAR.
  - EXISTING IMPROVEMENTS: MAINTAIN IN OPERATING CONDITION ALL ACTIVE UTILITIES AND SEWERS AND OTHER PIPE SYSTEM THAT MAY BE ENCOUNTERED.
  - TRENCHING: LAY ALL PIPE IN OPEN TRENCHES, EXCEPT WHEN LOCAL AUTHORITY GIVES WRITTEN PERMISSION FOR TUNNELING. PROVIDE A SEPARATE TRENCH FOR THE WATER LINE AT LEAST 10 FEET HORIZONTALLY FROM ANY SANITARY SEWER. IN LOCATIONS WHERE SEPARATE TRENCHES FOR SEWER AND WATER LINES ARE IMPRACTICABLE, LAY THE WATER PIPE ON A SOLID SHELF AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER. WIDTH OF TRENCH: EXCAVATE TRENCHES 12 INCHES EACH SIDE OF THE PIPE FOR PROPER INSTALLATION OF PIPE, SHEETING AND BRACING. SHEET AND BRACE TRENCHES AS NECESSARY TO PROTECT WORKMEN AND ADJACENT STRUCTURES. ALL TRENCHING SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS.
  - WATER REMOVAL: KEEP TRENCHES FREE FROM WATER WHILE CONSTRUCTION THEREIN IS IN PROGRESS. UNDER NO CIRCUMSTANCES LAY PIPE OR APPURTENANCES IN STANDING WATER. CONDUCT THE DISCHARGE FROM TRENCH DEWATERING TO DRAINS OR NATURAL DRAINAGE CHANNELS.
  - GRADING TRENCH BOTTOMS: THE BOTTOM QUADRANT OF THE PIPE SHALL BE FULLY AND UNIFORMLY SUPPORTED. THE FULL LOAD SHALL REST ON THE BARREL OF THE PIPE. THE TRENCH SHALL BE EXCAVATED TO A DEPTH OF 2 INCHES BELOW FINAL GRADE WITH SAND FOR BEDDING. FOR A DEPTH OF AT LEAST 6 INCHES ABOVE THE TOP OF THE PIPE, BACKFILL WITH SAND. TAMP THIS BACKFILL THOROUGHLY TAKING CARE NOT TO DISTURB THE PIPE. BACKFILL UNDER WALKS, PARKING AREAS, DRIVEWAYS AND STREETS WITH GRANULAR MATERIAL ONLY AND TAMP THOROUGHLY, BY APPROVED METHODS. TRENCHES PARALLEL TO AND WITHIN 5 FEET OF PAVED ROADWAYS SHALL BE CONSTRUCTED THE SAME. THERE SHALL ALWAYS BE 5 FOOT OF COVERAGE ABOVE THE MAIN.
  - TESTING: - HYDROSTATIC AND BACTERIOLOGICAL TESTS TO BE DONE BY CONTRACTOR OVER SEEN BY MEMBER OF WATER UTILITY.
  - BEFORE JOINTS ARE COVERED, FILL THE PIPING WITH WATER, OPENING HYDRANTS OR OTHER OUTLETS TO EXPEL AIR. TEST THE PIPING FOR LEAKAGE FOR A PERIOD OF AT LEAST TWO HOURS AT A PRESSURE OF 150 POUNDS PER SQUARE INCH. INSPECT ALL JOINTS FOR LEAKAGE AND REMEDY ANY LEAKS. UPON COMPLETION OF THE WATER DISTRIBUTION MAINS, FLUSH OUT THE SYSTEM UNTIL THE WATER RUNS CLEAR. AS SOON AS THE SYSTEM HAS BEEN FLUSHED OUT, IT SHALL BE STERILIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE WATER COMPANY. PIPING TO BE CHLORINATED TO 50PPM WITH LIQUID CHLORINE AND DECHLORINATED AS IT'S BEING BLOWN OFF. ALL TESTING TO BE SUPERVISED BY THE WATER UTILITY.
  - LOCATE TAPE: SIX INCH LOCATING TAPE (STATING "BURIED WATER LINE BELOW") SHALL BE BURIED 2 FEET DEEP WRAPPING AROUND VALVE BOXES, HYDRANTS, ETC.. TAPE TO BE EQUIVALENT TO TARRA TAPE SENTRY LINE DETECTABLE 1350.
  - LOCATE WIRE: TEN GAUGE SOLID LOCATE WIRE WITH MOISTURE RESISTANT COVERING DESIGNED FOR UNDERGROUND USE SHALL BE LAID ON TOP OF WATER MAIN. LOCATE WIRE SHALL BE LOOPED UP INTO THE VALVE BOXES. THE WIRE SHALL BE ONE CONTINUOUS PIECE WITH ALL SPLICES SOLDERED.
  - SHOP DRAWINGS: SUBMIT BUILDING AND AS-BUILT PLANS INCLUDING THE LOCATION OF HYDRANTS, VALVES, MAINS, ETC. TO THE ENGINEER FOR APPROVAL.
  - UTILITIES: IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND CONDITIONS PERTAINING TO HIS PHASE OF THE WORK. IT SHALL ALSO BE THE CONTRACTORS RESPONSIBILITY TO CONTACT THE OWNERS OF THE VARIOUS OWNERS UTILITIES BEFORE WORK IS STARTED. THE CONTRACTOR SHALL NOTIFY IN WRITING THE OWNERS OR THE ENGINEER OF ANY CHANGES, ERRORS OR OMISSIONS FOUND ON THESE PLANS OR IN THE FIELD BEFORE WORK IS STARTED OR RESUMED.
  - CONTRACTOR SHALL RESTORE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  - ALL FIRE LINES AND COMBINATION DOMESTIC AND FIRE LINES SHALL BE FLUSHED CLEAR OF DIRT AND DEBRIS AT A MINIMUM VELOCITY OF 10 FPS AND HYDROSTATICALLY TESTED AT 200 PSIG FOR 2 HOURS MINIMUM PER THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS #13 & #25 IN ADDITION TO ALL APPLICABLE AWWA STANDARDS.
  - WATER MAINS TO BE BACTERIA TESTED AFTER DISINFECTION.

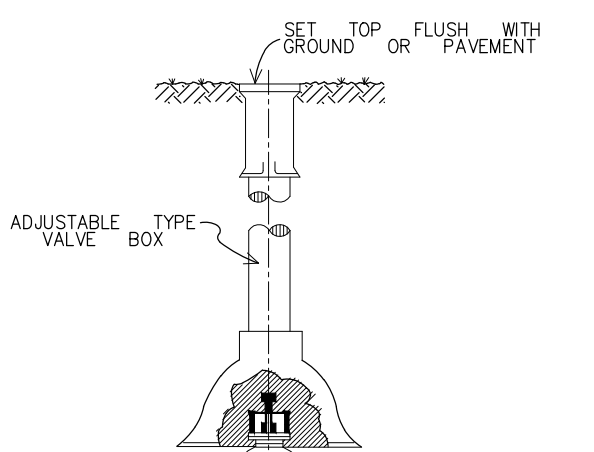
- NOTES:**
- ALL 12" O AND SMALLER PIPE IS TO BE C-900 PVC UNLESS OTHERWISE SHOWN BY THESE PLANS
  - USE 45° FITTINGS AT CROSSINGS TO AVOID GRADE CONFLICTS WITH STORM AND SANITARY SEWERS. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES.
  - ALL WATER MAINS TO HAVE A MINIMUM OF FIVE (5) FEET OF COVER.
  - TRENCHES IN PAVED AREAS OR PROPOSED PAVED AREAS SHALL BE FULL DEPTH BACKFILLED WITH COMPACTED GRANULAR MATERIALS TO PAVEMENT BASE.
  - THE CONTRACTOR SHALL RESTORE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  - THE CONTRACTOR SHALL LOCATE ALL UTILITIES OR UNDERGROUND STRUCTURES PRIOR TO CONSTRUCTION AND NOTIFY EACH RESPECTIVE UTILITY OWNER 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  - ALL UTILITY REPLACEMENTS SHALL CONFORM TO THE MANUFACTURERS CONSTRUCTION AND MATERIAL SPECIFICATIONS.



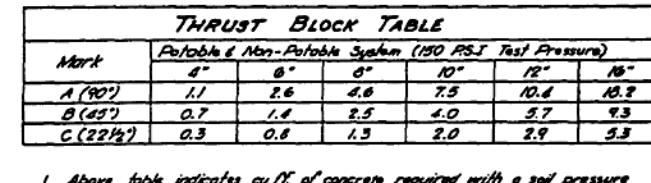
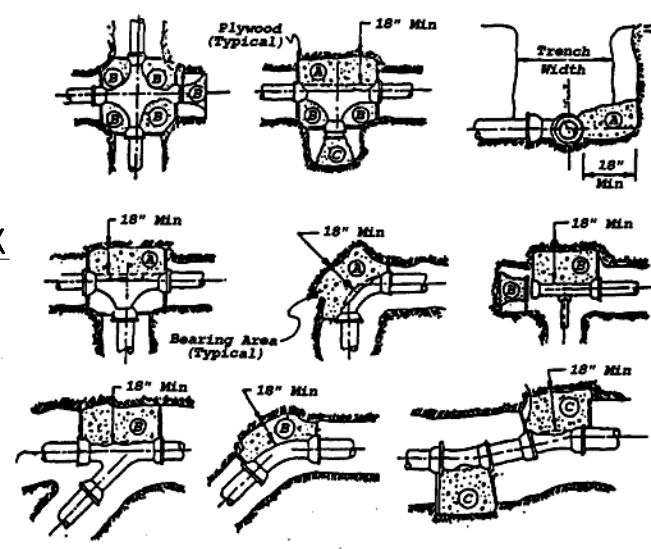
**FIRE HYDRANT ASSEMBLY**  
NO SCALE



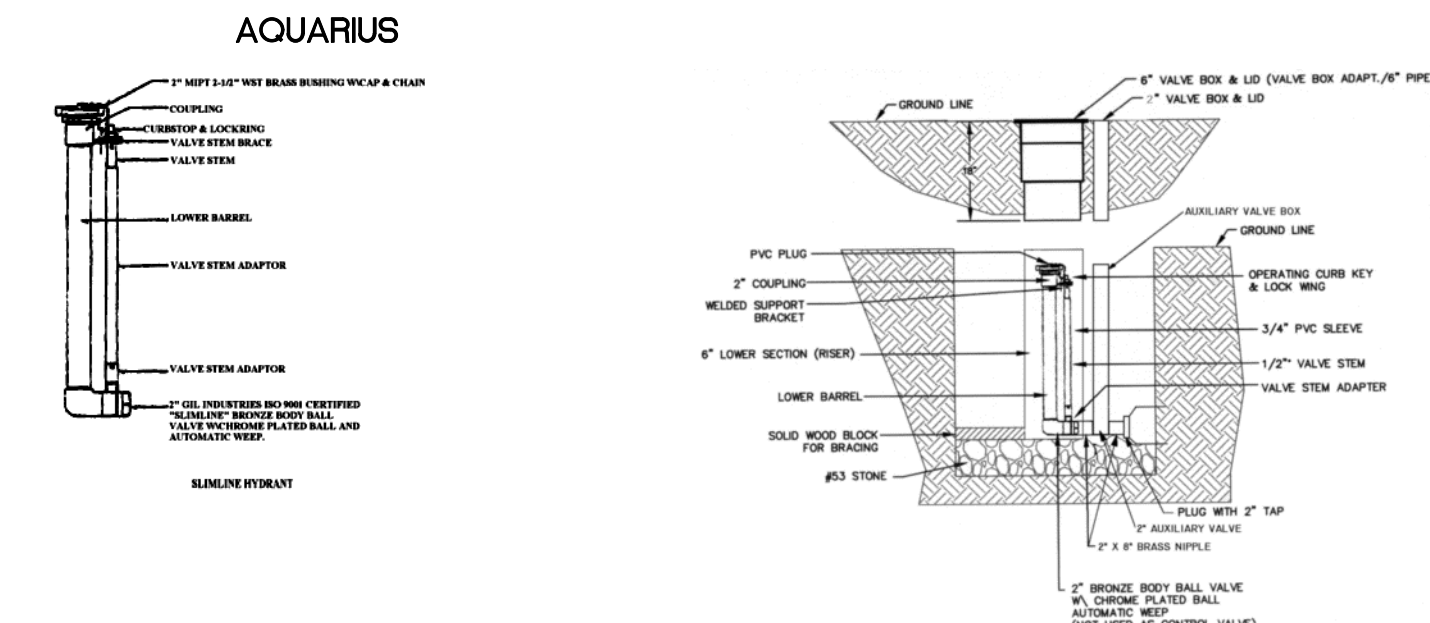
**BOLLARD**  
NO SCALE



**TYPICAL GATE VALVE AND VALVE BOX**



**CONCRETE BLOCKING FOR WATER MAINS**



**BLOW OFF HYDRANT**

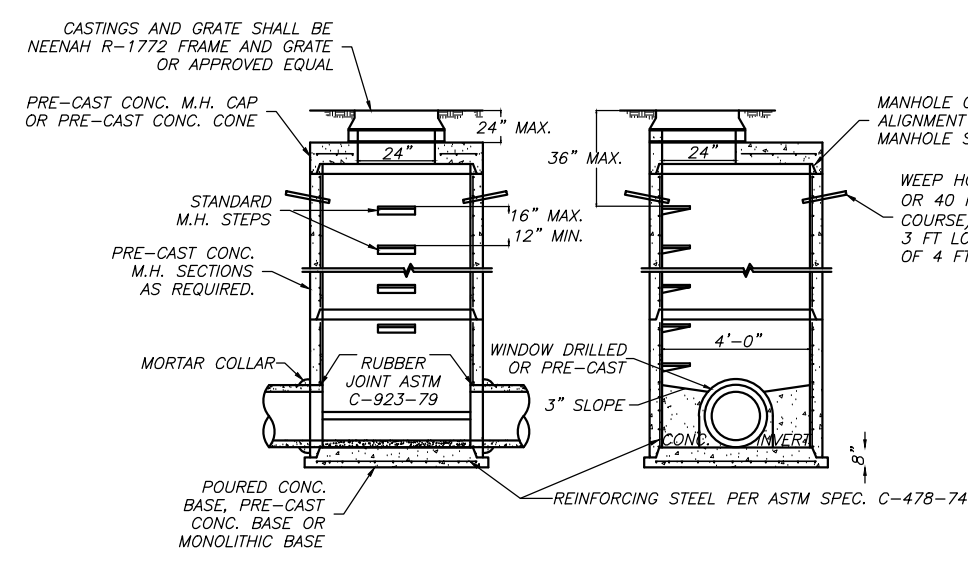
**AQUARIUS GHS 2" HIDDEN SLIMLINE FLUSHING HYDRANT**  
SHORTER LOW SPECIFICATIONS

Flushing Hydrant shall be of automatic freeze proof design with weep hole installed within a 2" ball valve. Valve will be 66 lb. wsg bronze body with chrome plated brass ball and Teflon seals. Ball valve to be ISO 9001 certified.

Hydrant barrel must be black iron pipe. Exterior shall receive 4 mil thickness of electrostatically applied Sherman Williams Fast Dry Acrylic Enamel, catalyzed with Polane for durability. All hydrants to be painted blue. Overall length of hydrant will vary, according to the depths of water systems. A brass hose connection, 2-1/2" NSFJ with attached cap & chain, shall be provided for convenience in flushing.

Operating device to be of key type design, with permanent attachment to the valve stem. Valve stem must be full length of the hydrant barrel with permanent attachment to the valve. Hydrant must have provision for lock up to prevent tampering.

Flushing Hydrant to be Aquarius GHS "HIDDEN SLIMLINE HYDRANT" as manufactured by GIL Industries, Inc., Pensacola, Florida.



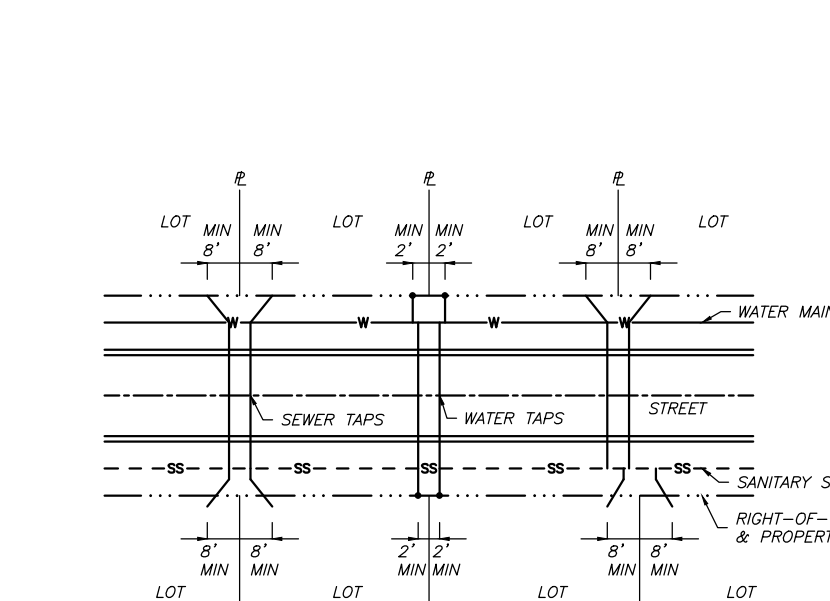
**STANDARD MANHOLE**  
NO SCALE

- GENERAL CONSTRUCTION REQUIREMENTS**
- ALL PIPES SHALL HAVE A SMOOTH FINISH.
  - ALL MANHOLE JOINTS SHALL BE WATERPROOF AND CONSTRUCTED IN ACCORDANCE WITH ASTM SPEC. C-443-70.
  - THE WEEP HOLE SHALL BE PLUGGED WITH CONCRETE GROUT AFTER THE COMPACTION HAS BEEN COMPLETED FOR THE TRENCH BACK FILL MATERIAL.
  - THE BASE SHALL BE PLACED ON COMPACTED GRAVEL OR STONE 4" MINIMUM.
  - BASE DIA. 48" - PIPE DIA. 6" TO 33" SDR THROUGH TO 45" - PIPE DIA. 6" TO 24" 45" TO 90".

**GENERAL NOTES**

MANHOLE SECTIONS IN ACCORDANCE WITH ASTM C-443. MANHOLE JOINTS IN ACCORDANCE WITH ASTM C-443 MAX. G-RING JOINT OR APPROVED EQUAL.

**WATER TAP STANDARD FOR CROSSING A STREET**

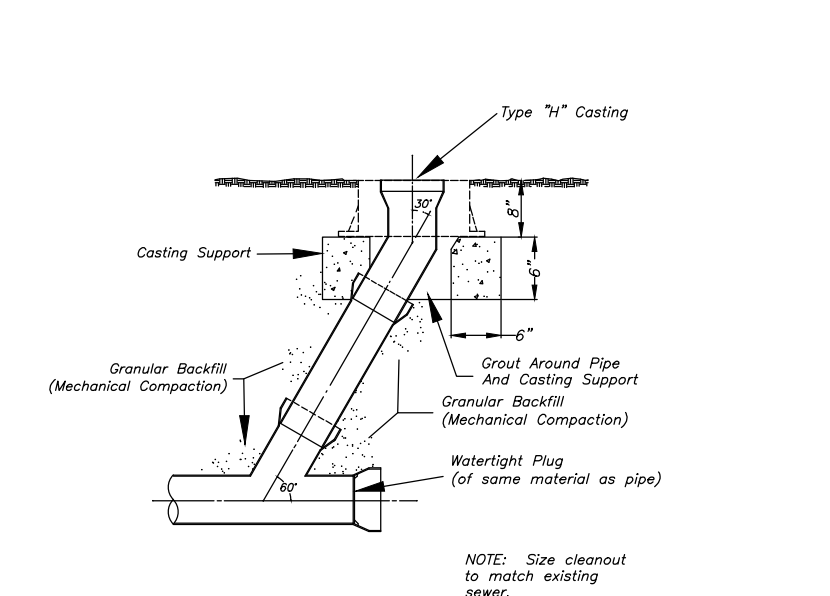


**SEWER TAP STANDARD FOR CROSSING A STREET**

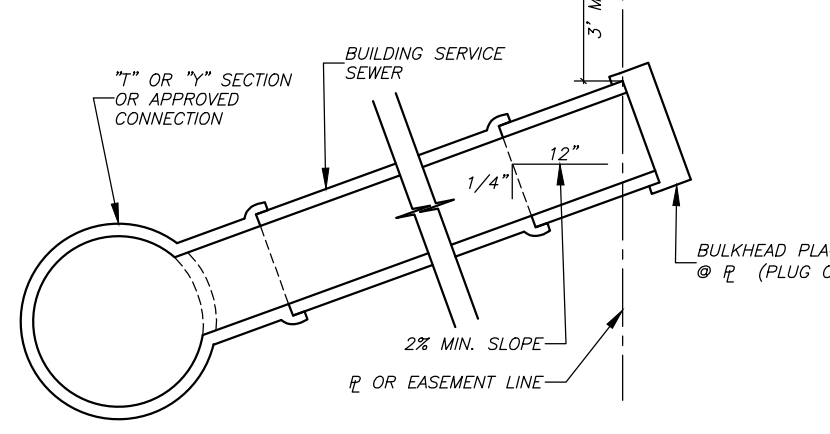
NOTE: BACKFILL IN STREET RIGHT OF WAY SHALL BE ACCORDING TO STATE, ALLEN COUNTY, OR CITY OF FT WAYNE ROAD AND STREET SPECIFICATIONS.

ALL WATER TAPS SHALL BE THREE K COPPER NOT LESS THAN 3/4" DIAMETER. NO WATER SHUT OFF VALVES SHALL BE PLACED WHERE THEY WILL BE UNDER CONCRETE.

