




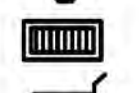
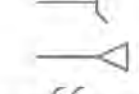

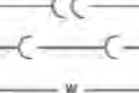
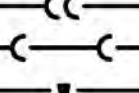




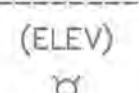


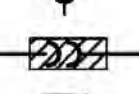



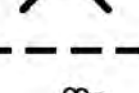




















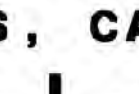

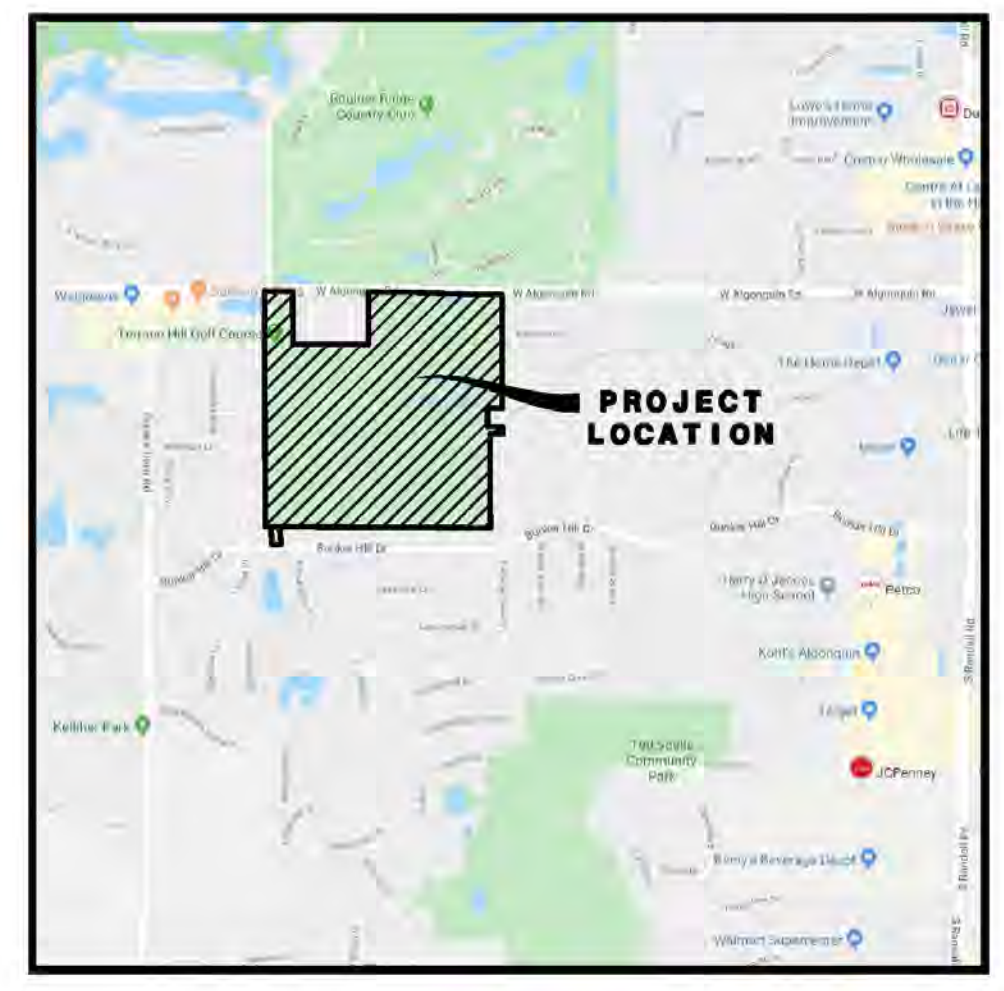


FINAL SITE DEVELOPMENT PLANS  
FOR  
**TRAILS OF WOODS CREEK - PHASE 1 & 2**  
ALGONQUIN, ILLINOIS  
WATERMAIN-SANITARY SEWER-STREET-STREET LIGHTING  
AND DRAINAGE IMPROVEMENTS

LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		MANHOLE
		CATCH BASIN
		INLET
		CLEANOUT
		SLOPE INLET BOX
		HEADWALL
		END SECTION
		STORM SEWER
		SANITARY SEWER
		WATERMAIN
		VALVE & BOX
		WATER VALVE IN VAULT
		FIRE HYDRANT
		CONTOURS
		ELEVATIONS
		STREET LIGHT
		WATERMAIN PROTECTION
		SILT FENCE INLET PROTECTOR
		TEMPORARY STRAW BALE DITCH CHECK
		SILT FENCE DITCH CHECK
		RIP-RAP
		OVERFLOW ROUTE



LOCATION MAP

BENCH MARKS

ELEVATION REFERENCE MARK  
NGS BENCHMARK IL KANE 2-42-7 (PID AJ2940): STATION IS LOCATED 0.3 MI SOUTH OF HUNTLEY RD, 289 FT SOUTH OF CENTERLINE OF AGGREGATE DRIVEWAY ADDRESS 19N339, 127 FT. NORTH OF CENTERLINE OF AGGREGATE DRIVEWAY ADDRESS 19N241, 209 FT. SOUTHWEST OF POWERPOLE (PP), 105 FT SOUTHWEST OF PP, 63.5 FT. WEST OF PP, AND 2 FT EAST OF ORANGE FIBERGLASS WITNESS POST. NOTE: ACCESS TO DATUM POINT THROUGH 6 INCH LOGO CAP. DATUM POINT IS 0.3 FT BELOW CAP. PK NAILS WERE SET IN WOOD PHYSICAL TIES. (WB)  
ELEVATION: 893.27 NAVD88  
CONTROL POINTS:  
CP #104: SET '4' IN CONCRETE CURB ON WEST SIDE OF FAIRWAY VIEW DRIVE AT THE INTERSECTION OF FAIRWAY VIEW AND NOTTINGHAM DRIVES.  
NORTHING: 2006585.59  
EASTING: 975942.61  
ELEVATION: 888.59 NAVD88  
CP #109: SET '4' IN CONCRETE FRAME AROUND TRAFFIC SIGNAL HANDHOLE LOCATED AT THE SOUTHEAST CORNER OF ALGONQUIN AND FRANK ROADS.  
NORTHING: 2006585.59  
EASTING: 975942.61  
ELEVATION: 888.59 NAVD88

Sheet Number	Sheet Title
01	TITLE
02-03	CONSTRUCTION SPECIFICATIONS - GENERAL NOTES
04	STREET PAVEMENT DESIGN AND DETAILS
05	OVERALL SITE PLAN
06-07	DEMOLITION, TREE PROTECTION AND SOIL BORING PLAN
08-10	MASTER UTILITY PLAN
11-14	STREET LIGHTING PLAN AND DETAILS
15-34	DRAINAGE AND GRADING PLANS
35-36	FAIRWAY VIEW IMPROVEMENTS
37	PLAN & PROFILE: STREET A - STREET J
38	PLAN & PROFILE: STREET B - STA. 30+00 TO STA. 42+50
39	PLAN & PROFILE: STREET B - STA. 42+50 TO STA. 48+01.17 / STREET K - STA. 48+01.17 TO STA. 53+50
40	PLAN & PROFILE: STREET K - STA. 53+50 TO STA. 64+50
41	PLAN & PROFILE: STREET K - STA. 64+50 TO STA. 75+08.07
42	PLAN & PROFILE: STREET G
43	PLAN & PROFILE: STREET F - STREET C - STA. 80+00 TO STA. 84+50
44	PLAN & PROFILE: STREET C - STA. 84+50 TO STA. 94+89.92
45	PLAN & PROFILE: STREET E - STREET I
46	PLAN & PROFILE: STREET D - STA. 100+00 TO STA. 112+50
47	PLAN & PROFILE: STREET D - STA. 112+50 TO STA. 122+55.02
48	PLAN & PROFILE: STREET H
49	PLAN & PROFILE: SOUTHWEST AND EAST SIDEYARD SANITARY SEWER AND WATERMAIN
50	PLAN & PROFILE: NORTHWEST SIDEYARD WATERMAIN
51	SANITARY SEWER AND WATERMAIN CONSTRUCTION DETAILS
52	DRAINAGE STRUCTURE DETAILS
ER01-ER03	SOIL EROSION AND SEDIMENTATION CONTROL PLAN
ER04	SOIL EROSION AND SEDIMENTATION CONTROL DETAILS
ER05	STORMWATER POLLUTION PREVENTION PLAN

PROFESSIONAL ENGINEER'S CERTIFICATION

STATE OF ILLINOIS) SS.  
COUNTY OF DU PAGE)  
I, CHRISTOPHER R. MORGART, A LICENSED PROFESSIONAL ENGINEER OF ILLINOIS, HEREBY CERTIFY THAT THIS TECHNICAL SUBMISSION WAS PREPARED ON BEHALF OF PULTE HOME COMPANY, LLC SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.  
DATED THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D., 2020.  
ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 062-055788  
MY LICENSE EXPIRES ON NOVEMBER 30, 2021  
PROFESSIONAL DESIGN FIRM LICENSE NUMBER 184-002937  
EXPIRES APRIL 30, 2021  
NOTE : UNLESS THIS DOCUMENT BEARS THE ORIGINAL SIGNATURE AND IMPRESSED SEAL OF THE DESIGN PROFESSIONAL ENGINEER, IT IS NOT A VALID TECHNICAL SUBMISSION.

FOR UNDERGROUND UTILITY  
LOCATIONS, CALL  
**J.U.L.I.E.**  
TOLL FREE  
TEL. 1-800-892-0123 or 811

DATE: \_\_\_\_\_  
RELEASED FOR PLAN REVIEW AND PERMIT  
PROCESSING ONLY.  
IF USED FOR BIDDING PURPOSES, THOSE PARTIES  
CONCERNED SHALL BE ADVISED THAT REVISIONS  
MAY BE REQUIRED PRIOR TO PLAN APPROVAL.  
NOT ISSUED FOR CONSTRUCTION UNTIL APPROVED BY THE  
VILLAGE OF ALGONQUIN AND PERMITTED AS REQUIRED.