**SEWER AND WATER TAP DETAIL**  
NO SCALE



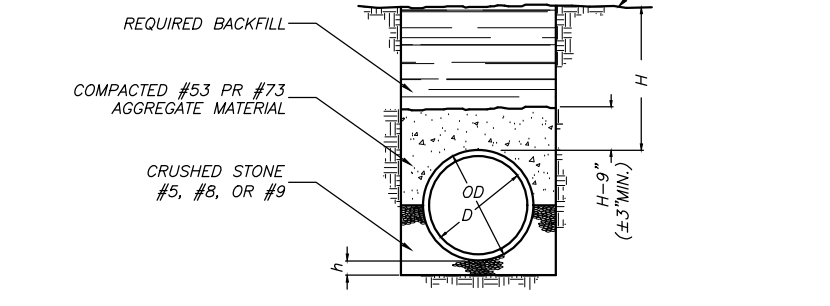
**Cleanout Detail**  
Not to Scale



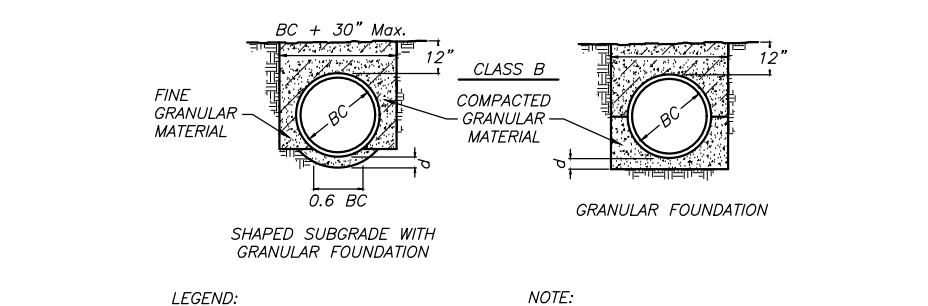
**SHALLOW CONNECTION 10' OR LESS**  
NO SCALE

**SANITARY SEWER CONSTRUCTION STANDARDS & SPECIFICATIONS**

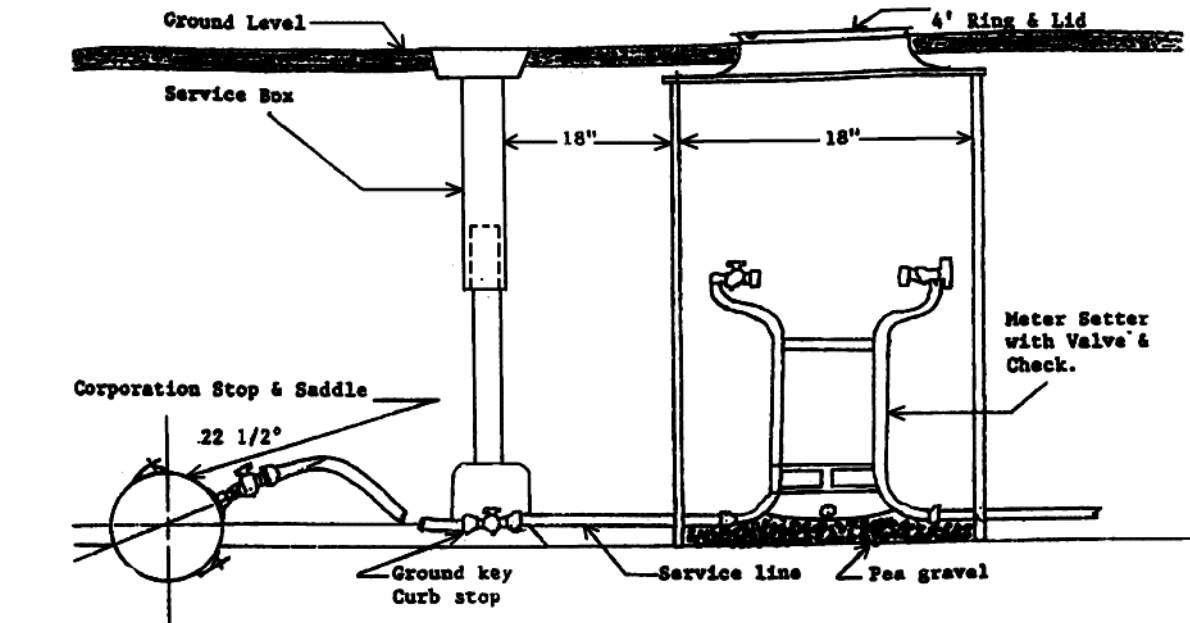
- SANITARY SEWER MATERIAL (ASTM REFERENCES): GRAVITY SEWER: PVC D3034 D3212 SDR-35 MAIN
- FLEXIBLE PIPE (PVC) SHALL BE INSTALLED PER ASTM D2321.
- LEAKAGE TESTS:
  - WATER (HYDROSTATIC) TEST THE LEAKAGE EXFILTRATION OR INFILTRATION SHALL NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY (0.019mm/mm) OF PIPE THE SYSTEM. AN EXFILTRATION OF INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET (610mm). MANHOLES SHALL BE TESTED SEPARATELY, EQUIVALENT TO 3.0 GALLONS PER HOUR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY CORRECTIONS. THE COST OF ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY FOR PERFORMING THE TESTS AND MAKING ANY NECESSARY CORRECTIONS AND REPLACEMENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
  - AIR TEST THE AIR TEST SHALL, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828-86 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, AND PER THE REQUIREMENTS OF THE UNI-BELL PVC PIPE ASSOCIATION FOR P.V.C. PIPE.
- DEFLECTION TEST:
  - DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.
  - NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, REPLACEMENT OR CORRECTION SHALL BE ACCOMPLISHED BY THE CONTRACTORS.
  - THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NO LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED. THE PIPE SHALL BE MEASURED IN COMPLIANCE WITH ASTM D 2212 STANDARD TEST METHOD OF DETERMINING DIMENSIONS OF THERMOPLASTIC PIPE AND FITTINGS. THE TEST SHALL BE PERFORMED WITH MECHANICAL PULLING DEVICES.
- MANHOLE TEST:
  - MANHOLES TO BE AIR TESTED IN ACCORDANCE WITH ASTM C1244-93, STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY NEGATIVE AIR PRESSURE (VACUUM) TEST.
- TELEVISION INSPECTION LOG:
  - THE CONTRACTOR SHALL FURNISH FCRWD A LEGIBLE TAPED TELEVISION INSPECTION RECORD OF THE ENTIRE NEW SEWER MAIN AND A WRITTEN RECORD OF TAP LOCATIONS BASED UPON THE TELEVISION INSPECTION RECORD PRIOR TO FINAL ACCEPTANCE BY THE FCRWD.
  - AS-BUILT DRAWINGS TO BE PROVIDED TO THE FCRWD UPON COMPLETION.
- RELATION TO WATER MAINS
  - HORIZONTAL AND VERTICAL WATER MAINS: SEWERS SHALL BE LAID AT LEAST 10 FEET (3 m) HORIZONTALLY FOR ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT (3 m) SEPARATION, THE CONTRACTOR MAY REQUEST A DEVIATION WHICH SHALL BE REVIEWED AND SUBJECT TO APPROVAL BY THE DESIGN ENGINEER AND REVIEWING AGENCY. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELL LOCATED ON THE WATER MAIN JOINTS. THE SEWER AND AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES (457 mm) ABOVE THE TOP OF THE SEWER. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE, BOTH THE WATER MAIN AND SEWER MUST BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS OF THE TOWN OF LAPEL AND BE PRESSURE TESTED TO 150 psi (1034 kPa) TO ASSURE WATER TIGHTNESS BEFORE BACKFILLING.
  - CROSSING: SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES (457 mm) BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, ONE OF THE FOLLOWING METHODS MUST BE SPECIFIED:
    - THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPE, AND SHALL BE PRESSURE TESTED AT 150 psi (1034 kPa) TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
    - EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET (3m) ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE TOWN OF LAPEL FOR USE IN WATER MAIN CONSTRUCTION.
- TRENCHES IN PAVED AREAS OR PROPOSED PAVED AREAS SHALL BE FULL DEPTH BACKFILL WITH COMPACTED GRANULAR MATERIALS TO PAVEMENT BASE.
- ALL SEWER LENGTHS AND GRADES ARE BASED UPON CENTER TO CENTER DIMENSIONS.
- ELEVATION AT SEWER STRUCTURES ARE PIPE INVERT.
- THE CONTRACTOR SHALL RESTORE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL LOCATE ALL UTILITIES OR UNDERGROUND STRUCTURES PRIOR TO CONSTRUCTION AND NOTIFY EACH RESPECTIVE UTILITY OWNER 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL UTILITY REPLACEMENTS SHALL CONFORM TO THE MANUFACTURERS CONSTRUCTION AND MATERIAL SPECIFICATIONS.
- ALL GRADES AT BOUNDARY SHALL MEET EXISTING GRADES.
- FOLLOWING OR DURING CONSTRUCTION OF THE SEWER, THE CONTRACTOR SHALL FIELD MARK THE SERVICE LATERAL LOCATIONS USING A STEEL FARM FENCE TYPE POST, PAINTED GREEN. THIS SHALL BE COORDINATED WITH FALL CREEK REGIONAL WASTE DISTRICT.



**BEDDING DETAIL**  
NO SCALE



**CLASS F (FLEXIBLE PIPE) DETAIL**  
NO SCALE

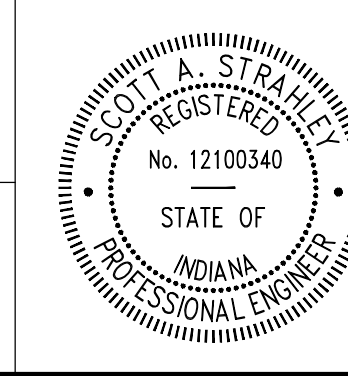


**SERVICE BOX**

**MONTGOMERY FARMS, PHASE 4**

**Utility Details**

Revisions: 07/07/2022 - Rev. per CWE comm. 07/14/2022 - Rev. per CWE comm.	For: Oakmont Development Co. II, LLC
By: Sauer Land Surveying, Inc. 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Sheet No. 6 of 13
Date: March 1, 2022	



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No. 12100340  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
Scott A. Sauer  
Indiana Professional Engineer  
1-800-382-5544  
1-800-428-5200

**STREETS**

- 1. SCOPE OF WORK:**  
The work required under this section includes all concrete and bituminous paving and related items necessary to complete the work indicated on drawings and described in the specifications, including but not limited to:  
All streets, parking areas in contract limits Curbs and gutters Sidewalks and concrete slabs, exterior steps.

- 2. MATERIALS:**  
A. Concrete: Concrete shall be ready-mixed concrete and shall be a mix of proportioned fine and coarse aggregates with Portland cement and water. Minimum cement content shall be 6 bags per cubic yard of concrete and maximum water content shall be 5.5 U.S. gallons per sack of cement, including moisture in the aggregate. Slump for normal weight concrete shall be a maximum of 4 inches and a minimum of 2 inches. The slump of machine placed concrete shall be no less than 1 1/4 inches nor more than 3 inches. Standard test ASTM C-143 shall be used to measure slump. Compressive strength of concrete at 28 days shall be 4000 psi. All exterior concrete shall have air entrainment of 5% to 8% by volume per ASTM C-260. Retempering of delivered concrete will not be allowed. The owner shall provide and pay for testing of concrete delivered to the job for compliance with these specifications. Test results will be submitted to the Engineer for review. Concrete shall be composed of:

- Portland cement: Conforming to ASTM C-150, Type 1A or Type 111A.
- Aggregates: Conforming to ASTM C-33.
- Water: Shall be clear and free from injurious amounts of oils, acids, alkalis, organic materials or other deleterious substances.

- Welded Steel Wire Fabric: Where required for concrete reinforcement shall conform to ASTM A 185.
- Premoulded Joint Filler: Shall be of non-extruding type meeting ASTM D-544, except that premoulded joint filler used in concrete walk construction may be either non-extruding or resilient.
- Bituminous Pavement Materials: All materials proposed for the construction of bituminous pavements shall comply with the Indiana Department of Highways Standard Specifications, per latest revisions.
- Compacted Aggregate Subbase: Shall be crushed stone or gravel. Crushed gravel shall be a minimum of 35% crushed material. Chert shall be limited to a maximum of 8% of the total. Material shall be free from an excess of flat, elongated, thinly laminated, soft or disintegrated pieces, and shall be free from fragments coated with dirt. Compacted aggregate shall be graded as follows:

Sieve Size	% Passing
1 1/2"	100
1"	80-100
3/4"	70-90
1/2"	55-80
#4	35-60
#8	25-50
#30	12-30
#200	5-10

- Lime-Pozzolan Stabilization: Acceptable additives for lime-pozzolan stabilization will contain free lime as calcium oxide and be pozzolanic (self cementing) such as Calcein.

- Total calcium and magnesium oxide (nonvolatile basis) minimum percent-55.
- Available calcium hydroxide (rapid sugar test ASTM C 25) plus total MgO content calculated to be equivalent Ca (OH)2 (available CaO) + (%MgO) (1.828). Minimum percent-25.
- Loss on ignition (carbon dioxide plus moisture combined free max percent-40).
- Free water (as received) max%-4.
- Sieve Analysis Max. Percent
 

No. 4	5
No. 30	10
No. 100	25

Note: Engineer reserves the right to test any or all loads during the course of the project to assure quality stabilization reagent parameters.

**3. APPLICATION:**

- Grading: Do any necessary grading in addition to that performed in accordance with Earthwork Section, to bring subgrades, after final compaction, to the required grades and sections for site improvement.
- Lime-Pozzolan Stabilization
  - Preparation of Subgrade: Subgrade shall be shaped to the proper grade and cross section prior to stabilization. All vegetation and other objectionable material shall be removed from within the limits of stabilization boundaries. No traffic will be allowed on prepared subgrade prior to paving.
  - Spreading: Additive shall be spread uniformly on the area to be stabilized where the mixing operation can be completed during the same workday. Prepare, transport, and distribute additive on the subgrade in a manner that will minimize dusting. Do not apply stabilizer when wind conditions may cause hazards to traffic, workmen, or adjacent property.

- Additive quantities:
 

Clay/Loam	5-6%
Sand	8-9%

- Mixing/Watering: The spreading of additive will be following immediately by a mixing operation utilizing rotate stabilizer or pulverizer that produces a homogeneous mixture of soil and additive, to a depth of 12". During this mixing operation potable water will be added, if necessary, to bring the moisture content 2 to 3 percent above optimum based on standard proctor. All clods and lumps must be reduced to 2 inch or less diameter.
- Compaction: Compaction of the stabilized subgrade shall begin immediately after mixing or gradation is complete. The subgrade shall be uniformly compacted with a sheep's foot compactor capable of compacting 12" of thickness with centrifugal force of 25,000 lbs. (example Cat CP 563) until compactor is no longer leaving depressions in the roadbed.
- Finishing: When vibratory and static compaction is complete, the surface shall be shaped to the required lines, grades and cross sections. Compaction shall be finished with a smooth drum roller or wheel roller to seal the surface, minimize evaporation, and prevent wetting from heavy rains. No traffic shall be permitted on the completed subgrade until it has passed a proof roll. The curing period shall be from 3-5 days due to specific site conditions at the discretion of the Project Engineer.

- Compaction of AASHTO: The first 6 inches below the subgrade shall be compacted to 100% of the maximum dry density as determined by the provisions of AASHTO T-99. Water shall be prevented from standing on the compacted subgrade. The owner shall provide and pay for compaction tests of the subgrade to insure compliance with these specifications. Test results shall be submitted to the Engineer.

- Utility Structures: Check for correct elevation of all manhole covers, valve boxes, and similar structures located within areas to be paved, and make, or have made, any necessary adjustments in such structures.

- Placing Concrete:
  - Subgrade: Place concrete only on a moist, compacted subgrade or base free from loose material. Place no concrete on a muddy or frozen subgrade.
  - Forms: All forms shall be free from warp, tight enough to prevent leakage and substantial enough to maintain their shape and position without springing or settling, when concrete is placed. Forms shall be clean and smooth immediately before concreting.
  - Placing Concrete: Concrete shall be deposited so as to require a little rehandling as practicable. When concrete is to be placed at an atmospheric temperature of 35 degrees F or less, paragraph 702.11 of the Indiana Department of Highways Standard Specifications latest revision shall be followed.

- Concrete Curb and Gutter:
  - Contraction Joints: Unless otherwise provided, contraction joints shall be sawed or tooled joints spaced 20 feet on center.
  - Finish: Tamp and screed concrete as soon as placed, and fill any honey combed places. Finish square corners to 1/4" radius and other corners to radii shown.

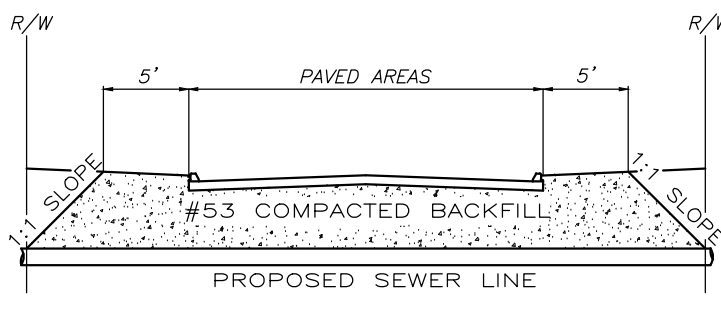
- Concrete Walks and Exterior Steps:
  - Slopes: Provide 1/4 inch per foot cross slope. Make adjustments in slopes at walk intersections as necessary to provide proper drainage.
  - Dimensions: Walks and steps shall be one course construction and of widths and details shown on the drawings.
  - Finish: Screed concrete and trowel with a steel trowel to a hard dense surface until water has disappeared. Apply medium broom finish and scribe control joints at 5 foot spacing. Provide 1/2" expansion joints where sidewalks intersect and at a maximum spacing of 50 feet between expansion joints.

- Curing Concrete: Except as otherwise specified, cure all concrete by one of the methods described in Section 501.17 of the Indiana Department of Highways Standard Specifications, latest revisions.

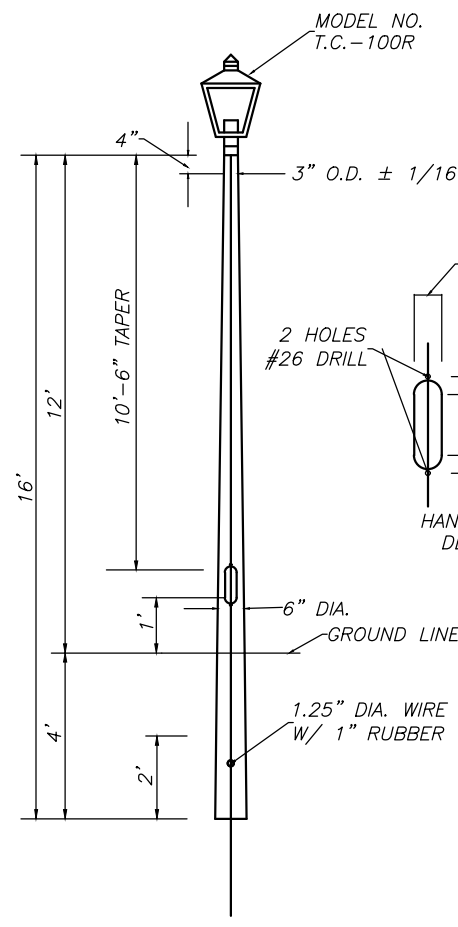
- Bituminous Pavement: Hot Mix Asphalt pavement shall be as specified in Section Hot Mix Asphalt 402 of the Indiana Department of Highways Standard Specifications, latest revisions. Paving will not be permitted during unfavorable weather or when the temperature is 40 degrees F and falling.

- Compacted Aggregate Subbase: The thickness shown on the drawings is the minimum thickness of the fully compacted subbase. Compaction shall be accomplished by rolling with a smooth wheeled roller weighing 8 to 10 tons. Compact to 90% compaction using Standard Testing Procedures. Along curbs, headers and walls and at all placed not accessible to the roller, the aggregate material shall be tamped with mechanical tampers or with approved hand tampers.

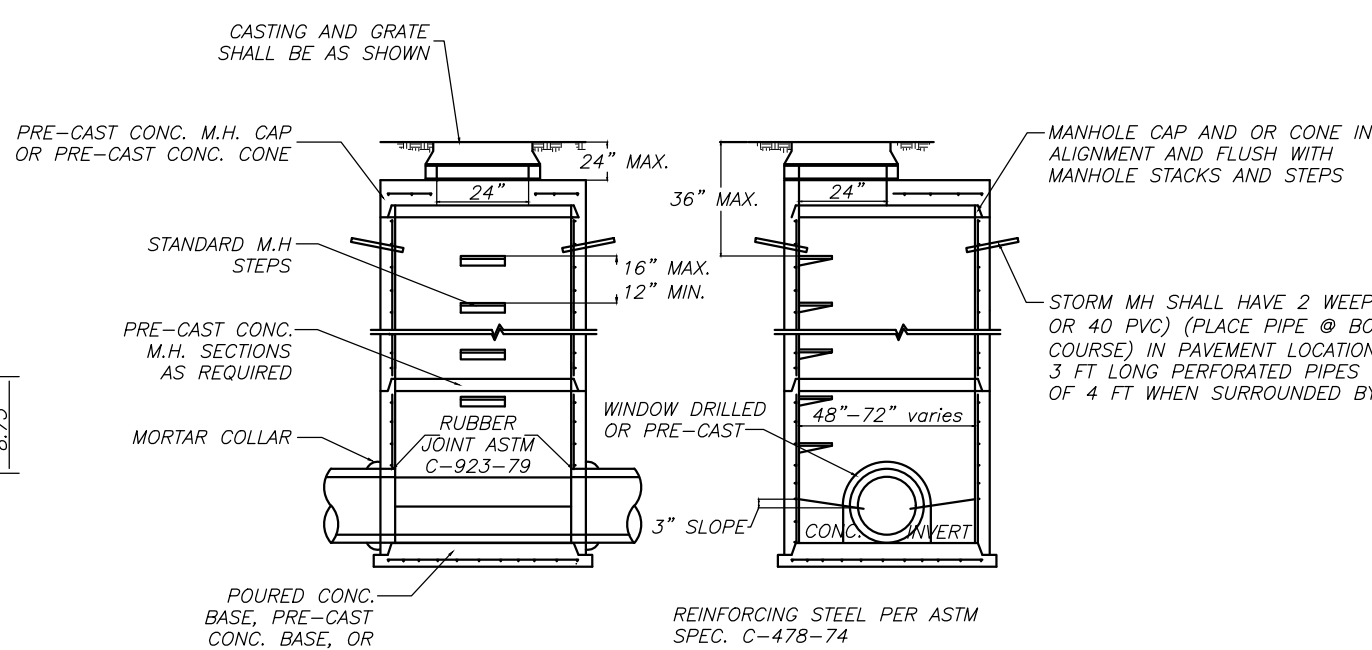
- Density Test: Density tests shall be performed on every 1 foot of fill and 50 feet apart on fill sections only.