PREPARED FOR:  
PULTE HOME COMPANY, LLC  
1900 E. GOLF ROAD, SUITE 300  
SCHAUMBURG, ILLINOIS 60173  
(847) 230-5400

PREPARED BY:  
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2280 White Oak Circle, Suite 100  
Aurora, Illinois 60502-9675  
Ph: 630.862.2100 Fax: 630.862.2199  
E-Mail: cadd@cemcon.com Website: www.cemcon.com

R E V I S I O N S					
NO.	DATE	SHEETS	NO.	DATE	SHEETS

JOB NO. 402.136  
COMPLETION DATE :  
JULY 10, 2020  
SHEET 1 OF 52



PLOT FILE CREATED: 7/13/2020 7:23 AM BY JEFF CEBULA  
DRAWING LAST SAVED: 7/19/2020 8:32 AM BY LESLIE  
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Design Standards for Sewer and Water Construction

Sanitary Sewer System

Sanitary sewer system shall be designed to meet Illinois Environmental Protection Agency (IEPA), The Standard Specifications for Sewer and Watermain Construction in Illinois, latest edition and other applicable requirements. The design shall incorporate the more stringent requirements of the following items or agency requirements:

Each single-family lot or each building in other than single-family development shall be served with a separate sanitary sewer service. All structures shall include provisions for an overhead sewer system.

All new buildings shall include provisions for an overhead sewer system, unless otherwise approved by the Utilities Superintendent or Director of Public Works.

Manholes are to be provided at each change in direction of flow, change in pipe size, change in slope, change in material and at each pipe intersection, excluding services. Maximum manhole spacing is three hundred feet (300). Where feasible, the sanitary sewer system shall be designed so as to provide for manholes to be installed within the R.O.W. Sanitary sewers installed within the rights-of-way shall not be placed more than eight feet from edge of pavement. Commercial and industrial structures require an inspection manhole on the service line between the wye into the main and the building preferably within 10 feet of the building and in an accessible area. If an external grease trap is used, the manhole must be downstream of the grease trap and domestic wye into the service line.

Provide calculations to substantiate the available capacity of the receiving sewer.

Note on the plans which sewer lines are to be public and private. All public portions of the sewer must be in a dedicated easement in order to provide maintenance.

Sanitary sewer shall be constructed either of P.V.C., S.D.R. 26, ASTM 0-3034, or a sewer safe lined ductile iron pipe of class 52. Pipe shall be laid in approved bedding. Minimum size sewer main shall be eight inches (8"). Sanitary sewers with an invert elevation fifteen feet or greater in depth shall be installed in as an approved sewer safe lined ductile iron pipe.

When connecting to an existing sewer main by means other than an existing "Y", "T", or an existing manhole, one of the following methods shall be used:

Remove a section of pipe and replace with a "Y" or "T" branch section. Pipe section shall be removed by breaking only the top of one bell. After the "Y" or "T" branch is inserted, concrete shall be placed over the broken area to a minimum thickness of four inches (4") and to a dimension of eight inches (8") in all directions. All pipe sleeves shall be a Non-Shear Mission Coupling type.

Using pipe cutter equal to Sewer Tap Machine by Transmate, and neatly and accurately cut a hole of proper dimensions and insert "band-seal" coupling saddle DFW 6T/C to fasten the inserted fitting and hold it firmly in place. Follow manufacturer's recommendations for installation.

Pipe penetrations into existing sanitary manholes shall be properly sized and cored and sealed (Kor-N-Seal by NPC, Inc.) with flexible watertight connections. No cut-in connection shall be made by breaking or cutting a hole in the main and inserting the spigot end of an ordinary sewer pipe. No service connections shall be made directly to manholes are permitted unless approved by the Superintendent.

Force-mains shall be constructed of sewer safe ductile iron pipe of class 52. All field cuts shall be restored per manufacturer's recommendations. Air relief valves are required at all high points along the main and clean outs shall be installed per detail at a minimum of every 2,000 feet.

New sanitary manholes are to be pre-cast reinforced concrete eccentric type with a minimum 48" I.D. barrel section, and monolithic bottom section. Pipe penetrations are to be sealed via the use of a cast-in-place flexible synthetic rubber pipe sleeve, which is to be fastened to the pipe with stainless steel bands. Barrel sections shall be sealed using a butyl rubber material strip and/or rubber gasket and an eight-inch (8") "MacWrap" by Mar Mac Inc., external seal band or approved equal. Frames shall be sealed to the manhole by using a heat shrinkable wrap around sleeve equal to the Wrapit Seal manhole encapsulation system by Canusa. Existing frames requiring adjustment are also required to be sealed. A maximum of eight inches (8") of adjusting rings may be used, with the top ring being a GNR recycled rubber ring, supplied by East Jordan. All joints between pre-cast elements, adjusting rings and manhole frames shall be set in place using butyl rubber joint sealant. Steps shall be made of steel reinforced plastic, using an approved plastic meeting ASTM D4101, Type II, Grade 49108, over a #3 grade 60, ASTM A615, reinforcing bar. Steps shall be at 16" (inch) centers.

Sanitary sewer manholes constructed in a flood plain must have a rim twenty four inches (24") above base flood elevation and have a water-tight-lock type frame and cover, Neenah R-1916 C or approved equal. Cover must have "SANITARY" cast into the top of the cover.

Except as provided in #9 above, all frame and covers are to be East Jordan Iron Works Number 1050-Z1, with concealed pick holes and sealed cover. Variations in casting dimensions shall be approved by Utilities Superintendent. Manhole covers must have "SANITARY" cast into the top of the cover. Manhole covers shall be EAST JORDAN IRON WORKS, product No. 102332, catalog No. 102369. The cover casting shall include the Village of Algonquin logo. All casting shall be coated immediately after cleaning and machining. Coating shall be a non-toxic water base asphalt paint, complying to the AWWA C104 specification.

All utility and service trenches under or within two feet of paved surfaces or driving areas shall be backfilled with CA-6 material properly compacted. Mechanically compacted backfill shall be placed in six-inch horizontal layers of thickness. Each layer shall be evenly spread, moistened (or dried, if necessary), and then tamped or rolled until 90 percent relative compaction is achieved.

IEPA PERMIT IS REQUIRED PRIOR TO CONSTRUCTION OR INSTALLATION OF THE SANITARY SEWER SYSTEM IMPROVEMENTS OR ADDITIONS.

Water System

Water main systems shall be designed to meet Illinois Environmental Protection Agency, The Standard Specifications for Sewer and Water Main Construction in Illinois, latest edition and other applicable agency requirements. The design shall incorporate the more stringent requirements of the following items or agency requirements. Only employees from the Village of Algonquin are authorized to operate valves connected to the Village water system.

IEPA PERMIT IS REQUIRED PRIOR TO CONSTRUCTION OR EXTENSION OF THE WATER SYSTEM

The minimum size watermain to be installed is eight inches (8") in diameter.

All watermains shall be Ductile Iron Pipe (DIP), cement lined, Class 52, AWWA C-151.

Valves up to 12" shall be open left resilient wedge gates valves "Mueller A-2360" or approved equal; installation intervals shall not exceed 1000 feet or as directed by the Village Engineer. It shall not require more than three valves to isolate a single location within the distribution system. Valves 16" and larger shall be butterfly type as manufactured by Pratt or Village of Algonquin approved equal.

Watertight valve vaults shall be provided for each valve 6" (inches) and greater. Valve vaults are to be pre-cast with monolithic bottom section, reinforced concrete barrel sections, concentric type top section, barrel sections shall be sealed using a butyl rubber or bituminous mastic material. Pipe penetrations are to be sealed via the use of a cast-in-place flexible synthetic rubber pipe sleeve, which is to be fastened to the pipe with stainless steel bands. Inside diameter of valve vaults shall be 48" for valves 8" or less. Valves 10" or greater shall be installed in valve vaults 60" in diameter or as required by the Village Engineer or Utilities Superintendent. All tapping valves shall be installed in valve vaults 60" in diameter or as directed by the Village Engineer or Utilities Superintendent. A maximum of eight inches (8") of adjusting rings may be used.

Hydrants are to be Watrous Pacer WB67-250 traffic breakaway type, with a fresh coat of red paint. All hydrants require a 6" auxiliary valve (Resilient Wedge Gate Valve), and valve box (Tyler 6860 series) with a valve box stabilizer (American Flow Control Trench Adapter).

Valve boxes shall be provided for all buried valves that are 4" (inches) and smaller. Valve boxes shall be one complete assembled unit composed of the valve box and extension stem. All moving parts of the extension stem shall be enclosed in a housing to prevent contact with the soil. Valve box assembly shall be adjustable to accommodate variable trench depths. The stem assembly shall be of a telescoping design that allows for variable adjustment length. The material shall be galvanized square steel tubing. The stem assembly shall have a built-in device that prevents the stem assembly from disengaging at its fully extended length. The extension stem must be capable of surviving a torque test to 1,000 ft.-lb. without failure. Valve box shall be American Flow Control's Trench Adapter.

Spacing between hydrants shall be at each intersection and shall not exceed three hundred feet (300'). Front of hydrants shall be placed a minimum of three feet from the back of curb.

The water system must be extended, as a minimum, to the limit of the subdivision and looped wherever possible. Note on plans which mains are to be public and private.

Connection to an existing watermain shall be performed by pressure connection only. Pressure connection and valve shall be located within a valve vault minimum diameter shall be sixty inches (60"). Tapping sleeve shall be Mueller H-615. Tapping valve shall be RESILIENT WEDGE GATE VALVE NRS mechanical joint valve. All fittings will be swabbed with a clean solvent of at least 50 mg/L. This solution must be tested by a Village representative prior to use. If the Director of Public Works deems a pressure connection cannot be accomplished, use of a cut-in-sleeve and tee connection may be permitted. Shop drawings of proposed material shall be submitted to the Superintendent for approval.

Minimum diameter of water services is one inch (1"), type "K" copper. All corporation taps of 2" and smaller must use the direct tapping method. Copper must be one piece from corporation tap (Mueller H-15000) to H15154), and also one piece from the roadway to the meter unless approved by the Village plumbing inspector. Curb box is to be Mueller H-10300 Series Minneapolis pattern base.

All frames and covers are to be East Jordan Iron Works Number 1050-Z1. Variations in casting dimensions shall be approved by Utilities Superintendent. Valve vault covers must have "WATER" cast into the top of the cover. Manhole covers shall be EAST JORDAN IRON WORKS, product No. 102332, catalog No. 102369, reference No. 102369. The cover casting shall include the Village of Algonquin logo. All casting shall be coated immediately after cleaning and machining. Coating shall be a non-toxic water base asphalt paint, complying to the AWWA C104 specification.