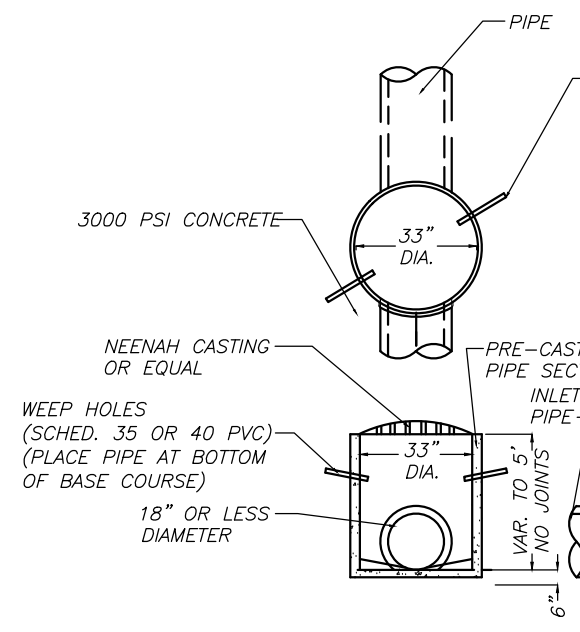
**MINIMUM BACKFILL REQUIREMENT FOR WORK ALONG ROADWAYS AND COUNTY RIGHT-OF-WAYS**  
No Scale



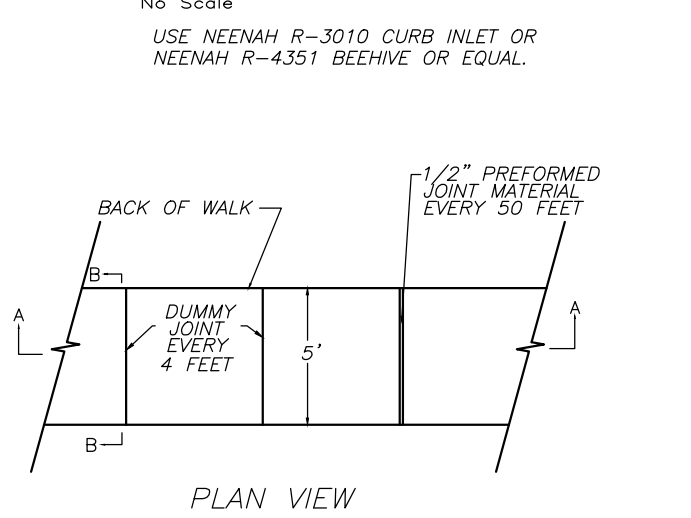
**TYPICAL LIGHT POLE**  
No Scale



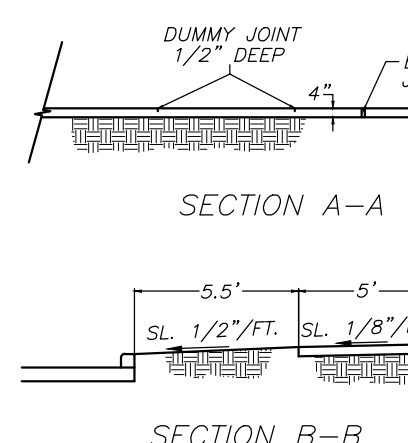
**48" STORM MANHOLE**  
No Scale



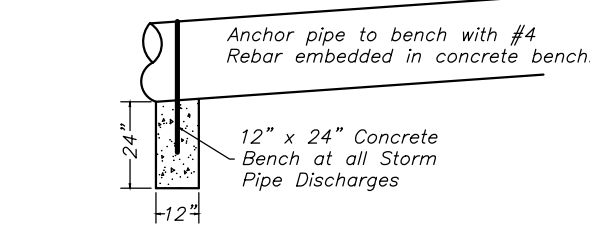
**33" INLET**  
No Scale



**TYPICAL SIDEWALK DETAIL**  
No Scale

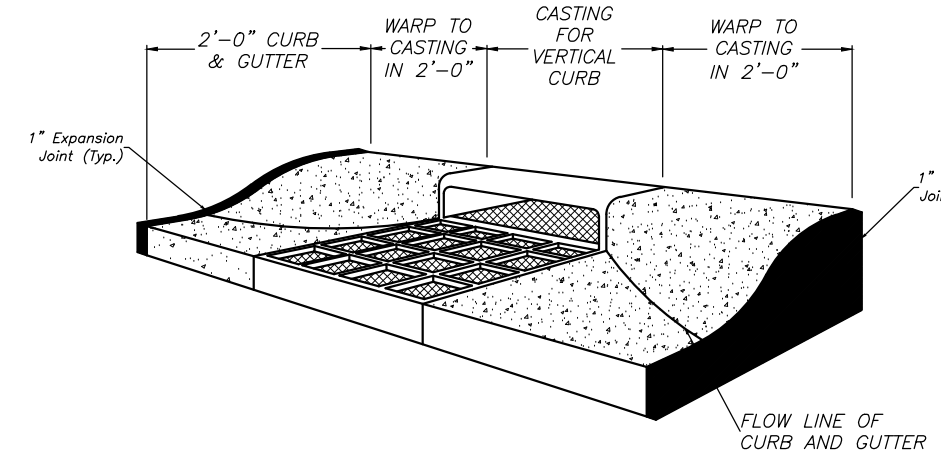


**TYPE I-B CONCRETE CURB DETAIL**  
No Scale



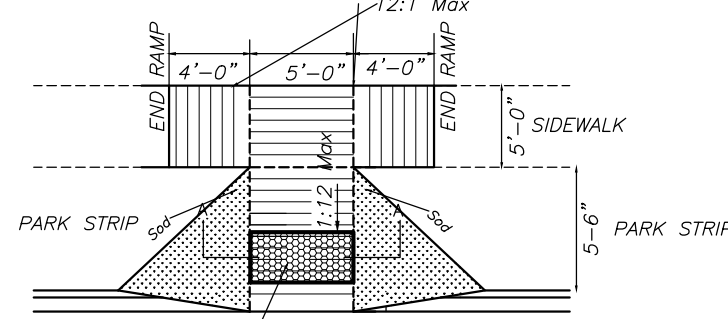
**CONCRETE BENCH DETAIL**  
No Scale

Storm Discharge Pipe shall be strapped to concrete anchor if pipe is submerged.

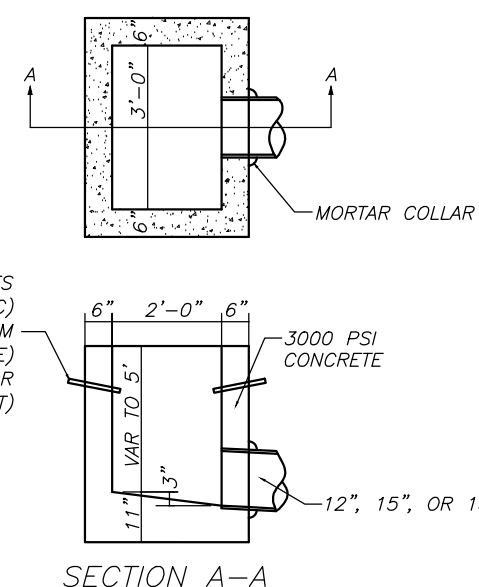


**WARPED CURB INLET DETAIL**  
No Scale

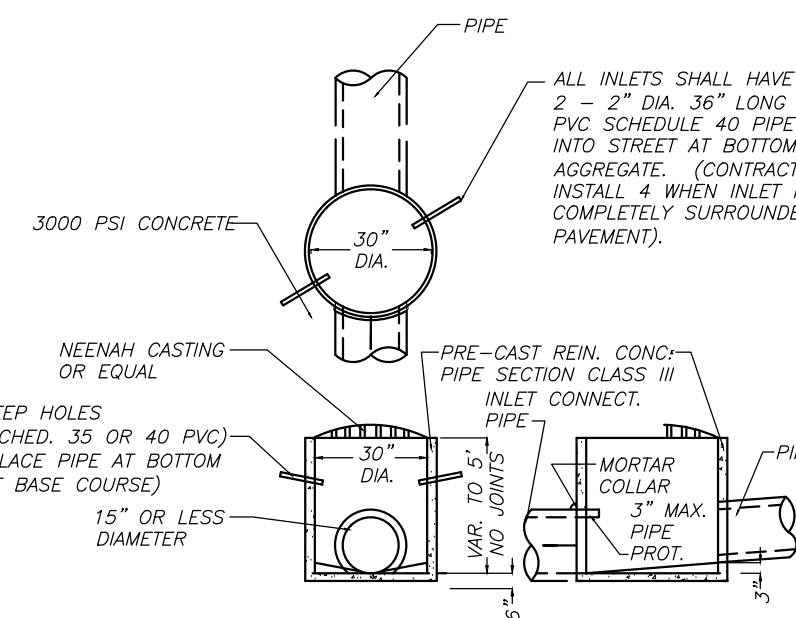
- NOTE:**
- All Casting Grate Surfaces to be Depressed 1" to 1.5" Below Street Surface with Smooth Transition of Paving to Grate Surface.
  - All Inlets Shall have 1" Expansion Joint Material 2'-0" from inlet installed on both sides. (see detail herein)



**CURB RAMP, TYPE "C"**  
No Scale

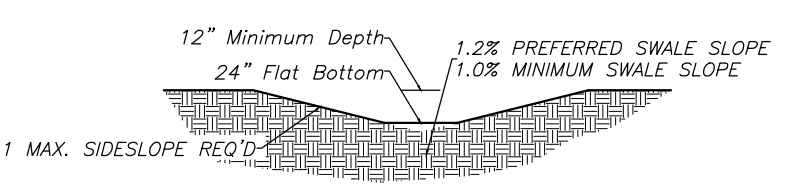


**2' x 3' INLET**  
No Scale

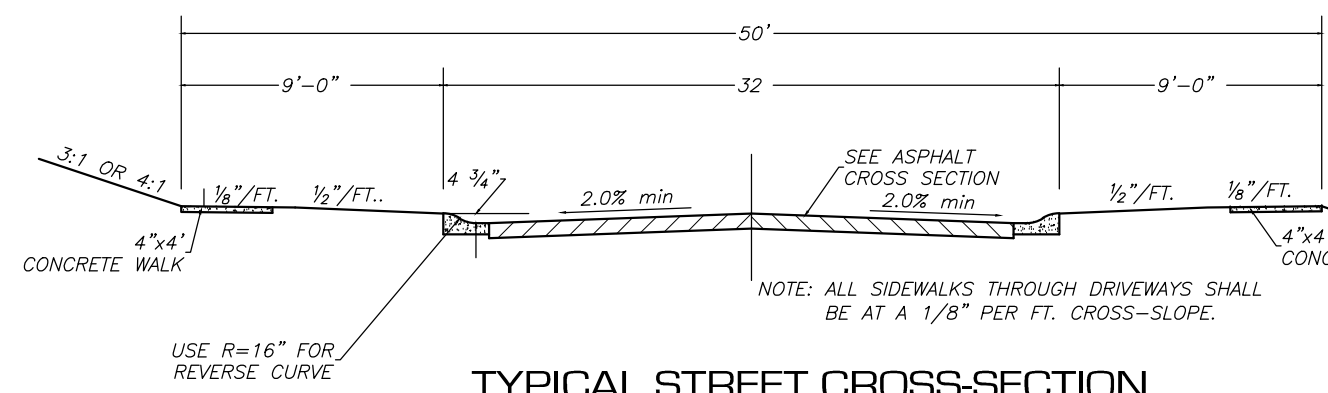


**30" INLET**  
No Scale

- NOTE:** POURED CONCRETE BASE WITH #5 BARS BOTH WAYS 12" C. TO C. USE NEENAH R-3010 CURB INLET OR NEENAH R-4351 BEEHIVE OR EQUAL.



**TYPICAL SWALE DETAIL**  
Not to Scale



**TYPICAL STREET CROSS-SECTION**

**STORM SEWER SPECIFICATIONS**

**1. SCOPE OF WORK**

- The work under this section includes all storm sewers, storm water inlets and related items including excavating and backfilling necessary to complete the work shown on the drawings.

**2. MATERIALS**

- Storm Sewers:
  - Corrugated Polyethylene pipe shall be A.D.S. N-12 or Hancor Hi-Q and shall conform to AASHTO M294 latest revision with joints conforming to ASTM D-3350 latest revision.
  - Reinforced Concrete pipe shall conform to ASTM C-76 latest revision with plain joints.
- Manholes:
  - Precast reinforced concrete manhole sections and steps shall conform to ASTM C-478 latest revision.
  - Castings shall be of uniform quality, free from blow holes, porosity, hard spots, shrinkage, distortion or other defects. They shall be smooth and well-cleaned by shotblasting or by some other approved method. They shall be coated with asphalt paint which shall result in a smooth coating, tough and tenacious when cold, not tacky or brittle. They shall be gray iron meeting ASTM A-48 latest revision.
  - Joints - manhole sections shall be jointed with rubber type gaskets. The rubber type gaskets shall meet ASTM C-433 latest revision.

- Subdrains:
  - Perforated corrugated plastic pipe subdrains shall conform to ASTM D-3350 and AASHTO H252.

**3. APPLICATIONS:**

- Permits and Codes: The intent of this section of the specifications is that the contractor's bid on the work covered herein shall be based upon the drawings and specifications but that the work shall comply with all applicable codes and regulations as amended by any waivers. Contractor shall furnish all bonds necessary to get permits for cuts and connections to existing sewers.
- Local Standards: The term "Local Standards" as used herein means the standards of design and construction of the respective municipal department or utility company.
- Existing Improvements: Maintain in operating condition all active utilities, sewers and other drains encountered in the sewer installation. Repair to the satisfaction of the owner any damage to existing active improvements.
- Workmanship: To conform to all local, state and national codes and to be approved by all local and state agencies having jurisdiction.
- Trenching: Lay all pipe in open trenches, except when the local authority gives written permission for tunneling. Open the trench sufficiently ahead of pipe laying to reveal any obstructions. The width of the trench shall be the inside pipe diameter plus 24 inches for 12 inches above the pipe. Sheet and brace trench as necessary to protect workmen and adjacent structures. All trenching to comply with Occupational Safety and Health Administration Standards. Keep trenches free from water while construction is in progress. Under no circumstances lay pipe or appurtenances in standing water. Conduct the discharge from trench dewatering to drains or natural drainage channels. Trenching and grade lines shall be maintained by lasers or other approved devices to assure proper slopes and lines are met.
- Special Supports: Whenever in the opinion of the Engineer, the soil at or below the pipe grade is unsuitable for supporting sewers and appurtenances specified in this section, such special support, in addition to those shown or specified, shall be provided as the Engineer may direct and the contract will be adjusted.
- Backfilling: For a depth of at least 12 inches above the top of the pipe, backfill with earth or granular material free from large stones, rock fragments, roots or sod. Tamp this backfill thoroughly, taking care not to disturb the pipe. For the remaining trench depth, backfill with earth or granular material containing stones, or rocks not larger than 4 inches. Backfill under walks, parking areas, driveways and street shall be granular material only - thoroughly compacted by approved methods. Trenches parallel to and within 5 feet of paved roadways shall be constructed the same.
- Manhole Inverts: Construct manhole flow channels of concrete, sewer pipe or brick, smoothly finished and of semi-circular section conforming to the inside diameter of the connecting sewers. Make changes in size or grade gradually and changes in direction by true curves. Provide such channels for all connecting sewers at each manhole.
- Subdrains: All subdrains onsite shall be of the size as shown and shall be placed as shown on the plans. They shall be constructed to the grades shown. All drains constructed offsite as part of the outlet drain will be located as shown.
- Utilities: It shall be the responsibility of each contractor to verify all existing utilities and conditions pertaining to his phase of the work. It also shall be the contractor's responsibility to contact the owners of the various utilities before work is started. The contractor shall notify in writing the owners or the engineer of any changes, errors or omissions found on these plans or in the field before the work is started or resumed.
- As-builts: As-built drawings to be provided to the Owner upon completion.
- Television Inspection Log: The contractor shall furnish to the city a legible taped television inspection record of the entire new storm sewer and a written record based upon the television inspection record prior to final acceptance by the Owner.

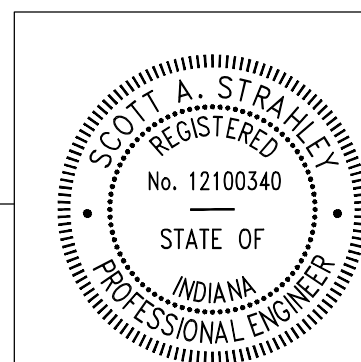
**EARTHWORK**

- All topsoil should be removed before embankment or fill is constructed. Contractor shall contact owner for stockpile locations.
- Exposed subgrade shall be proof-rolled to determine unsuitable soil locations. Any unsuitable locations shall be excavated and backfilled with suitable material free of vegetable matter, rubbish, large rock and other deleterious material.
- All fill places under paved areas shall be compacted to 98% max-dry density (ASTM D-1557), compacted in 8" layers. Any unsuitable locations shall be excavated and properly backfilled.
- Removal of existing trees, buildings, silos, etc. shall require back fill with suitable material to 98% compaction.
- All testing shall be done by a qualified soil testing firm approved by the owner.
- A minimum of 4" of topsoil shall be replaced on all areas requiring vegetation to grow (areas outside building and paving areas).
- All exposed areas receiving topsoil shall be seeded and mulched to prevent erosion. It is the responsibility of the earth moving contractor to install more rigid erosion control if site conditions require it. Erosion control specifications are included as a part of the earthwork construction.
- Straw bales or silt fence is required around each storm sewer inlet and drainage swales during construction.
- Positive drainage during construction is required either temporarily or permanently to prevent any ponding of water or encroachment on adjacent property.
- The earthwork contractor is responsible to keep all tiles and drainage paths open or flowing at all times during construction.

**CURB RAMP DETAIL GENERAL NOTES**

- All material and workmanship shall be in accordance with the Indiana Department of Transportation Standard Specification, latest edition.
- All sidewalks shall conform to ADA standards, include areas within driveways, spillways, ramp locations and all lot frontages
- The curb ramp includes the ramp, flared sides, and warped or rolled edges as indicated by the shaded area on the details.
- Curb ramps shall be specified by the appropriate type where there is an existing or proposed sidewalk at street intersection, across driveways, and across alleys.
- Dimensions are based on a 6 inch curb height, and shall be proportionally adjusted for other curb heights.
- The thickness of concrete in the curb ramp, including flared sides and rolled edges, shall be as shown for the type specified.
- The ramp slope should not exceed 1:12 at any curb ramp location where pedestrian traffic must travel along or across the curb ramp.
- The location of curb ramps in new construction shall take precedence over the location of drainage structures and signal, utility or light poles.
- The bottom edge of the curb ramp shall be flush with the edge of the adjacent pavement and gutter line.
- Curb ramps shall be aligned with the sidewalk and the cross-walk; where possible.
- The normal gutter flow line shall be maintained throughout the curb ramp area, and appropriate drainage structures shall be used, as needed, to intercept the flow prior to the curb ramp area. Positive drainage shall also be provided to carry water away from the intersection of the curb ramp and the gutter line.
- Surface texture of curb ramps shall be course brooming or other approved method transverse to ramp slope (Min. 1/8 in. deep to a Max. 3/16 in. depth).
- All curb ramps shall include Visual Warning Detection per ADA requirements. Contractor shall use 2' x 5' insert as provided by concrete supplier to place. 1/4" high round warning dimples. Dimple inset shall be Red in Color

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**MONTGOMERY FARMS, PHASE 4**

**Storm Sewer & Street Details**

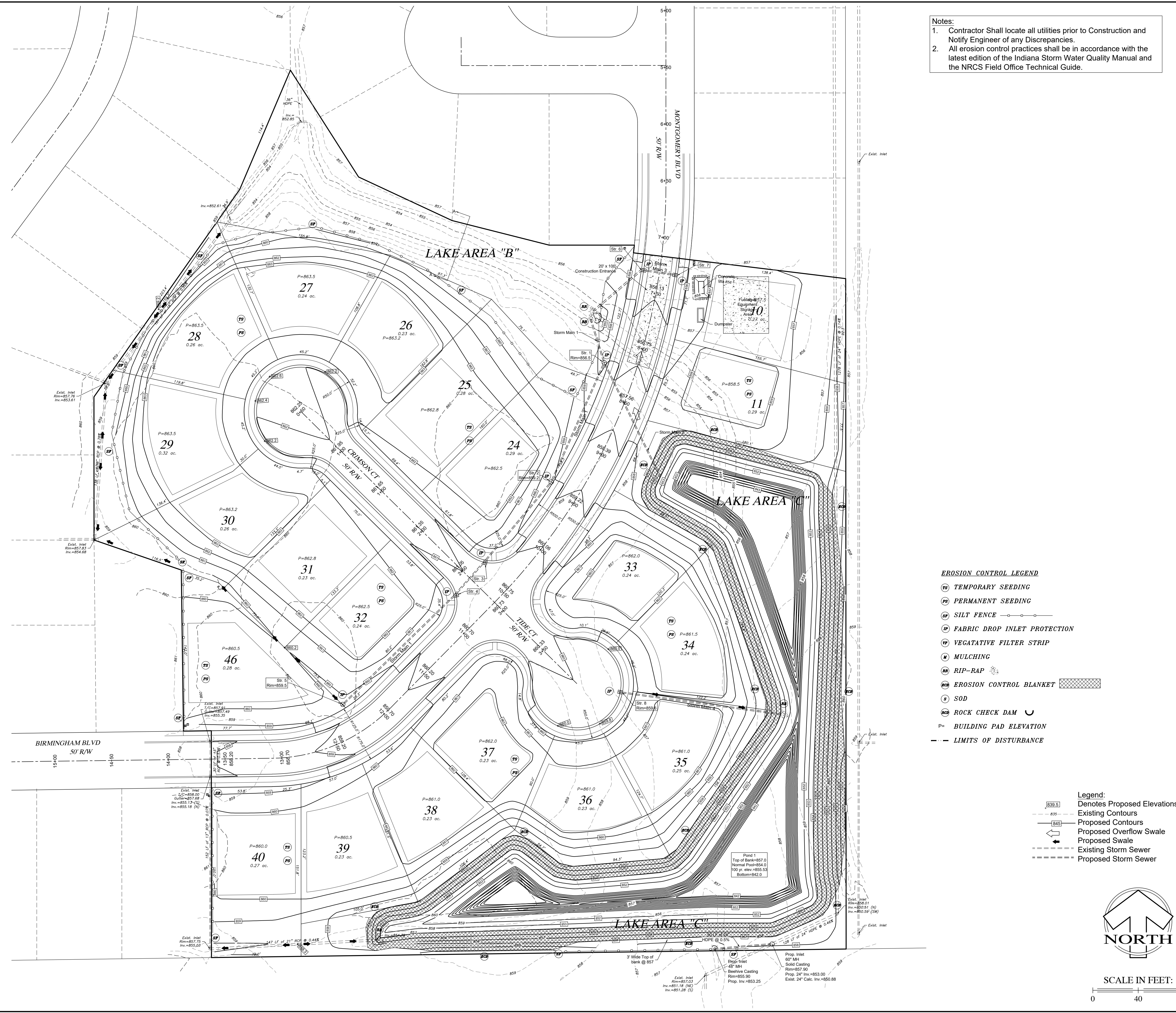
Revisions: 07/07/2022 - Rev. per CWE comm. 07/14/2022 - Rev. per CWE comments	For: <b>Oakmont Development Co. II, LLC</b>	Scale:
	By: <b>Sauer Land Surveying, Inc.</b> 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Sheet No. <b>7 of 13</b>
	Date: <b>March 1, 2022</b>	

**Notes:**

- Contractor Shall locate all utilities prior to Construction and Notify Engineer of any Discrepancies.
- All erosion control practices shall be in accordance with the latest edition of the Indiana Storm Water Quality Manual and the NRCS Field Office Technical Guide.