All utility and service trenches under or within two feet of paved surfaces or driving areas shall be backfilled with CA-6 material properly compacted. Mechanically compacted backfill shall be placed in six-inch horizontal layers of thickness. Each layer shall be evenly spread, moistened (or dried, if necessary), and then tamped or rolled until 90 percent relative compaction is achieved.

Chlorinating of the watermain and collection of safe water samples shall be in accordance with IEPA requirements and completed prior to the installation of service taps.

Watermain Testing Procedure

STEP #1 - PLANNING

The contractor shall submit to the Project Manager a plan that indicates the watermain to be disinfected. The plan shall include the name of the project and phase if applicable, IEPA permit number, source water location(s), all valves, hydrants, main size and length of main in feet. The Project Manager will then submit the plans to the water department for review.

The Water Department will review the plan and designate the location for injecting the chlorine and the sample locations. After review, the plan will be given back to the Project Manager. No samples shall be taken from Fire Hydrants.

Once the chlorinating and sampling plan is approved, the contractor shall install the necessary corps and appropriate appurtenances.

No Pre-testing of the system will be permitted, unless otherwise approved by Village of Algonquin Water Department personnel or persons authorized by the Utility Superintendent or Director of Public Works.

STEP #2 - PRESSURE TESTING

PRESSURE TESTING: The contractor must notify the Project Manager at least 48 hours prior to pressure testing the newly installed watermain. Each section of pipe to be tested shall be filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner approved by the Director of Public Works. The pump, pipe connection, and all necessary apparatus, including gauge and meter connections, shall be furnished by the contractor. The apparatus includes the following:

- Wrench for corporation shut down
- Valve Key
- B-box Key
- (1) 30 gallon trash can
- (1) 5 gallon bucket
- Enough food grade hose and copper tubing to make all appropriate connections
- (1) gallon of bleach
- (5) Clean rags
- (1) Hydrant wrench
- (1) Pump with appropriate specifications
- Pump shall be filled with gas
- Pump shall have back flow prevention
- Pump shall have pressure release spigot
- Any cracked or defective pipes, fittings, valves, or hydrants discovered in consequence of this pressure test shall be removed and replaced by the contractor with the new material and the test shall be repeated until passed or to the satisfactory of the Director of Public Works.

Each section of Pipe is to be tested at a hydrostatic pressure of 150 psi for two hours. As per AWWA C-600, test pressure shall not vary by more than five psi (+/-).

Allowable leakage in gallons per hour for pipe line shall not be greater than that determined by the formula:

$$L = \frac{SD(sq. Rt. P)}{133,200}$$

- Note: L = Testing allowance (makeup water) in gallons per hour
- S = Length of pipe tested, in feet
- D = Nominal diameter of the pipe in inches
- P = Average test pressure during leakage (test in pound per square inch)

The Project Manager shall provide an estimate of the gallons of water used to flush and test the newly installed watermain. The Project Manager shall also provide certification documenting the results of the pressure test.

STEP #3 - CHLORINATION

No sooner than 48 hours after the newly installed system has passed the pressure testing procedure as described above, shall the contractor schedule disinfection and sample collecting with the Chief Water Operator.

Prior to disinfection of the watermain, the watermain shall be flushed to remove any foreign substances that may be present in the watermain must have passed the pressure test.

After the watermain is chlorinated, the main shall remain unused for a minimum of 24 hours and have a free chlorine residual of not less than 10 mg/L.

After the 24 hour detention time, the watermain may be flushed of all the super chlorinated water and a maximum chlorine residual of 2 mg/L is achieved in the watermain.

Two consecutive samples taken 24 hours apart from each of the sample locations. These samples must be free of any bacteriological contamination. The samples are collected by a designated water department employee. Who will also deliver the samples to a laboratory that is certified by the Illinois Department of Public Health to conduct Bacteriological sample screening. Satisfactory disinfection is demonstrated when two consecutive water samples, collected at least twenty-four hours apart, indicate no bacterial contamination.

If unsatisfactory results are obtained with the samples, then the watermain shall be rechlorinated, flushed and resampled until two consecutive satisfactory results are obtained from each sample point.

After two consecutive satisfactory results are obtained from each sample point, the watermain shall be placed into service by the Water Department. The Water Department will notify the Project Manager at the time the satisfactory results and active main. The Project Manager in turn will notify the contractor of the passing results.

The amount of water used during the flushing and chlorination process shall be measured and given to the Utilities Superintendent.

After all sample sites have two consecutive satisfactory results, the IEPA permit will be signed by the Chief Water Operator. The Chief Water Operator will forward the signed IEPA permit and laboratory reports to the Assistant Public Works Director.

The Assistant Public Works Director will complete the IEPA permit and process accordingly.

Billing of water use during testing will be sent to Developer.

Watermain valves and hydrants will be re-inspected during project punch listing.

Sanitary Testing Guidelines

The following is a list of testing required for all sanitary installations. A passing result of all of the following is required prior to any acceptance/occupancy is granted. Cost of equipment purchase or lease, materials, and labor necessary to conduct all testing is incidental to and shall be included in cost bid for sanitary construction.

Air / Pressure Testing: All sanitary sewer gravity mains shall be required to pass a low-pressure air test.

A pressure equal to 4 PSIG shall be introduced into the main via an air compressor.

The pressure shall not drop more than ¼ PSIG over the course of time determined by the testing criteria chart.

Forcemain testing will use a hydro static test that is equal to 1.5 times the designed operation pressure.

The procedure shall be the same as used for testing a Village of Algonquin water system (see Construction Testing of Watermain Guidelines).

A passing test is achieved when the pressure drops less than 5 psi during the 2 hour test or the main passes when the calculated recovery is met.

Mandril / Deflection Testing: The entire length of the installed PVC main line pipe shall be deflection tested for acceptance with an approved go-no-go testing device. Ductile Iron Sewer Safe Pipe is not required to be mandril / deflected tested.

All sanitary sewer manholes shall be vacuum tested as directed by the Village Engineer or Utilities Superintendent.

Sanitary sewer manholes shall be tested for leakage immediately after installation.

Lift holes shall be plugged with a non-shrink grout.

Inlet and outlet pipes at manhole shall be plugged, taking care to securely brace plug to avoid its being drawn into manhole.

Vacuum test equipment shall be placed at inside of top of the frame and seal inflated to 40 psi to create a seal between vacuum base and structure.

A vacuum of 10 inches of mercury shall be drawn and vacuum pump shut - off.

With valves closed, time shall be measured for vacuum to drop to 9 inches.

Manhole integrity is acceptable if the time exceeds 60 seconds for a 48-inch diameter manhole, 75 seconds for a 60-inch diameter manhole, and 90 seconds for a 72-inch diameter manhole.

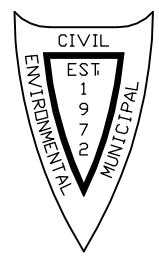
If manhole fails initial test, necessary repairs shall be made with a non-shrink grout or other acceptable and approved materials.

Retesting shall proceed until a satisfactory test is obtained.

Contractor shall repair all visible defective joints or leaks in manhole even though vacuum test requirements are met.

All sanitary sewer mains shall be televised one year after installation and prior to final acceptance by the Village. The original videotape and documentation shall become the property of the Village.

PREPARED FOR:  
PULTE HOME COMPANY, LLC  
1900 E. GOLF ROAD, SUITE 300  
SCHAUMBURG, ILLINOIS 60173  
(847) 230-5400



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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

CONSTRUCTION SPECIFICATIONS – GENERAL NOTES

TRAILS OF WOODS CREEK – PHASE 1 & 2

FILE NAME: GENNOTES	DSGN. BY: CRM	JOB NO.: 402.136	FLD. BK./PG.:	SHEET NO.
DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = N/A	02 of 52



PLOT FILE CREATED: 7/13/2020 7:23 AM BY JEFF CEBULA  
DRAWING LAST SAVED: 7/19/2020 8:32 AM BY LESLIE  
DRAWING PATH: P:\402136\UWG\ENG\DRAWINGS\FINAL DRAFTING\GENNOTES.DWG

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITION, THE NATIONAL ELECTRIC CODE AND THE SUBDIVISION AND DEVELOPMENT CODES AND STANDARDS AS PUBLISHED BY MUNICIPALITY OF ALGONQUIN. ALL WORK, INCLUDING SOIL EROSION CONTROL, SHALL ALSO BE PERFORMED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL (I.U.M.), IN THE EVENT OF CONFLICTING SPECIFICATIONS, THE MUNICIPALITY'S SPECIFICATION SHALL PREVAIL.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND HEALTHFUL WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
3. THE CONTRACTOR SHALL INFORM THE MUNICIPALITY BEFORE WORK COMMENCES ON EACH CATEGORY OF CONSTRUCTION, I.E. WATERMAIN, SANITARY, STREET AND DRAINAGE IMPROVEMENT. A FORTY EIGHT (48) HOUR NOTICE SHALL BE GIVEN FOR ANY ITEM THAT REQUIRE FINAL TESTING AND INSPECTION SUCH AS WATERMAINS OR SANITARY SEWERS.
4. IF THE ENGINEER IS RETAINED FOR CONSTRUCTION STAKING SERVICES, THE ENGINEER WILL BE GIVEN SEVENTY-TWO (72) HOURS NOTICE FOR ANY STAKING THAT IS TO BE DONE. IF ENGINEER IS CONTRACTED BY OWNER OR CONTRACTOR FOR CONSTRUCTION STAKING SERVICES, EACH OF THE VARIOUS ITEMS OF WORK COVERED BY THIS CONTRACT WILL BE STAKED ONCE. ADDITIONAL STAKING REQUIRED DUE TO CONTRACTOR NEGLIGENCE SHALL BE PAID FOR BY THE CONTRACTOR AT THE CURRENT HOURLY RATE.
5. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRESS OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS (INCLUDING UTILITY LOCATIONS) PRIOR TO THE INSTALLATION OR FABRICATION OF ANY MATERIALS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
7. AFTER CONSTRUCTION STAKING IS PERFORMED, BUT PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CALL THE ATTENTION OF THE OWNER'S REPRESENTATIVE TO ANY ERRORS OR DISCREPANCIES WHICH MAY BE SUSPECTED IN LINES AND GRADES WHICH ARE ESTABLISHED BY THE OWNER, AND SHALL NOT PROCEED WITH THE WORK UNTIL ANY LINES AND GRADES WHICH ARE BELIEVED TO BE IN ERROR HAVE BEEN VERIFIED OR CORRECTED BY THE OWNER'S REPRESENTATIVE.
8. CONTRACTORS SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS AND, WHEN NECESSARY, CLEAN PAVEMENTS ON A DAILY BASIS.
9. THE UNDERGROUND CONTRACTOR SHALL BE RESPONSIBLE TO PLACE ON GRADE AND COORDINATE WITH OTHER CONTRACTORS ALL UNDERGROUND STRUCTURE FRAMES SUCH AS CATCH BASINS, INLETS, MANHOLES, HYDRANTS, BUFFALO BOXES, VALVES, ETC. NO ADDITIONAL COMPENSATION WILL BE PAID AND NO ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF CONSTRUCTION.