**SWPPP NOTES:**

- The site is an existing field.
- The entire site is in Flood Zone X. No part of the site contains any floodway fringe or floodway areas.
- Land use upstream from this site is residential and agricultural.
- All proposed land disturbance is located on this grading plan by building pad grades and surface flow arrows.
- Construction related pollution sources include mud tracked onto street surfaces, petroleum spills, and oil and grease droppings from construction equipment. An area for fuel or oil contaminated soil shall be maintained adjacent to the concrete chute washout area near the stable construction entrance. Small amounts of soil can be stored temporarily in a shallow depression lined with impervious material until it can be disposed of properly. Additionally, any soil contaminated by petroleum products shall be handled in accordance with all regulations. Immediately following the discovery of a leaking fuel storage tank or a leak of fuel or oil from a machine, the leak should be stopped and the cause of the leak repaired. The soil impacted by the leak shall be removed to a safe holding area. The extent of the spill shall then be determined in order to assure compliance with reporting requirements and, if required, the proper notifications shall be made. Disposal of all contaminated material shall then take place into an approved landfill with a complete documentation of the source of contamination, the remedial actions taken, and the time and place of disposal.
- There are no known state or federal water quality permits required for this construction.
- There are no known locations where stormwater may be discharged into groundwater.
- Stormwater will be discharged from this site into a series of detention basins which eventually outlets into Fisher Creek and further Stony Creek. Stony Creek is on the established U.S. EPA TMDL list for E. coli. It is not on the IDEM 303d list of impaired waters.
- No soil stockpiles or borrow pits will be located on this site.
- The equipment washout pit will be located on this site.
- A dumpster for discarded non-hazardous materials will be located adjacent to the washout pit.
- There will be no fuel tanks or other hazardous materials stored on the project site.
- The construction entrance will be located at the proposed entrance to the site at Montgomery Boulevard.
- Erosion Control Blankets shall be applied around all pond banks between the normal pool and the top of bank.
- NOT should be submitted to the Madison County Engineer and Drainage Board for final inspection upon site stabilization and completion of home construction.
- In the event of dewatering due to a rain event during construction, the discharge point shall be the existing inlet in the Southeast corner of the development.
- Other than a swale running through the site, there are no known wetlands, lakes and water courses on or adjacent to the project site.



- EROSION CONTROL LEGEND**
- TEMPORARY SEEDING
  - PERMANENT SEEDING
  - SILT FENCE
  - FABRIC DROP INLET PROTECTION
  - VEGETATIVE FILTER STRIP
  - MULCHING
  - RIP-RAP
  - EROSION CONTROL BLANKET
  - SOD
  - ROCK CHECK DAM
  - BUILDING PAD ELEVATION
  - LIMITS OF DISTURBANCE

- Legend:**
- Denotes Proposed Elevations
  - Existing Contours
  - Proposed Contours
  - Proposed Overflow Swale
  - Proposed Swale
  - Existing Storm Sewer
  - Proposed Storm Sewer

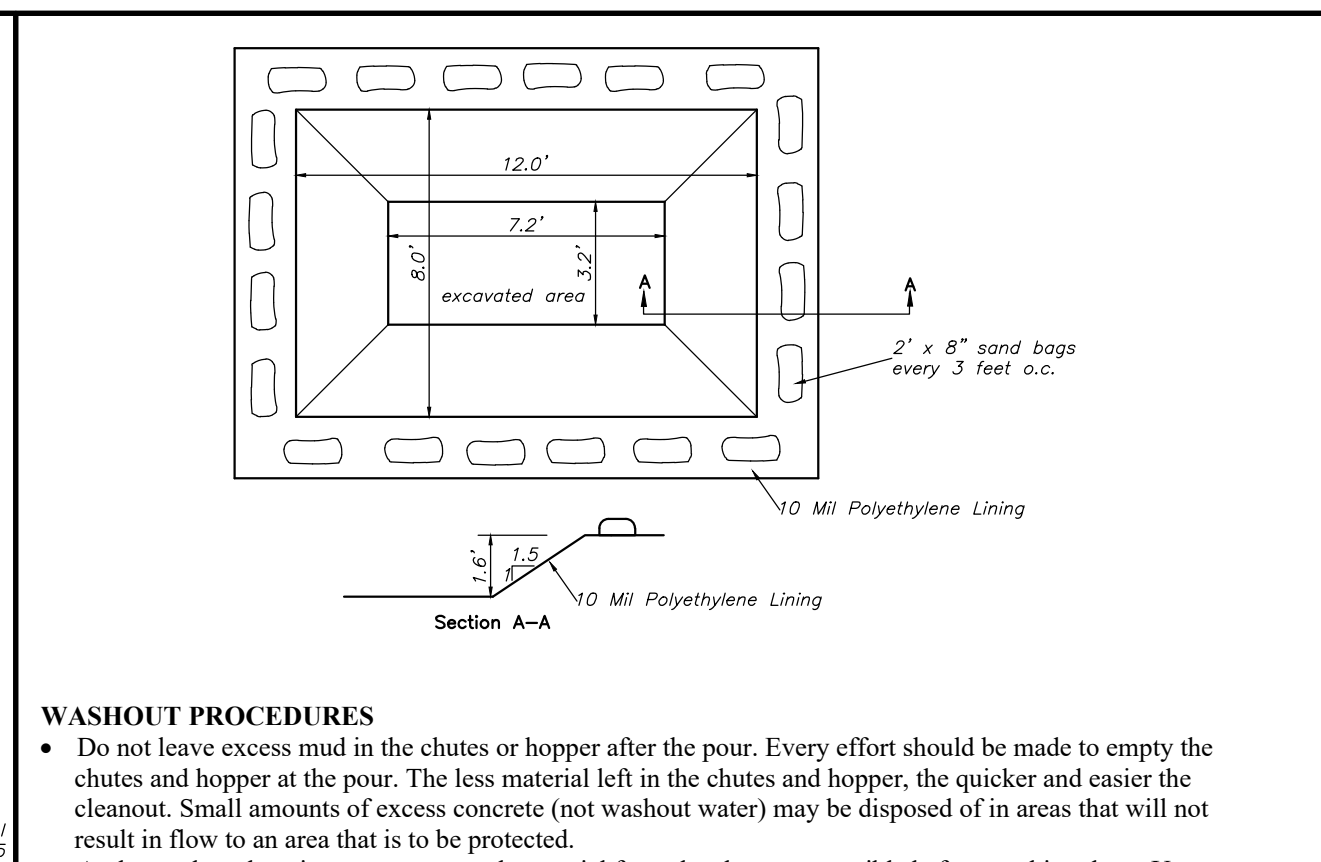
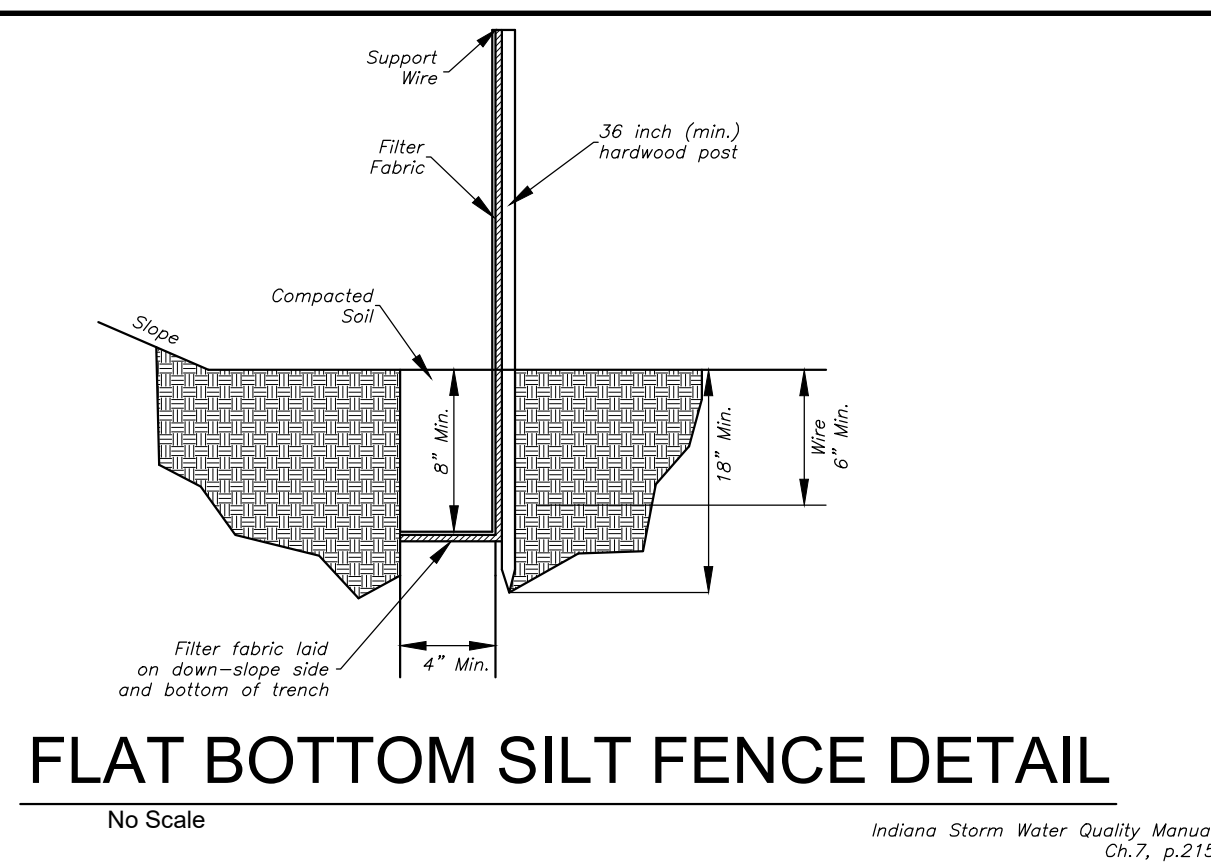
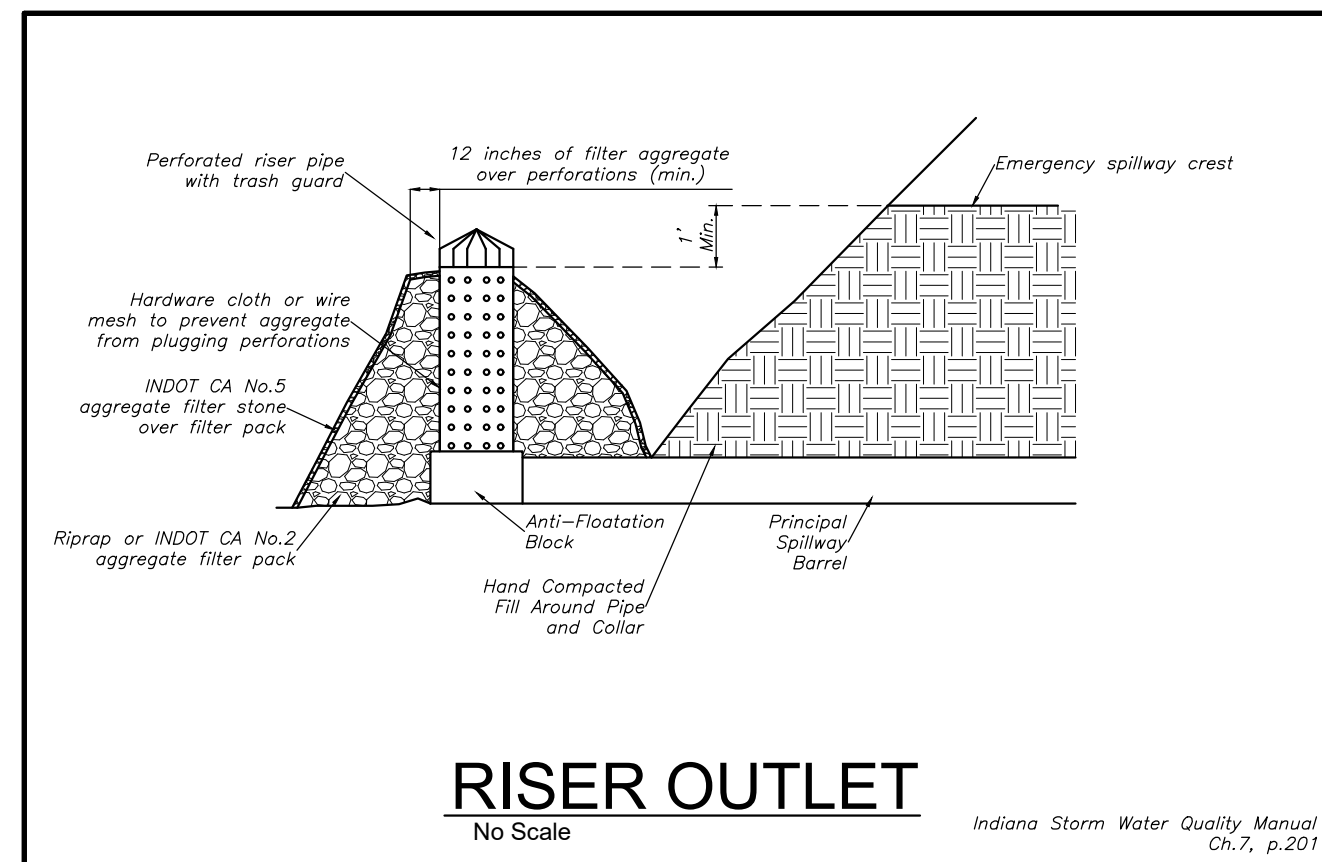


SCALE IN FEET:  
0 40 80

<p>HOLEY MOLEY SAYS. "DON'T DIG BLIND"</p> <p>1-800-382-5544 CALL TOLL FREE 1-800-428-5200</p>	<p>Indiana Professional Surveyor</p>	<p>NO. 20900196 STATE OF INDIANA LAND SURVEYOR</p>
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**MONTGOMERY FARMS, PHASE 4**  
**Erosion Control Plan**

Revisions: 07/29/2022 - Rev. per SWCD comm.	For: Oakmont Development Co. II, LLC	Scale: 1"=40'
By: Sauer Land Surveying, Inc. 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Date: March 1, 2022	Sheet No. 8 of 13



**WASHOUT PROCEDURES**

- Do not leave excess mud in the chutes or hopper after the pour. Every effort should be made to empty the chutes and hopper at the pour. The less material left in the chutes and hopper, the quicker and easier the cleanout. Small amounts of excess concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be protected.
- At the washout location, scrape as much material from the chutes as possible before washing them. Use non-water cleaning methods to minimize the chance for waste to flow off site.
- Remove as much mud as possible when washing out.
- Stop washing out in an area if you observe water running off the designated area or if the containment system is leaking or overflowing and ineffective.
- Do not back flush equipment at the project site. Back flushing should be restricted to the plant as it generates large volumes of waste that more than likely will exceed the capacity of most washout systems. If an emergency arises, back flush should only be performed with the permission of an on-site manager for the project.
- Do not use additives with wash water. Do not use solvents or acids that may be used at the target plant.

**MAINTENANCE**

- Inspect daily and after each storm event.
- Inspect the integrity of the overall structure including, where applicable, the containment system.
- Inspect the system for leaks, spills, and tracking of soil by equipment.
- Inspect the polyethylene lining for failure, including tears and punctures.
- Once concrete wastes harden, remove and dispose of the material.
- Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
- Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
- Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
- The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.
- The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
- Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering.
- Prefabricated units are often pumped and the company supplying the unit provides this service.
- Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.
- When concrete washout systems are no longer required, the concrete washout systems shall be closed.
- Dispose of all hardened concrete and other materials used to construct the system.
- Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.

**TEMPORARY SEEDING**  
Purpose -To reduce erosion and sedimentation damage by stabilizing disturbed areas where additional work (e.g., grading) is not scheduled for a period of 2 mo. to 1 yr.  
-To reduce problems associated with mud or dust from bare soil surfaces during construction.  
-To reduce sediment runoff to downstream areas.  
-To improve visual aesthetics of the construction areas.

**REQUIREMENTS** Site and seedbed preparation: Graded and fertilizer applied.  
Plant Species: Selected on the basis of quick germination, growth, and time of year to be seeded.  
Mulch: Clean grain straw, hay, wood fiber, etc., to protect seedbed and encourage plant growth.  
Seeding frequency: As often as possible following construction activity. Daily seeding of rough graded areas when the soil is loose and moist is usually most effective.

**APPLICATION**  
**SITE PREPARATION:**  
1. Install practices needed to control erosion, sedimentation, and water runoff, such as temporary and permanent diversions, sediment traps or basins, silt fences, and straw bale dams.  
2. Grade the site as specified in the construction plan.

**SEEDBED PREPARATION:**  
1. Test soil to determine its nutrient levels. (Contact your county SWCD or Cooperative Extension Office for assistance and soils information, including available soil testing services.)  
2. Fertilize as recommended by the soil test. If testing is not done, consider applying 400-600 lb./acre of 13-12-12 analysis, or equivalent, fertilizer.  
3. Work the fertilizer into the soil 2-4 in. deep with a disk or rake operated across the slope.

**SEEDING:**  
1. Select a seeding mixture and rate from Exhibit 3.11-B, and plant at depth and on dates shown.  
2. Apply seed uniformly with a drill or cultipacker-seeder or by broadcasting, and cover to the depth shown on Exhibit 3.11-B.  
3. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.  
4. Mulch seeded areas to increase seeding success. Anchor all mulch by crimping or tacking. Use of netting or erosion control blankets is possible, but may not be cost-effective for temporary seeding.

**Exhibit 3.11-B. Temporary Seeding Recommendations.**

Seed Species*	Rate/acre	Planting depth	Optimum dates**
Wheat or rye	150 lb.	1 to 1-1/2 in.	9/15 to 10/30
Spring Oats	100 lb.	1 in.	3/1 to 4/15
Annual rye grass	40 lb.	1/4 in.	3/1 to 5/1; 8/1 to 9/1
German Millet	40 lb.	1 to 2 in.	5/1 to 6/1
Sudan grass	35 lb.	1 to 2 in.	5/1 to 7/30

\* Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than a year (Practice 3.13.12).  
\*\* Seeding outside the optimum dates increases the chance of seeding failure.

**MAINTENANCE**  
\* Inspect periodically after planting to see that vegetative stands are adequately established; re-seed if necessary.  
\* Check for erosion damage after storm events and repair; reseed and mulch if necessary.  
\* Top dress fall seeded wheat or rye seeding with 50 lb./acre of nitrogen in February or March if nitrogen deficiency is apparent. (Exhibit 3.11-B shows only wheat/rye fall seeded.)

**PERMANENT SEEDING**  
Purpose: To stabilize exposed areas after all final grading work is complete.

**REQUIREMENTS**  
Site and seedbed preparation: Grade, lime and fertilizer applied.  
Seed selected: Perennial ryegrass (turf-type) 60 lbs./ac.  
Bluegrass 90 lbs./ac.  
Fertilizer: According to soil test or use 600 lbs./ac. 12-12-12 analysis or equivalent.  
Mulch: 1.5 to 2 tons/ac. straw must be dry, unchopped and free of undesirable seeds.  
Mulch must cover 75% of soil surface.

**APPLICATION:**  
1. Apply fertilizer and lime as recommended by soil test.  
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4 in. deep with a disk or rake operated across the slope.  
3. Apply seed uniformly with a drill or cultipacker-seeder or by broadcasting, and cover to a depth of 1/4" to 1/2".  
4. If drilling or broadcasting, firm seedbed with a roller or cultipacker.  
5. Mulch all seeded areas and crimp or anchor mulch.

**MAINTENANCE:**  
\* Inspect periodically and after storm events until after stand is successfully established.  
\* Plan to add fertilizer the following growing season according to soil test recommendation.  
\* Repair damaged, bare, or sparse areas and gullies by filling, re-fertilizing, over or re-seeding and mulching after preparing a new seedbed.

**DORMANT SEEDING**  
Purpose -To provide early germination and soil stabilization in the Spring.  
-To reduce sediment-laden storm water runoff from being transported to downstream areas.  
-To repair or enhance previous seeding.  
-To improve visual aesthetics of the construction areas.

**APPLICATION**  
**SITE PREPARATION:**  
1. Install practices needed to control erosion, sedimentation, and water runoff, such as temporary and permanent diversions, sediment traps or basins, silt fences, and straw bale dams.  
2. Grade the site as specified in the construction plan, and apply soil amendments as recommended by a soil test (incorporate soil amendments into soil prior to soil freezing).

**SEEDBED PREPARATION:**  
1. Test soil to determine its nutrient levels. (Contact your county SWCD or Cooperative Extension Office for assistance and soils information, including available soil testing services.)  
2. Fertilize as recommended by the soil test. If testing is not done, consider applying 400-600 lb./acre of 13-12-12 analysis, or equivalent, fertilizer. (Incorporate soil amendments into soil prior to soil freezing.)  
3. Work the fertilizer into the soil 2-4 in. deep with a disk or rake operated across the slope.