SANITARY SEWER, STORM SEWER, WATERMAIN

1. WATERMAIN SERVICES SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER AND SHALL BE RUN IN STRAIGHT ALIGNMENT UNLESS SPECIFICALLY SHOWN ON THE PLANS.
2. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO VERIFY IN THE FIELD ALL EXISTING AND UNDERGROUND UTILITIES ADJACENT TO THE PROJECT, AND BE RESPONSIBLE FOR PROTECTION OF SAME. THE CONTRACTOR SHALL ALSO NOTIFY THE MUNICIPALITY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.
4. ALL STORM MANHOLE, VALVE VAULT, OR CATCH BASIN ADJUSTMENT OF FRAMES SHALL BE MADE WITH PRECAST CONCRETE ADJUSTING RINGS SET IN PREFORMED BUTYL MASTIC RUB-R-NEK OR APPROVED EQUAL, AND NO MORE THAN 8" OF ADJUSTING RINGS WILL BE PERMITTED, 2 RINGS MAXIMUM, 2" MINIMUM TOP RING SIZE. THE TOP RING TO BE GNR RECYCLED RUBBER RING SUPPLIED BY EAST JORDAN.
5. ALL DRAINAGE STRUCTURES TO HAVE POURED INVERTS CONFORMING TO THE SHAPE OF THE PIPE.
6. THE CONTRACTOR SHALL BEWARE OF POTENTIAL CONFLICTS WITH EXISTING UTILITIES AS INDICATED ON THE PLANS. THE CONTRACTOR SHALL EXCAVATE AROUND UTILITIES TO DETERMINE ELEVATIONS BEFORE BEGINNING CONSTRUCTION.
7. "BAND-SEAL" OR SIMILAR COUPLINGS SHALL BE USED WHEN JOINING SEWER PIPES OF DISSIMILAR MATERIALS.
8. ALL NEW SANITARY SEWERS SHALL HAVE WYES FOR PROPOSED BUILDING SERVICES. ALL CONNECTIONS TO EXISTING SANITARY SEWERS NOT HAVING WYES SHALL BE MADE WITH A "SEWER TAP" FOR BUILDING SERVICES AND WITH A MANHOLE FOR SEWER EXTENSIONS. ALL TAPS SHALL INCLUDE A PROPERLY INSTALLED HUB WYE SADDLE.
9. ALL EXISTING FIELD DRAINAGE TILE ENCOUNTERED OR DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION, PROPERLY REROUTED AND/OR CONNECTED TO THE STORM SEWER SYSTEM MEETING THE REQUIREMENTS OF THE MUNICIPALITY USING APPROVED STORM SEWER MATERIALS. ALL LOCATIONS OF ENCOUNTERED FIELD DRAINAGE TILE SHALL BE PROPERLY INDICATED ON THE RECORD SET OF RECORD DRAWINGS.

SANITARY SEWER, STORM SEWER, WATERMAIN (CONT.)