**SEEDING:**  
1. Select a seeding mixture and rate from Exhibit 3.11-B, and plant at depth and on dates shown.  
2. Apply seed by broadcasting (seed is broadcast over the prepared seedbed and incorporated into the soil by natural freeze-thaw action).  
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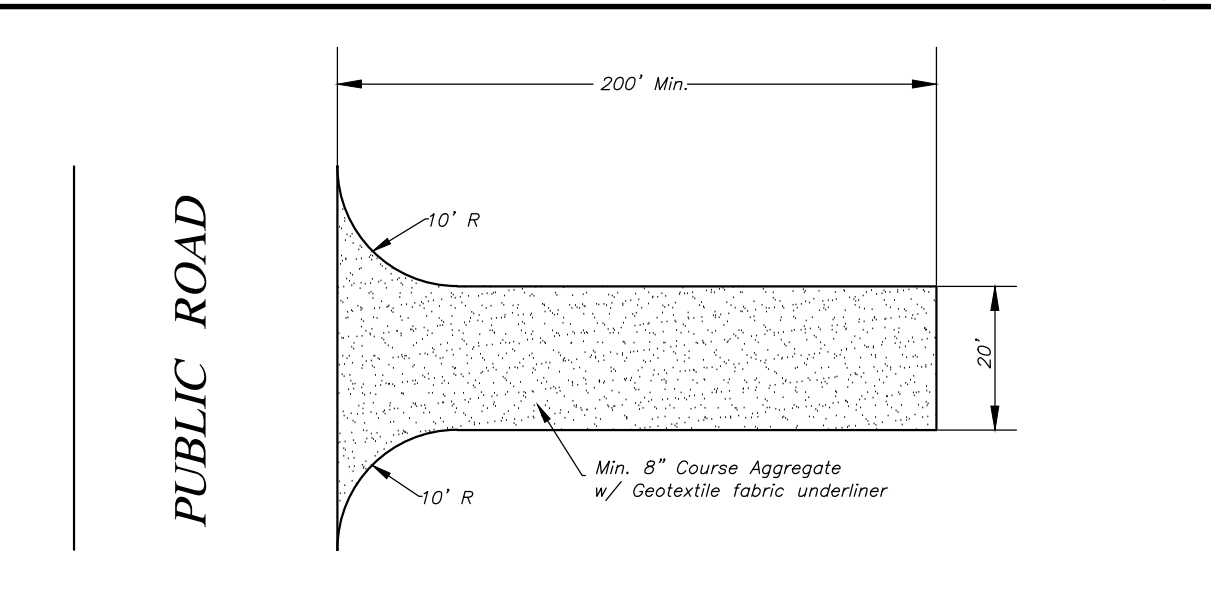
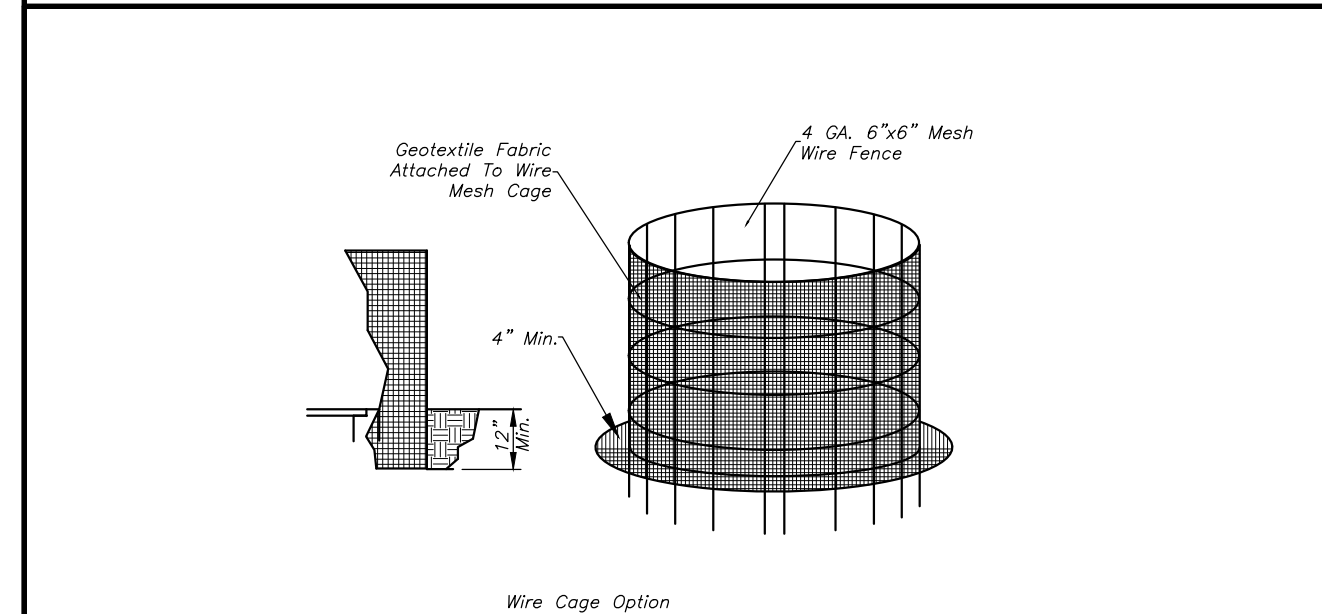
**Exhibit 3.11-B. Temporary Seeding Recommendations.**

Seed Species*	Rate/acre
Wheat or rye	150 lb.
Spring Oats	100 lb.
Annual rye grass	40 lb.

**MAINTENANCE**  
\* Inspect at least once every week  
\* Check for erosion or movement of mulch  
\* Check for inadequate cover (less than 80% density over the soil surface; re-seed and mulch in mid to late April if necessary. Re-seed within the recommended dates for temporary seeding..

**GENERAL EROSION CONTROL SPECIFICATIONS**

- All installations and practices referred to or implied on these plans shall be done in compliance with the "Indiana Storm Water Quality Manual (ISWQM), unless otherwise specified in the construction drawings or specifications. The contractor shall obtain a copy available for use on the site.
- As first priority, before any work begins, the contractor shall establish erosion control measures to insure all runoff leaving the site is controlled to reduce sedimentation off the site. If ponds are required, then they shall be constructed before storm sewers are installed.
- Do not disturb any areas outside Construction Zone areas. Maintain sod where possible.
- All unpaved, disturbed areas including ditches, pond dikes, slopes and runoff areas are to be seeded as soon as possible in accordance with Chapter 7 of the ISWQM after final grade and topsoil is in place.
- Fertilizer shall be applied to all areas receiving seed using a minimum of 400 to 600 lbs. per acre of 13-12-12 analysis fertilizer or equivalent.
- All seeded areas shall be mulched in accordance with Chapter 7 of the ISWQM using 2 tons per acre of straw or hay and anchored by crimping or other approved method. An alternate to straw or hay is wood fiber or cellulose at the rate of 1 ton per acre applied with a hydraulic mulch machine and stabilized by using a tacking agent.
- Use erosion control blanket mats in accordance with Chapter 7 of the ISWQM in areas too steep for standard straw mulch. (\$2000 Double Net Straw Blanket).
- Hydro-seeding and wood fiber mulch shall be required on areas with slopes steeper than 4:1 and erosion control blankets shall be required on areas with slopes steeper than 3:1.
- Install temporary drop inlet protection either by excavated drop inlet protection, gravel donut drop inlet protection, or geotextile drop inlet protection, all in accordance with Chapter 7 of the ISWQM around all storm inlets until paving or seeding is established.
- Install rock check dams where necessary across all swales having flow line grade less than 2% in accordance with ISWQM.
- For swales with flow lines greater than 2%, install erosion control blankets on the lower one foot of the flowline in accordance with Chapter 7 of the ISWQM.
- Place riprap as shown on the drawings immediately after structures are set in accordance with Chapter 7 of the ISWQM.
- Unpaved right of way is to be adequately drained and silt fence or straw bales set in temporary swales to prevent erosion.
- If major erosion is occurring, the earthwork contractor shall be responsible for constructing sediment trap(s) in accordance with Chapter 7 of the ISWQM as required to reduce siltation, and/or placing erosion control mats on slopes or channels in addition to what is shown on the construction drawings.
- Contractors shall include all erosion control measures and maintenance of same in his bid to do the work.
- The contractor is required to inspect and maintain all erosion control measures after each storm event until vegetation is established on the site by performing the following:
  - To remove excess sediment to one half the design volume when it accumulates.
  - Immediately perform all repairs to all erosion control measures.
  - Remove trash and other accumulated debris.
  - Clean and/or replace gravel/stone as needed.
  - Remove erosion control measures when all erosion has subsided and permanent improvements are completed, smoothing the site to blend with the surrounding area, then stabilize with seed, etc. as needed.



**PERMANENT SEEDING**  
Purpose: To stabilize exposed areas after all final grading work is complete.

**REQUIREMENTS**  
Site and seedbed preparation: Grade, lime and fertilizer applied.  
Seed selected: Perennial ryegrass (turf-type) 60 lbs./ac.  
Bluegrass 90 lbs./ac.  
Fertilizer: According to soil test or use 600 lbs./ac. 12-12-12 analysis or equivalent.  
Mulch: 1.5 to 2 tons/ac. straw must be dry, unchopped and free of undesirable seeds.  
Mulch must cover 75% of soil surface.

**APPLICATION:**  
1. Apply fertilizer and lime as recommended by soil test.  
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4 in. deep with a disk or rake operated across the slope.  
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\* Plan to add fertilizer the following growing season according to soil test recommendation.  
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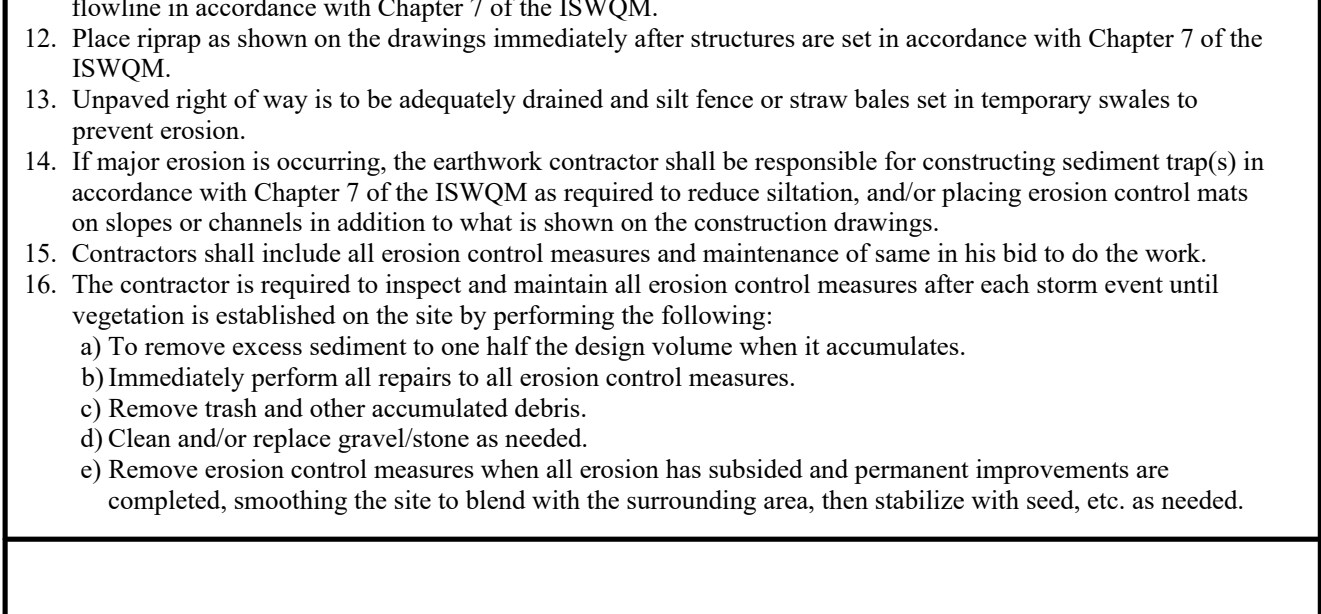
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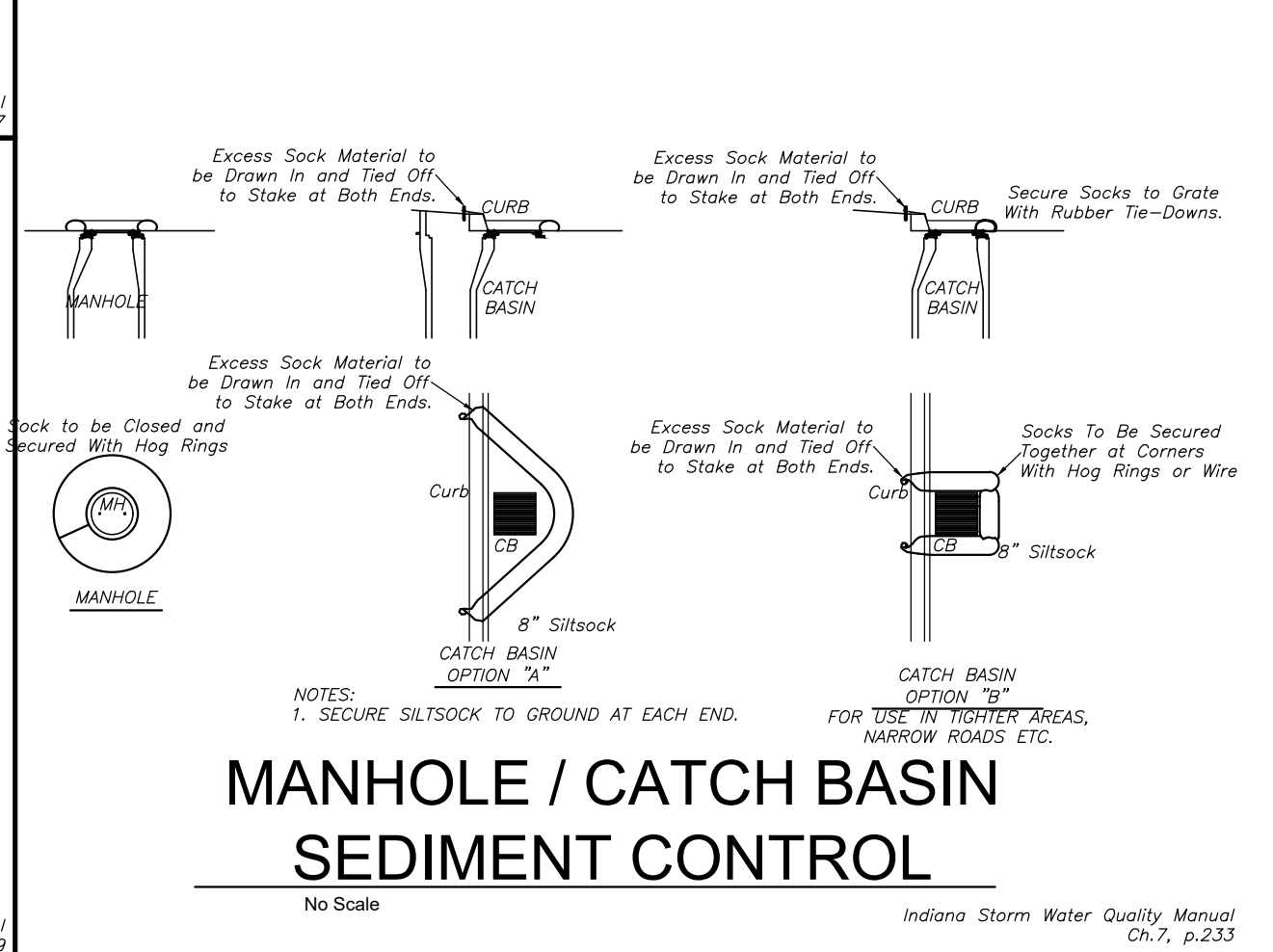
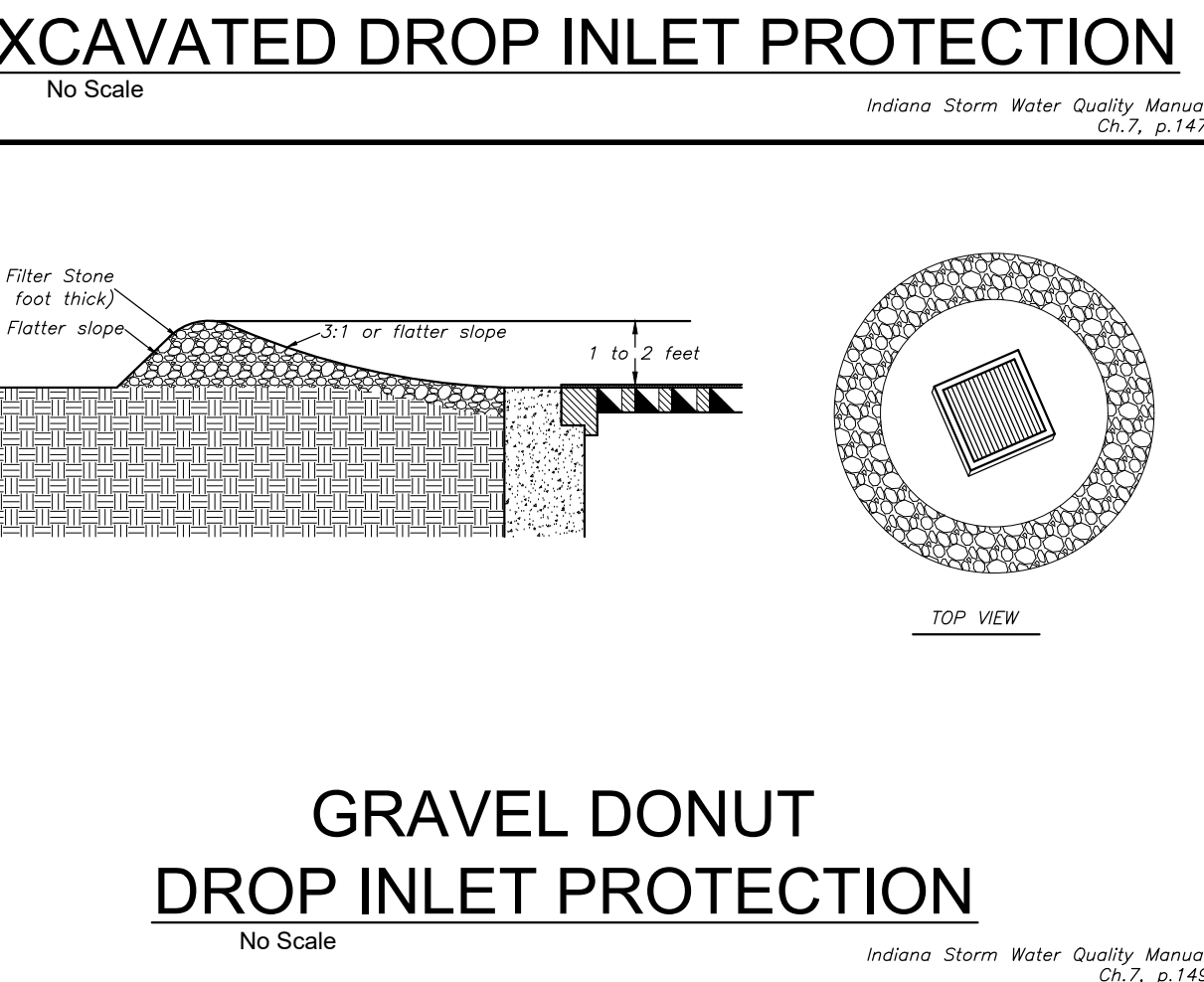
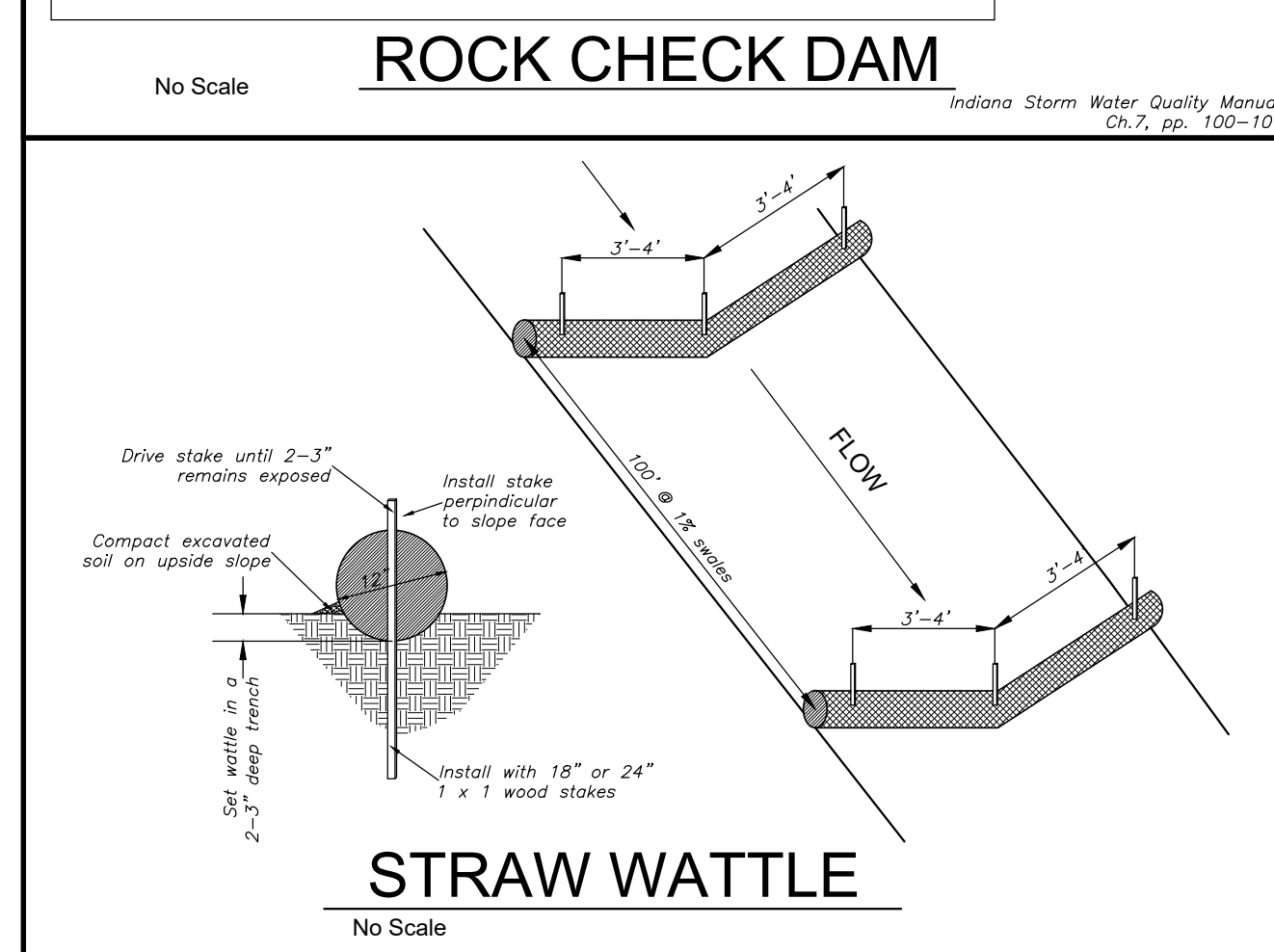
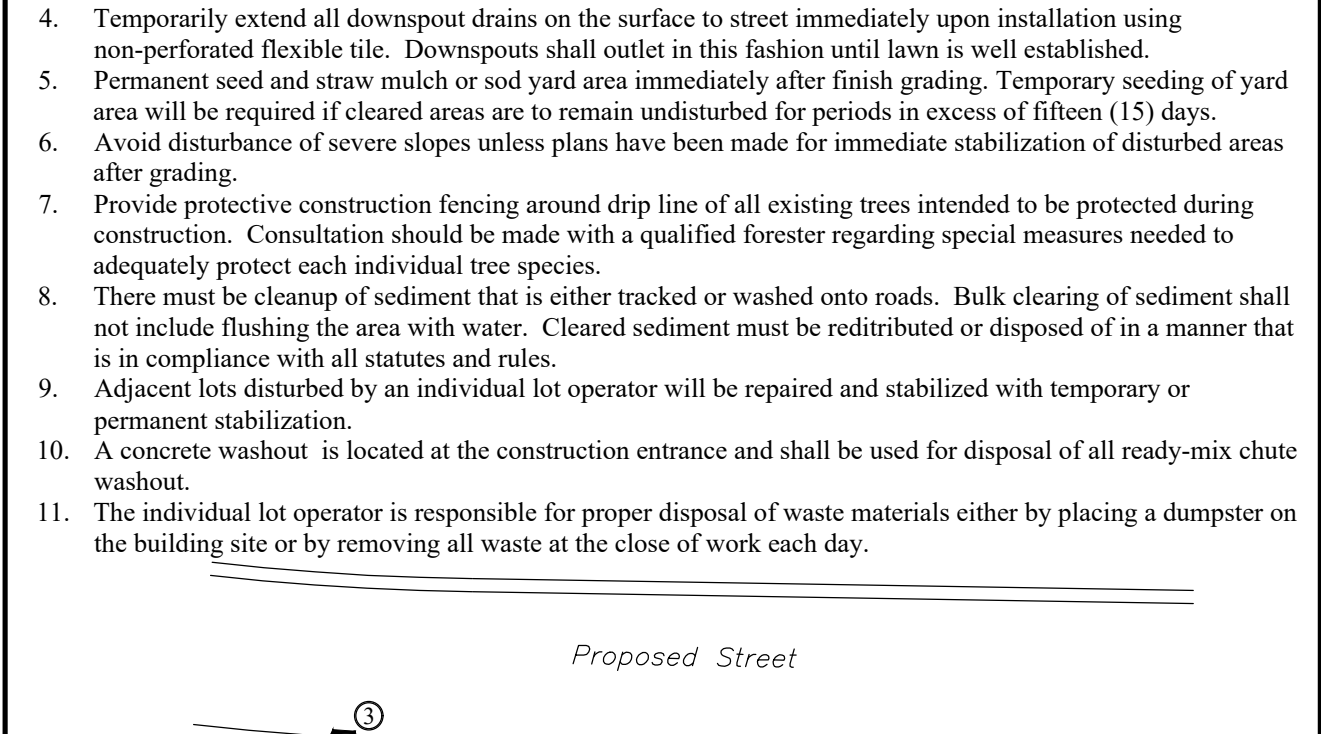
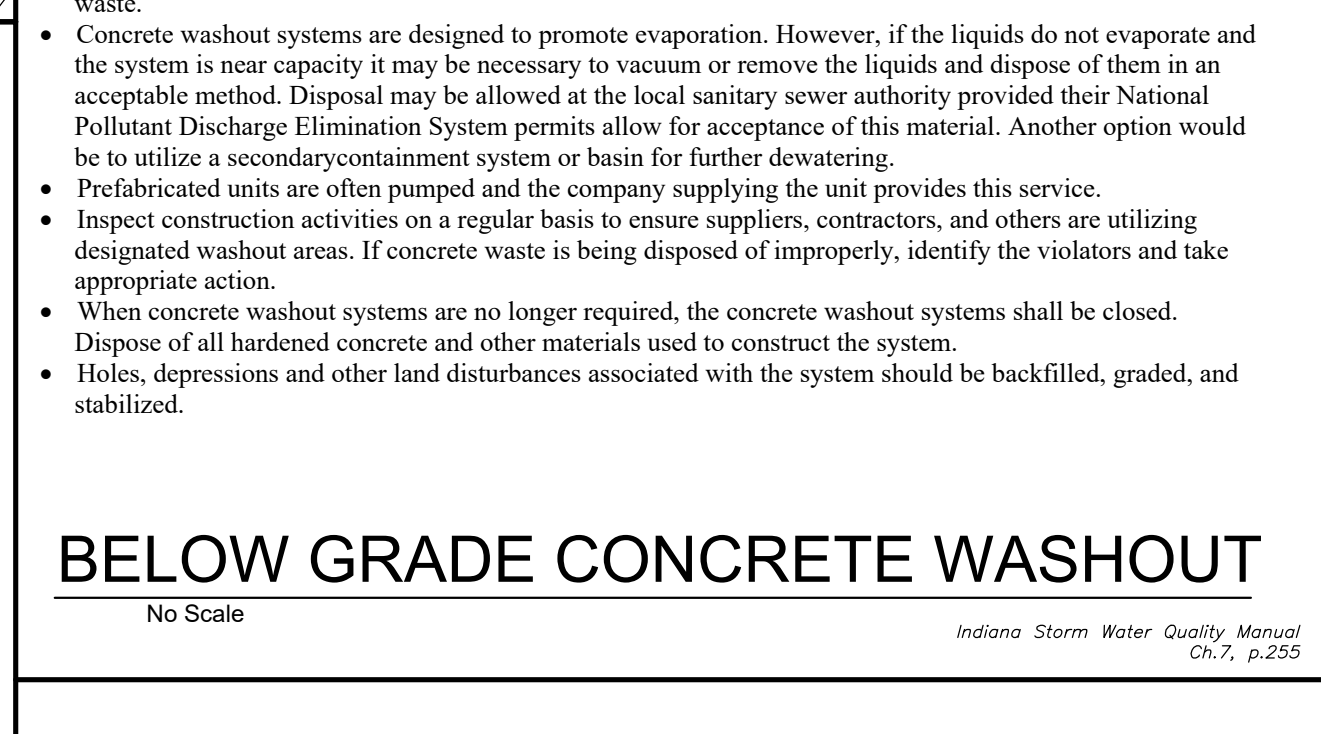
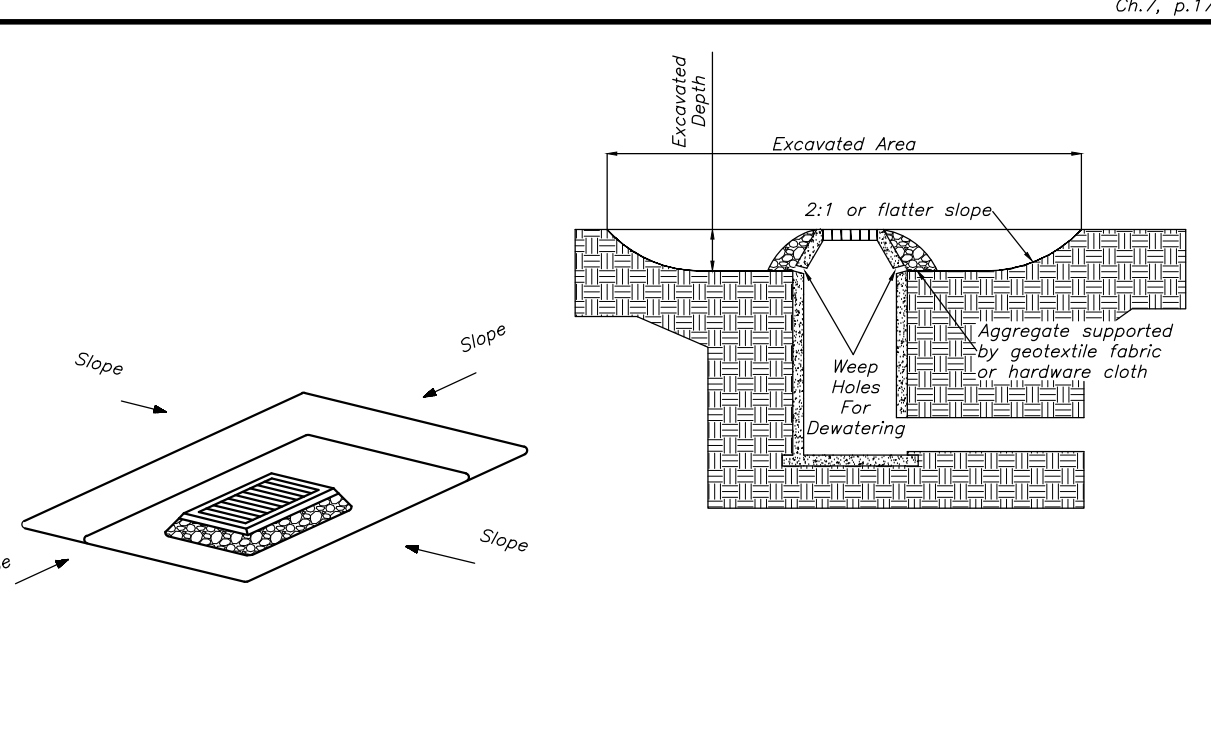
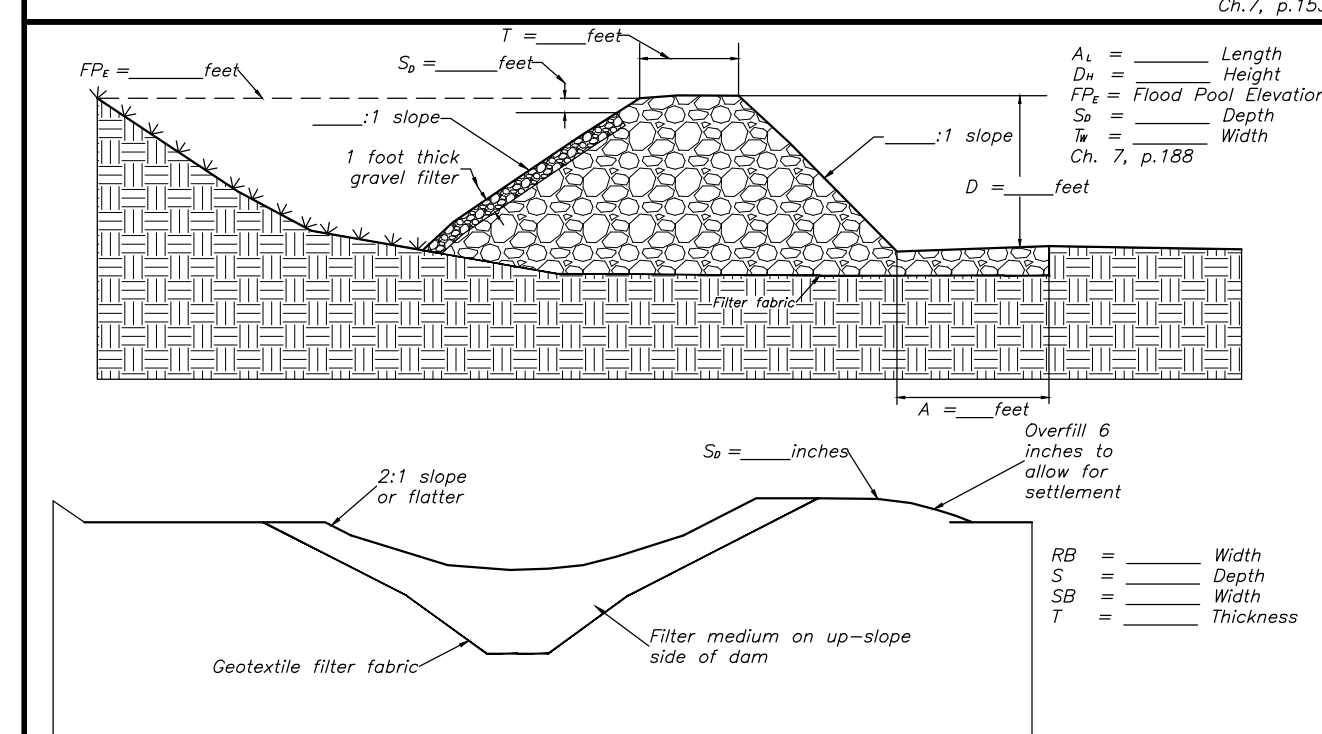
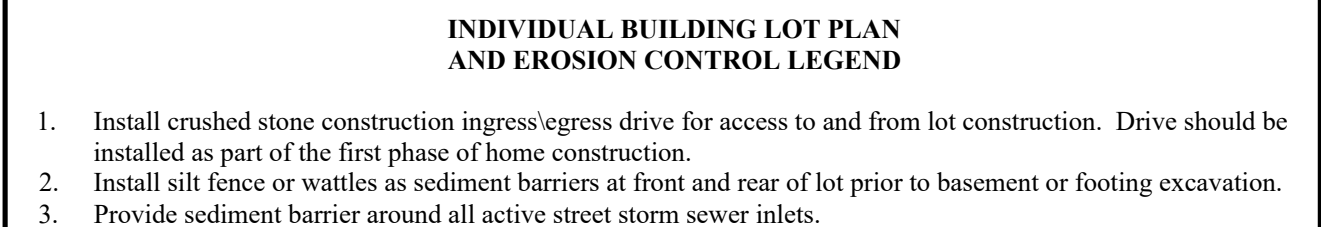
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\* Check for inadequate cover (less than 80% density over the soil surface; re-seed and mulch in mid to late April if necessary. Re-seed within the recommended dates for temporary seeding..



**PERMANENT SEEDING**  
Purpose: To stabilize exposed areas after all final grading work is complete.

**REQUIREMENTS**  
Site and seedbed preparation: Grade, lime and fertilizer applied.  
Seed selected: Perennial ryegrass (turf-type) 60 lbs./ac.  
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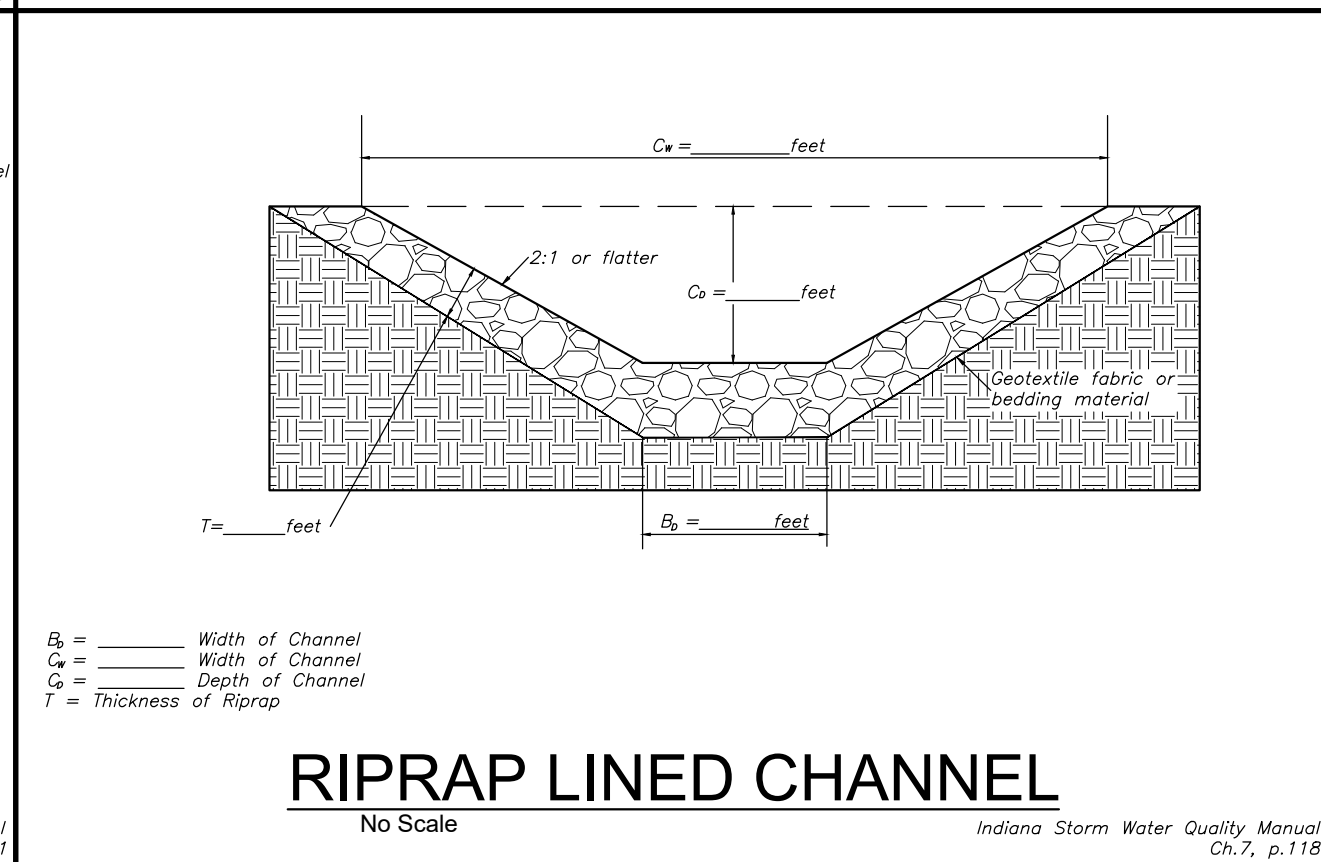
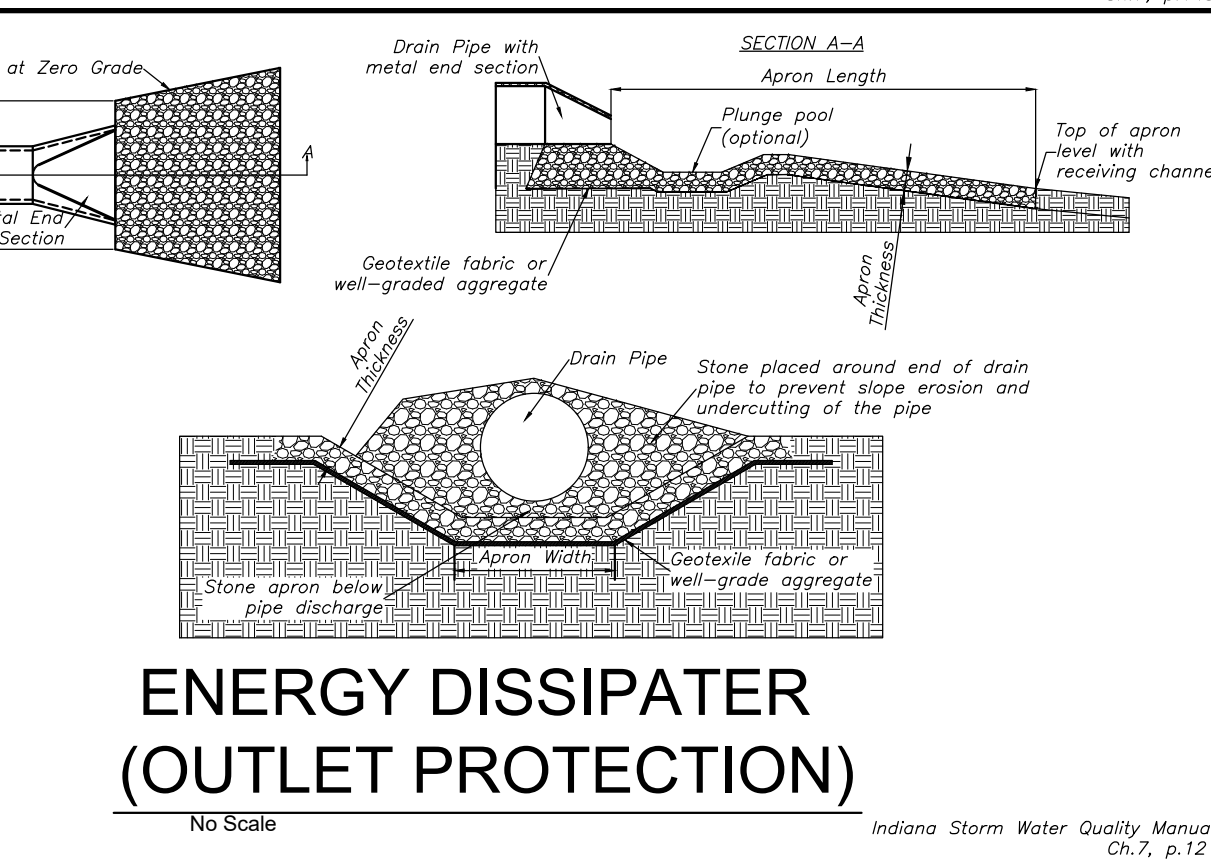
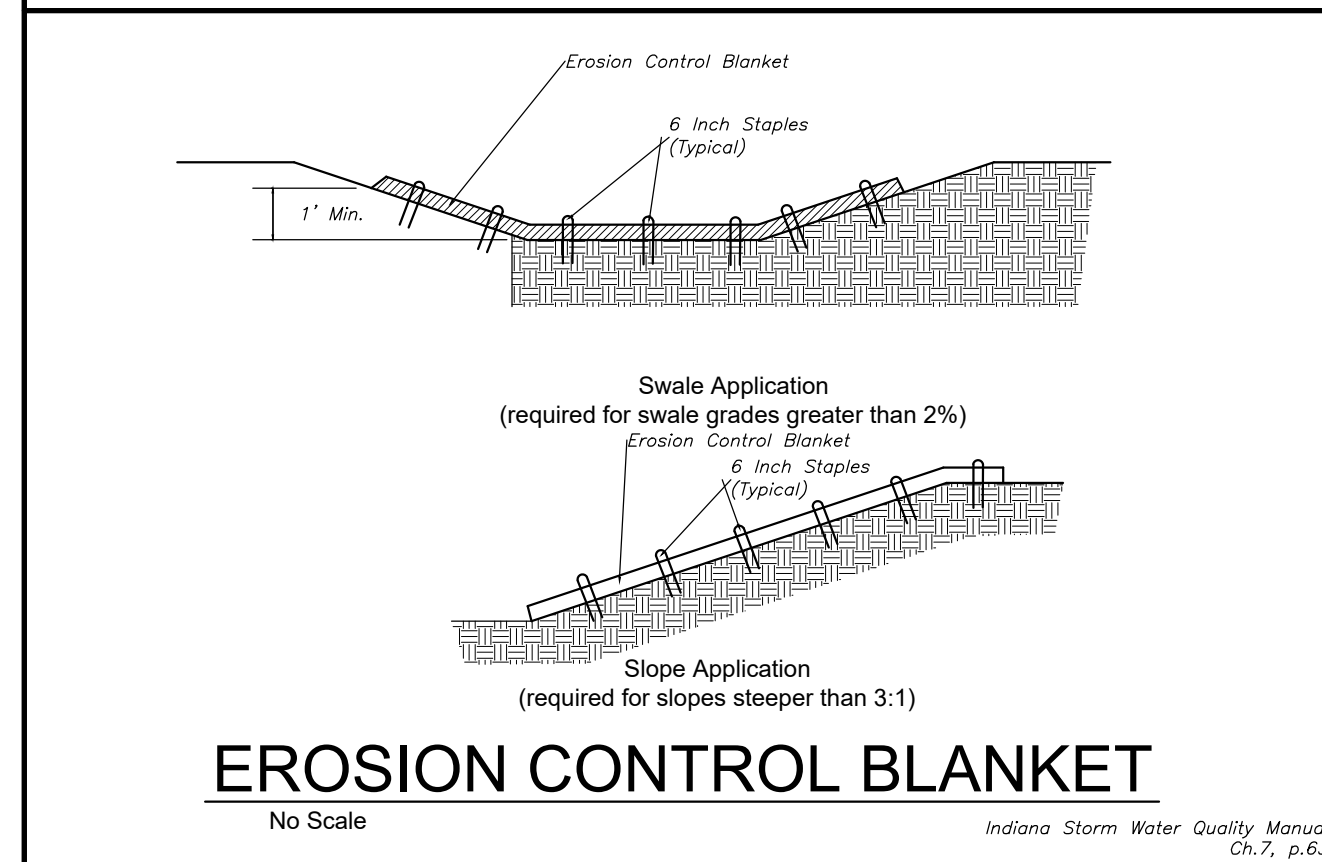
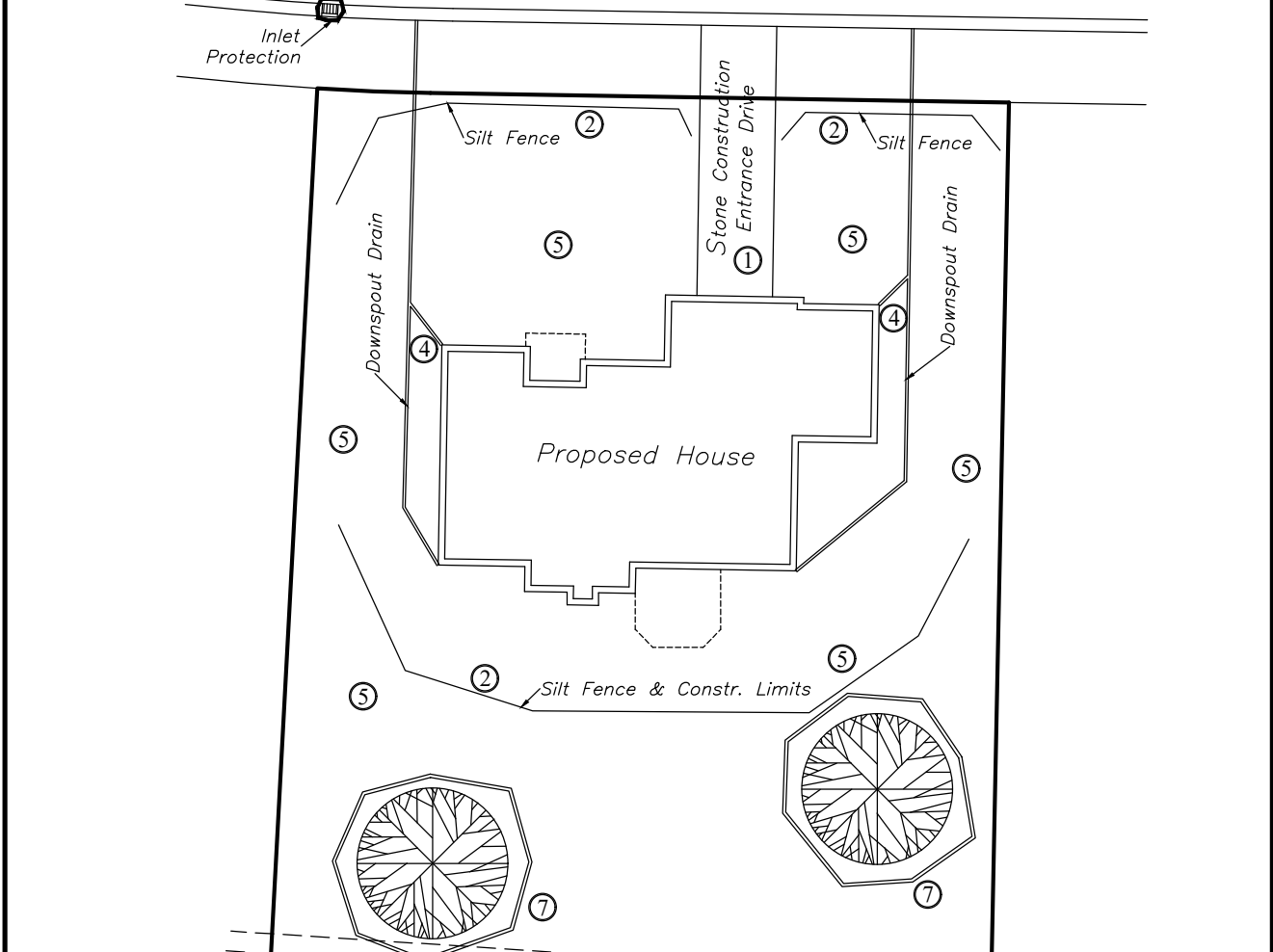
**SEEDBED PREPARATION:**  
1. Test soil to determine its nutrient levels. (Contact your county SWCD or Cooperative Extension Office for assistance and soils information, including available soil testing services.)  
2. Fertilize as recommended by the soil test. If testing is not done, consider applying 400-600 lb./acre of 13-12-12 analysis, or equivalent, fertilizer. (Incorporate soil amendments into soil prior to soil freezing.)  
3. Work the fertilizer into the soil 2-4 in. deep with a disk or rake operated across the slope.

**SEEDING:**  
1. Select a seeding mixture and rate from Exhibit 3.11-B, and plant at depth and on dates shown.  
2. Apply seed by broadcasting (seed is broadcast over the prepared seedbed and incorporated into the soil by natural freeze-thaw action).  
3. Work the fertilizer into the soil 2-4 in. deep with a disk or rake operated across the slope.

**Exhibit 3.11-B. Temporary Seeding Recommendations.**

Seed Species*	Rate/acre
Wheat or rye	150 lb.
Spring Oats	100 lb.
Annual rye grass	40 lb.

**MAINTENANCE**  
\* Inspect at least once every week  
\* Check for erosion or movement of mulch  
\* Check for inadequate cover (less than 80% density over the soil surface; re-seed and mulch in mid to late April if necessary. Re-seed within the recommended dates for temporary seeding..



**PERMANENT SEEDING**  
Purpose: To stabilize exposed areas after all final grading work is complete.

**REQUIREMENTS**  
Site and seedbed preparation: Grade, lime and fertilizer applied.  
Seed selected: Perennial ryegrass (turf-type) 60 lbs./ac.  
Bluegrass 90 lbs./ac.  
Fertilizer: According to soil test or use 600 lbs./ac. 12-12-12 analysis or equivalent.  
Mulch: 1.5 to 2 tons/ac. straw must be dry, unchopped and free of undesirable seeds.  
Mulch must cover 75% of soil surface.

**APPLICATION:**  
1. Apply fertilizer and lime as recommended by soil test.  
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4 in. deep with a disk or rake operated across the slope.  
3. Apply seed uniformly with a drill or cultipacker-seeder or by broadcasting, and cover to a depth of 1/4" to 1/2".  
4. If drilling or broadcasting, firm seedbed with a roller or cultipacker.  
5. Mulch all seeded areas and crimp or anchor mulch.

**MAINTENANCE:**  
\* Inspect periodically and after storm events until after stand is successfully established.  
\* Plan to add fertilizer the following growing season according to soil test recommendation.  
\* Repair damaged, bare, or sparse areas and gullies by filling, re-fertilizing, over or re-seeding and mulching after preparing a new seedbed.

**DORMANT SEEDING**  
Purpose -To provide early germination and soil stabilization in the Spring.  
-To reduce sediment-laden storm water runoff from being transported to downstream areas.  
-To repair or enhance previous seeding.  
-To improve visual aesthetics of the construction areas.

**APPLICATION**  
**SITE PREPARATION:**  
1. Install practices needed to control erosion, sedimentation, and water runoff, such as temporary and permanent diversions, sediment traps or basins, silt fences, and straw bale dams.  
2. Grade the site as specified in the construction plan, and apply soil amendments as recommended by a soil test (incorporate soil amendments into soil prior to soil freezing).

**SEEDBED PREPARATION:**  
1. Test soil to determine its nutrient levels. (Contact your county SWCD or Cooperative Extension Office for assistance and soils information, including available soil testing services.)  
2. Fertilize as recommended by the soil test. If testing is not done, consider applying 400-600 lb./acre of 13-12-12 analysis, or equivalent, fertilizer. (Incorporate soil amendments into soil prior to soil freezing.)  
3. Work the fertilizer into the soil 2-4 in. deep with a disk or rake operated across the slope.

**SEEDING:**  
1. Select a seeding mixture and rate from Exhibit 3.11-B, and plant at depth and on dates shown.  
2. Apply seed by broadcasting (seed is broadcast over the prepared seedbed and incorporated into the soil by natural freeze-thaw action).  
3. Work the fertilizer into the soil 2-4 in. deep with a disk or rake operated across the slope.

**Exhibit 3.11-B. Temporary Seeding Recommendations.**

Seed Species*	Rate/acre
Wheat or rye	150 lb.
Spring Oats	100 lb.
Annual rye grass	40 lb.

**MAINTENANCE**  
\* Inspect at least once every week  
\* Check for erosion or movement of mulch  
\* Check for inadequate cover (less than 80% density over the soil surface; re-seed and mulch in mid to late April if necessary. Re-seed within the recommended dates for temporary seeding..

**MONTGOMERY FARMS, PHASE 4**

*Erosion Details*

Revisions: \_\_\_\_\_

For: **Oakmont Development Co. II, LLC**

By: **Sauer Land Surveying, Inc.**

14033 ILLINOIS ROAD, SUITE C  
FORT WAYNE, IN 46814  
TEL: 260/469-3300 / FAX: 260/469-3301

Date: **March 1, 2022**

Scale: \_\_\_\_\_

Sheet No. **9 of 13**

Professional Surveyor Seal: J. D. H. No. 20900190, State of Indiana, No. 20900190.

Note: Within 48 hours before the initiation of construction activity, the project site owner must notify the appropriate plan review agency and IDEM, Office of Water Quality, of the actual project start date. Notification shall be made to: Madison County MS4 Coordinator, at 765.641.9687 and IDEM Rule 5 Coordinator at 317.233.1864 or 800.451.6027 ext.3-1864.

## MONTGOMERY FARMS, PHASE 4



USGS Lapel Quadrangle Map  
Scale: 1"=1000'

## MONTGOMERY FARMS, PHASE 4



FEMA Flood Insurance Rate Map 1805C 0240D  
Scale: 1"=1000'

### EROSION CONTROL & SEDIMENT CONTROL PLAN FOR MONTGOMERY FARMS, PHASE 4 PART OF THE NORTHEAST 1/4 OF SECTION 33, TOWNSHIP 19 NORTH, RANGE 6 EAST MADISON COUNTY, INDIANA

#### NARRATIVE:

Oakmont Development Co. II, LLC, is developing the fourth phase of Montgomery Farms, which is a 20 lot residential single-family detached subdivision. This development is privately financed and will have water and sewer service by the Town of Lapel. Storm water will be detained and then drained through an existing storm sewer system that will be released into the Hiram D. Fisher Drain and eventually Stony Creek through a path previously approved by the Madison County Engineer.

The development tract is located on a relatively flat tract situated at the South end of Montgomery Boulevard and East end of Birmingham Boulevard in Lapel. This development is adjoined on the South by and agricultural tracts, and on the North, East and West by residential tracts. The construction site is currently vegetated.

All discharge is into local drains (HUC14 Number 05120201070040 - Stony Creek / Headwaters). The current 10-year storm discharge through this site and into the offsite system is 14.4 cfs. Post development 10-year discharge into the offsite system will be 1.4 cfs. The 100-year discharges are 25 cfs and 1.8 cfs for pre and post development conditions, respectively.

There are no floodway areas indicated on the current FEMA map of this property (18095C 0240D, effective May 3, 2011).

#### STORMWATER POLLUTION PREVENTION MEASURES:

Erosion control measures and specifications are set forth in the attached grading and development plans for MONTGOMERY FARMS, PHASE 4. Under the terms of said plans and specifications, contractors are required to perform work according to the Indiana Storm Water Quality Manual.

Erosion control measures on this site will be performed by qualified personnel and all erosion control measures are required to comply with requirements set forth in 327-IAC 15-5.

The Notice of Intent and a full set of plans shall be posted on site or be available at the site on demand.

When site work begins, erosion control measures will be carried out in accordance with the plans and specifications. Erosion control measures on the site will be inspected weekly and within 24 hours of any rain event in excess of 1/8 inch by the owner or his designated representative. Additionally, all on-site personnel shall be notified of the importance of constantly monitoring construction materials and all machinery on the site to ensure that no wash off enters any land adjacent to the receiving waters. Any fuel tanks or hazardous materials stored on the site shall be located in an imperviously lined bermed secondary containment area within the area specified for parking heavy equipment. Pursuant to 327 IAC 2-6.1, any fuel spill, material spillage, or machinery oil leaks shall be promptly cleaned up using acceptable industry practices and shall be reported promptly to: Lapel-Stony Creek Fire Department 765/534-3747; IDEM 317/233-7745 or 888/233-7745. Rule 327 IAC 2-6.1 requires that any spill greater than 100 pounds of solids or 55 gallons of liquids be reported to the listed agencies.

Construction related pollution sources include mud tracked onto street surfaces, petroleum spills, and oil and grease droppings from construction equipment. An area for fuel or oil contaminated soil shall be maintained adjacent to the concrete chute washout area near the stable construction entrance. Small amounts of soil can be stored temporarily in a shallow depression lined with impervious material until it can be disposed of properly. Additionally, any soil contaminated by petroleum products shall be handled in accordance with all regulations. Immediately following the discovery of a leaking fuel storage tank or a leak of fuel or oil from a machine, the leak should be stopped and the cause of the leak repaired. The soil impacted by the leak shall be removed to a safe holding area. The extent of the spill shall then be determined in order to assure compliance with reporting requirements and, if required, the proper notifications shall be made. Disposal of all contaminated material shall then take place into an approved landfill with a complete documentation of the source of contamination, the remedial actions taken, and the time and place of disposal.

It is particularly important to keep the streets free of mud and debris. Scraping the bulk of material off of the pavement after heavy tracking events will be required during construction. A dumpster shall be placed adjacent to the construction entrance for depositing construction related solid waste materials and a ready-mix chute washout area shall be installed and maintained as shown on the plan. Inspection reports shall be maintained on the premises and made available on demand.

#### CONSTRUCTION SEQUENCE:

- Before opening the site, first evaluate, mark, and protect existing vegetation suitable for use as filter strips (especially in perimeter areas) and protect any BMPs which exist and are functional.
- Install the stable construction entrance at the proposed subdivision entrance. All equipment will be moved into the site for construction and will not be removed from the site until completion of the job.
- Keep all streets free of mud and install stone-filled fabric bags over any inlets.
- Before clearing and grading, install sediment basins or traps around the perimeter of the construction area and diversions above any area where disturbed area is exposed to washing into the existing ponds or onto the adjacent real estate. The intent is to direct water from undisturbed areas away from the sediment traps while conveying sediment-laden runoff from disturbed areas to the traps.
- Also, before clearing and grading, install the main storm sewer system with inlet and outlet protection devices to convey storm runoff through the site without creating gullies and to prevent damage to the receiving waters.
- As soon as the storm drain system is functional, install drain inlet protections, which trap sediment on-site in shallow pools while allowing high water flows to enter the system.
- Once erosion and sediment control measures are in place, begin land clearing followed immediately by grading of the streets, lots, and the additions to the detention basins. Do not leave large areas unprotected for more than seven (7) days. Adjoining areas planned for clearing should be left undisturbed as long as possible to serve as natural buffer zones.
- As grading is done, install additional traps, silt fences, slope drains, temporary diversions, and other runoff control measures at appropriate locations to keep sediment contained in-site.
- Immediately after grading, apply surface stabilization practices on all graded areas, using permanent measures in accordance with your erosion/sediment control plan. However, if weather delays permanent stabilization, temporary seeding and/or mulching may be necessary as a stopgap measure. Also, stabilize (using temporary seeding/mulching or other suitable means) any disturbed area where active construction will not take place for 15 working days.
- After construction and final grading, the subdivision developer's contractor shall landscape and permanently stabilize all disturbed sites, including borrow and disposal areas. Also, the subdivision developer's contractor shall remove temporary runoff control structures and any unstable sediment around them and vegetate those areas.

#### MAINTENANCE GUIDELINES:

General guidelines for all BMPs include inspection after a rain event and at least once every seven (7) calendar days.

Recommended guidelines for maintenance of the individual facilities are:

- **Silt Fence** - If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. Remove deposited sediment when it is causing the filter fabric to bulge or when it reached one-half the height of the fence at its lowest point. When the contributing drainage area has been stabilized, remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize.
- **Straw Wattles** - If significant erosion occurs between wattles, install an erosion resistant liner in that portion of the channel. Remove the accumulated sediment when it reaches one-half the height of the dam to maintain channel capacity, allow drainage through the dam, and prevent large flow from displacing the sediment. Replace wattles as needed to maintain design height and cross-section of the dam. When the wattles are no longer needed, remove the wattles and stabilize the channel, using an erosion resistant lining if necessary.
- **Gravel Donut Drop Inlet Protection** - Inspect daily and make repairs as needed. When the contributing drainage area has been stabilized, remove and properly dispose of all sediment and construction material and restabilize. In the event that the inlet is near the perimeter of the site, and may receive run-off from an unstabilized agricultural field, the donut may be cleaned and left to remain as permanent protection.
- **Temporary Construction Entrance** - Inspect daily and reshape the pad as needed for drainage and runoff control. Top dress with aggregate as needed. Immediately remove mud and sediment tracked or washed onto the public road. Do not flush with water unless the water can be conveyed into a sediment trap or basin.
- **Filter Drop Inlet Protection** - Inspect daily and make needed repairs immediately. Remove sediment from pool area to provide storage for the next rain event. Avoid damaging or undercutting the fabric during sediment removal. When the contributing drainage area has been stabilized, remove sediment, properly dispose of all construction material, grade the area to the elevation of the casting rim, then stabilize immediately.
- **Sediment Trap** - Remove the accumulated sediment when it reaches one-half the height of the dam to maintain trap capacity, allow drainage through the dam, and prevent large flow from displacing the sediment. Add riprap and aggregate as needed to maintain design height and cross-section of the dam. When the trap is no longer needed, remove the riprap and aggregate and stabilize the channel, using an erosion resistant lining if necessary.
- **Excavated Drop Inlet Protection** - Inspect daily and remove sediment when the pool area is approximately one-half full. Remove and replace aggregate if sediment hinders drainage. When the contributing drainage area has been stabilized, remove sediment, seal weep holes, fill basin with soil, compact and grade to finished elevation, and stabilize.
- **Outlet Protection** - Inspect for stone displacement and replace stones, as required, ensuring placement at finished grade. Check for erosion around sides of the apron, and piping or undercutting and repair immediately, as req

#### POST CONSTRUCTION MEASURES:

Following construction and the installation of all landscaping and permanent erosion control measures, the completed site shall be stabilized to protect the paved areas on the MONTGOMERY FARMS, PHASE 4 property. Particular attention shall be paid to areas where surface water discharges to newly excavated areas. The developer shall regularly monitor the condition of the erosion control measures constructed as part of the site development to assure that there is no degradation due to individual home construction activities. Ongoing maintenance of the swales and detention areas will be the responsibility of the Montgomery Farms Community Association. The Association shall be required to maintain sufficient funds and have vendors in place to maintain the facilities. All maintenance of the common areas and the detention basin shall be governed by the procedures stated in the maintenance manual.

This project drains to wet detention basins to control storm water runoff of the site. The purpose of a wet detention pond is to detain storm water runoff long enough for contaminated sediments to settle and remain in the pond and allow the water in the pond to be displaced by the next rain event. This sedimentation process removes particulates, organic matter, and metals from the water while nutrients are removed through biological uptake. A higher level of pollutant removal and storm water quality can be achieved through the use of a wet detention pond than with many other storm water management measures. A pond has the capability to remove soluble pollutants and is suitable for areas with an expected high level of nutrient inflow. It is effective in removing suspended solids, metals, and nutrients.

Total Suspended Solid removal is expected between 50 and 90 percent per Table 2, page 121, Chapter 8 of the Indiana Storm Water Quality Manual. The pond is designed to control the 100 year storm event. The pond exists as designed previously by this firm. It is also elongated and irregularly shaped so flows enter the pond and spread out, which minimizes the potential of no-flow zones. In addition a vegetated buffer around the pond will protect the banks from erosion and remove pollutants from overland flow.

#### Pond Maintenance Activity:

- Inspect for damage of the structures, monitor for sediment accumulation. (Annual Inspection and/or after storm events)
- Repair undercut or eroded areas. (As needed)
- Clear debris from inlet and outlet structures and ensure they are operational. (Monthly)
- Remove sediment from the permanent pool when pool volumes are reduced or the pond is entropic. (Every 20 to 25 years)

#### SOIL TYPES:

The site contains 3 major soil types: 2) Brookston (Bs), and 2) Crosby (CrA) (CrB2).

#### Bs--Brookston silt clay loam, 0 to 2 percent slopes

This is a deep very poorly drained soil in shallow depressions. Slopes are 0 to 2 percent. The soil is prime farmland if drained. It is designated not highly erodible (class 3) in the Highly Erodible Land (HEL) Classification system.

#### CrA--Crosby silt loam, 0 to 2 percent slopes

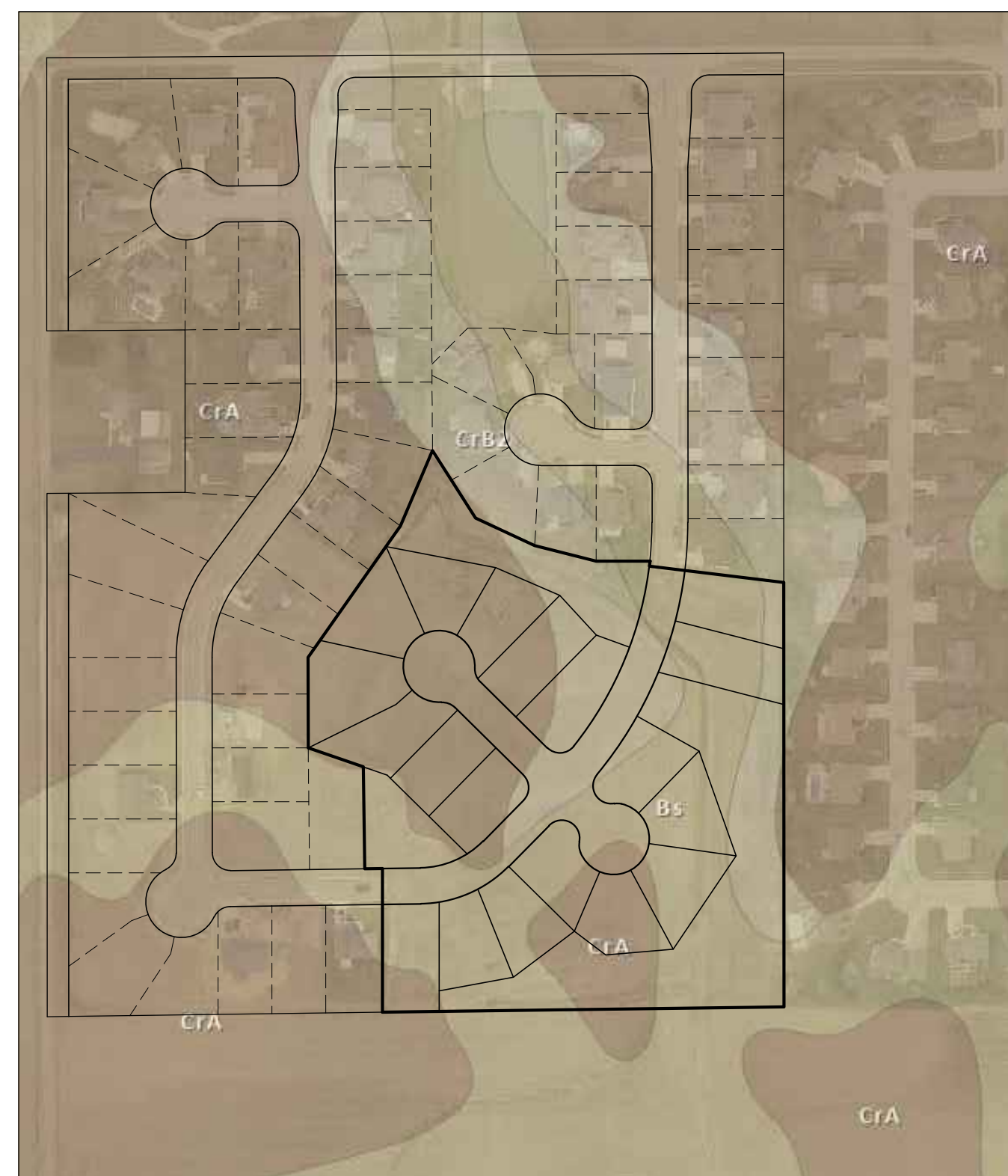
This is a deep very poorly drained soil and has a seasonal high watertable at 0.5 to 2.0 ft. Slopes are 0 to 2 percent. The soil is prime farmland if drained. It is designated not highly erodible (class 3) in the Highly Erodible Land (HEL) Classification system.

#### CrB2--Crosby silt loam, 2 to 6 percent slopes

This is a somewhat poorly drained soil and has a seasonal high watertable at 0.5 to 2.0 ft. Slopes are 2 to 6 percent. The soil is prime farmland if drained. It is designated not highly erodible (class 3) in the Highly Erodible Land (HEL) Classification system.

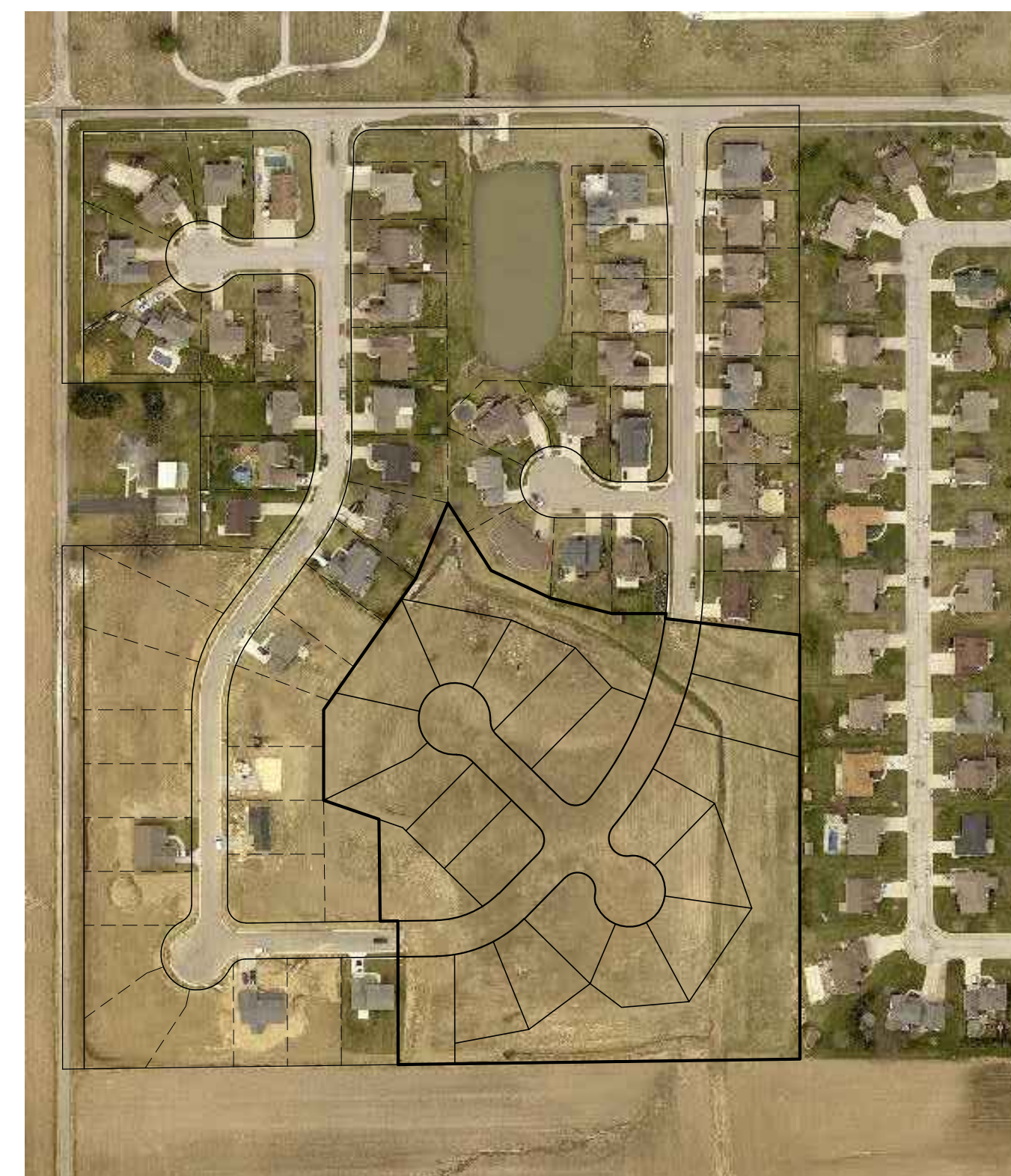
During construction, while the soil is exposed, special care will be required to prevent the surface layer from eroding and outletting silt into the adjacent drainage system.

## MONTGOMERY FARMS, PHASE 4



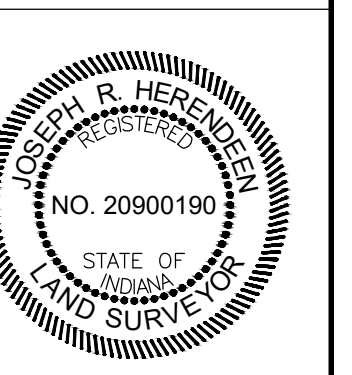
Madison County Soil Survey  
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## MONTGOMERY FARMS, PHASE 4



Existing Conditions Display  
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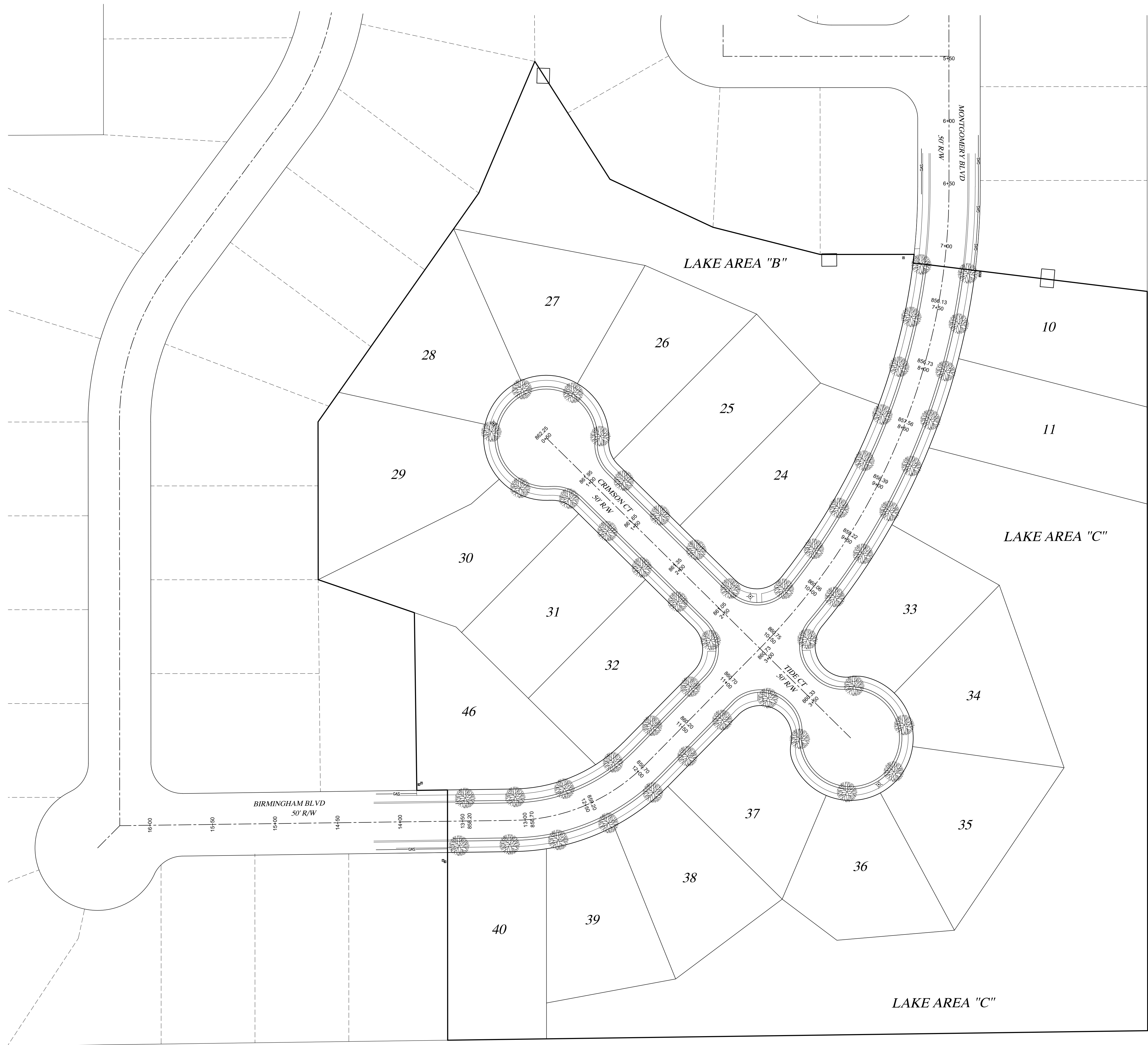
*Joseph A. Hinkle*  
Indiana Professional Surveyor



## MONTGOMERY FARMS, PHASE 4

### Storm Water Pollution Prevention Specifications

Revisions:	For: Oakmont Development Co. II, LLC	Scale:
	By: Sauer Land Surveying, Inc. 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Sheet No. 10 of 13
Date: March 1, 2022		



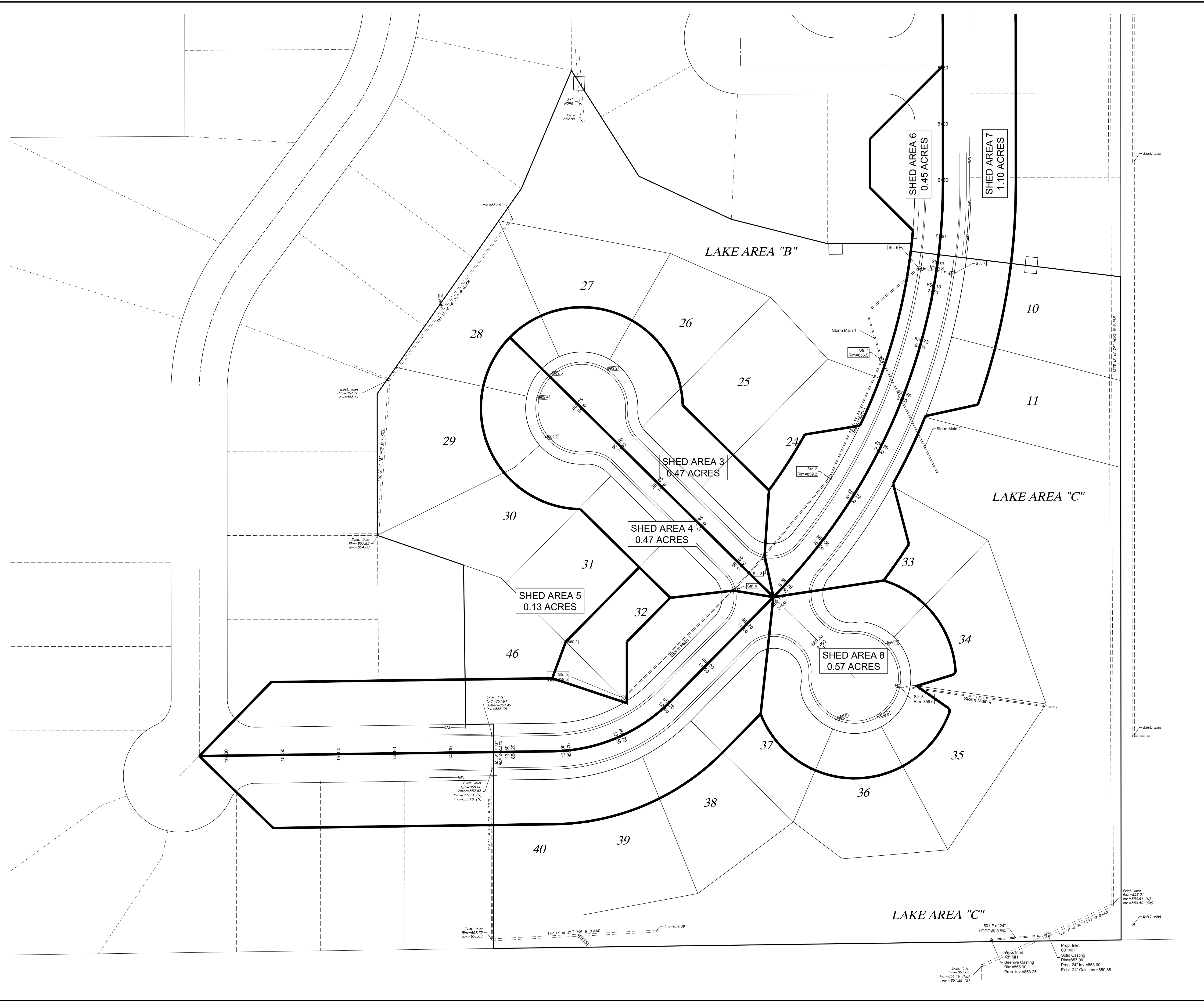
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**MONTGOMERY FARMS, PHASE 4**  
 Landscaping Plan



1-800-382-5544  
 CALL TOLL FREE  
 1-800-428-5200

Revisions:	For: Oakmont Development Co. II, LLC	Scale: 1"=40'
	By: Sauer Land Surveying, Inc. 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Sheet No. 11 of 13
	Date: March 1, 2022	



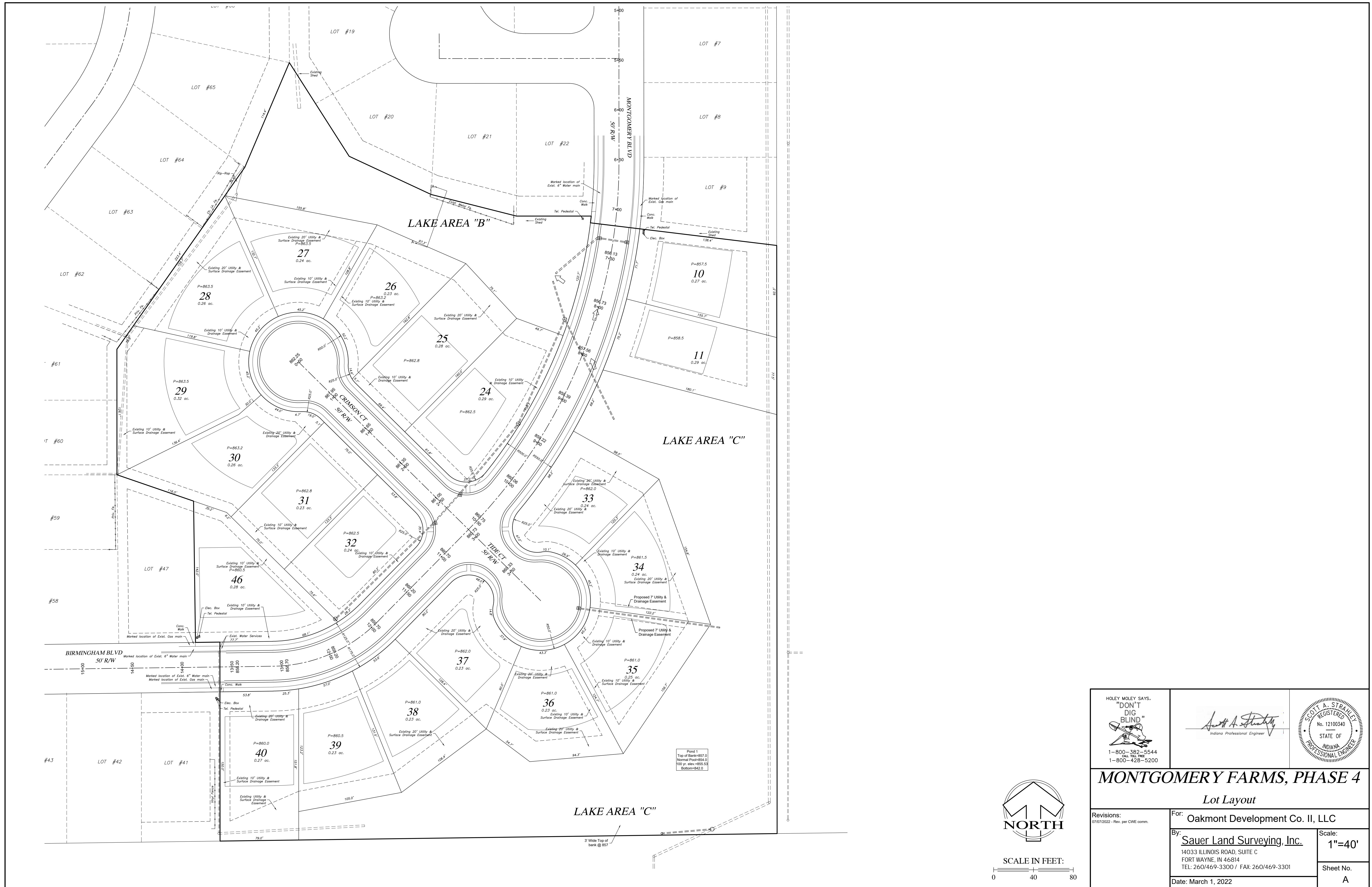
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**MONTGOMERY FARMS**

*Storm Sewer Shed Map*

Revisions:	For: Oakmont Development Co. II, LLC	Scale: 1"=40'
	By: Sauer Land Surveying, Inc. 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301	Sheet No. 12 of 13
	Date: March 1, 2022	

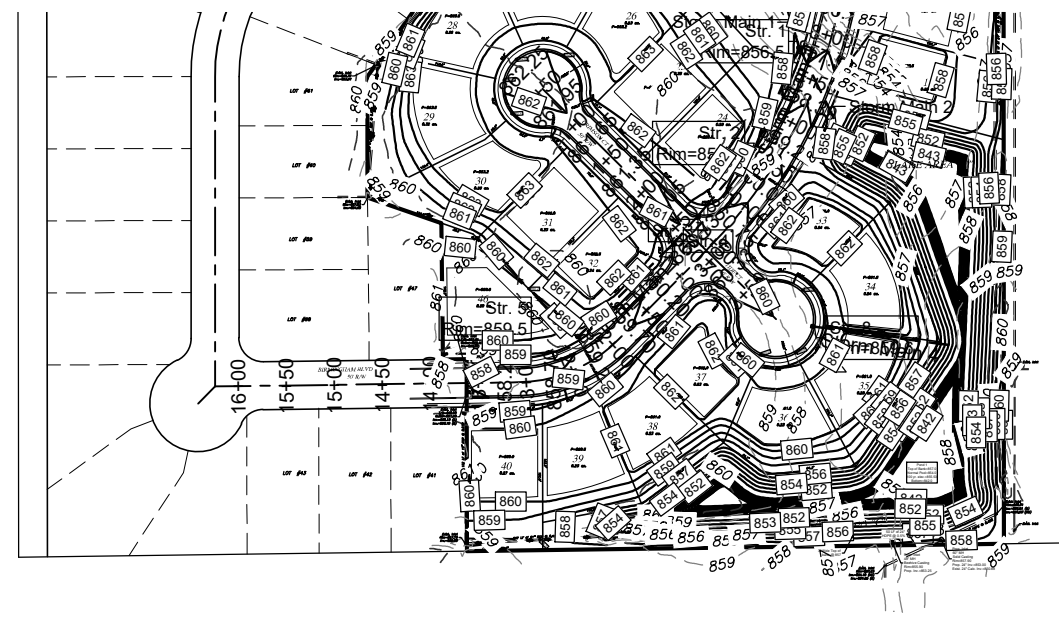




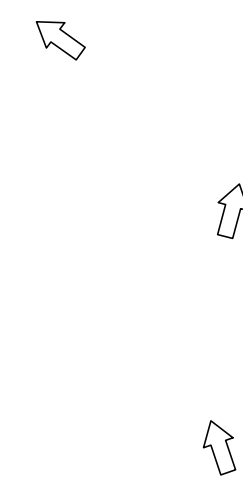
<p>HOLEY MOLEY SAYS. "DON'T DIG BLIND"</p> <p>1-800-382-5544 CALL TOLL FREE 1-800-428-5200</p>	<p>Scott A. Strahley Indiana Professional Engineer</p>	
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**MONTGOMERY FARMS, PHASE 4**  
**Lot Layout**

<p>Revisions: 07/07/2022 - Rev. per CWE comm.</p>	<p>For: <b>Oakmont Development Co. II, LLC</b></p> <p>By: <b>Sauer Land Surveying, Inc.</b> 14033 ILLINOIS ROAD, SUITE C FORT WAYNE, IN 46814 TEL: 260/469-3300 / FAX: 260/469-3301</p> <p>Date: March 1, 2022</p>
<p>Scale: <b>1"=40'</b></p>	
<p>Sheet No. <b>A</b></p>	



862



SCALE IN FEET:  
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<p>HOLEY MOLEY SAYS.          "DON'T          DIG          BLIND"            1-800-382-5544  <small>CALL TOLL FREE</small>          1-800-428-5200</p>	<p><i>Scott A. Strahely</i>          Indiana Professional Engineer</p>	
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**MONTGOMERY FARMS, PHASE 4**  
*Offsite Shed Map*

<p>Revisions:  <small>07/26/2022 - New Shed Map</small></p>	<p>For: <b>Oakmont Development Co. II, LLC</b></p>
<p>By: <b>Sauer Land Surveying, Inc.</b>          14033 ILLINOIS ROAD, SUITE C          FORT WAYNE, IN 46814          TEL: 260/469-3300 / FAX: 260/469-3301</p>	<p>Scale:  <b>1"=200'</b></p>
<p>Date: July 26, 2022</p>	<p>Sheet No.  <b>A</b></p>