10. AT THE COMPLETION OF THIS PROJECT ONE SET OF RECORD DRAWINGS IS TO BE SUBMITTED TO THE ENGINEER SHOWING THE LOCATION OF ALL OF THE SERVICES, PIPE SIZES & SLOPES WHERE APPLICABLE, AND STRUCTURE LOCATIONS AND RIM & INVERT ELEVATIONS. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE OWNER DEFINING SANITARY SEWER WYE LOCATIONS FROM THE NEAREST DOWNSTREAM MANHOLE AND THE DISTANCE FROM THE SANITARY SEWER TERMINUS AND ALSO HORIZONTAL TIES BETWEEN WATER B-BOXES AND PROPERTY LINES.
11. ANY EXISTING UTILITY STRUCTURES REQUIRING ADJUSTMENT OR RECONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR TO THE SATISFACTION OF THE MUNICIPALITY. ADJUSTMENTS AND/OR RECONSTRUCTIONS NOT CALLED FOR ON THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
12. SANITARY SEWERS AND SANITARY SEWER SERVICES SHALL BE PVC SDR 26 CONFORMING TO ASTM D-3034 (4"-18") WITH ELASTOMERIC JOINTS PER ASTM D-3212 OR CEMENT LINED DUCTILE IRON PIPE, CL-52 AWWA C-151 INTO PUSH-ON JOINTS. IN THE CASES WHERE THE WATERMAIN OR WATER SERVICES ARE CONSTRUCTED ABOVE SANITARY OR STORM SEWER WITH LESS THAN 18 INCHES OR HORIZONTAL SEPARATION OR CONSTRUCTED BELOW THE SEWER, THE SEWER MATERIAL AND JOINTS SHALL MEET THE REQUIREMENTS OF BOTH SECTION 653.111 OF THE I.E.P.A. TECHNICAL POLICY STATEMENT AND THE MUNICIPALITY.
13. PLUMBING CONTRACTOR TO MAKE ALL CONNECTIONS WITH BUILDING SERVICES CONSTRUCTED BY UTILITY CONTRACTOR. SITE UTILITY CONTRACTOR TO CONSTRUCT SERVICES TO 5-FEET BEYOND RIGHT OF LINE UNLESS OTHERWISE SHOWN ON THE PLANS.
14. CONNECTIONS TO EXISTING SANITARY, STORM AND WATER SYSTEMS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
15. ALL WATERMAINS SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS S2 CONFORMING TO AWWA C-151 WITH PUSH-ON OR MECHANICAL JOINTS AND SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER.
16. WATER SERVICES SHALL INCLUDE THE NECESSARY LENGTH OF TYPE "K" COPPER WATER TUBE OF THE SIZE SHOWN ON THE PLANS, FLARE FITTINGS, CORPORATION STOP, CURB STOP, SERVICE BOX, AND TRENCH BACKFILL IN PAVED AREAS ALL AS REQUIRED BY THE MUNICIPALITY, AND ALL NECESSARY LABOR, TOOLS, EQUIPMENT, EXCAVATION AND BACKFILL, FOR A COMPLETE INSTALLATION AS SHOWN ON THE PLANS. THE PAY ITEM SHALL BE SHORT SERVICES (COMPLETE) AND LONG SERVICES (COMPLETE).
17. GRANULAR TRENCH BACKFILL SHALL BE USED IN ALL LOCATIONS WHERE THE PROPOSED UNDERGROUND UTILITY IS TO BE CONSTRUCTED UNDER PERMANENT TYPE PAVEMENTS, SIDEWALKS AND OR BIKE PATHS; IN ANY UTILITY TRENCH OVER WHICH ANOTHER UTILITY WILL PASS; OR AS DIRECTED BY THE ENGINEER. TRENCH BACKFILL SHALL BE EXTENDED AT A DISTANCE SUCH THAT A 1:1 SLOPE FROM EACH SIDE OF THE PERMANENT TYPE SURFACE INTERSECTS WITH THE TOP OF THE BACKFILL.
18. ALL SANITARY SEWER SHALL BE CONSTRUCTED WITH STONE BEDDING IN ACCORDANCE WITH ASTM D-2321 CLASS I.
19. THE COST OF PIPE BEDDING WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE CONTRACT UNIT PRICES OF THE VARIOUS SEWER ITEMS.
20. NEW WATERMAIN VALVES, INCLUDING PRESSURE TAP VALVES, ADJACENT TO AN EXISTING WATERMAIN, AND EXISTING WATERMAIN VALVES SHALL ONLY BE OPERATED BY THE MUNICIPALITY, WITH 48-HOUR NOTICE (MONDAY-FRIDAY).
21. ALL STORM SEWER JOINTS SHALL BE CONSTRUCTED UTILIZING "O" RING GASKETS CONFORMING TO ASTM C-443.
22. THE UNDERGROUND CONTRACTOR IS TO BE PRESENT PRIOR TO POURING CURBS TO MAKE ANY FINAL ADJUSTMENTS TO CURB STRUCTURES. STRUCTURE ADJUSTMENT SHALL BE MADE UP TO 6 INCHES OF PLAN GRADE AT NO ADDITIONAL COST TO THE OWNER.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL PIPE LINE CROSSINGS PRIOR TO COMMENCEMENT OF ANY UNDERGROUND IMPROVEMENT CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF VERTICAL CONFLICTS IMMEDIATELY.
24. FOR STRUCTURES LOCATED IN CLOSE PROXIMITY TO HARD SURFACED AREAS ROTATE ONE OPPOSITE TO HARD SURFACE AND ALIGN STEPS ACCORDINGLY.

PROTECTION OF WATERMAIN AND WATER SERVICE

WATER MAINS AND WATER SERVICE LINES SHALL BE PROTECTED FROM SANITARY SEWERS, STORM SEWERS, COMBINED SEWERS, HOUSE SEWER SERVICE CONNECTIONS AND DRAINS AS FOLLOWS:

- 1.) HORIZONTAL AND VERTICAL SEPARATION
  - A) WHENEVER POSSIBLE, A SEWER MUST BE AT LEAST TEN FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.
  - B) SHOULD LOCAL CONDITIONS EXIST WHICH WOULD PREVENT A LATERAL SEPARATION OF TEN FEET, A SEWER MAY BE CLOSER THAN TEN FEET TO A WATER MAIN PROVIDED THAT THE WATER MAIN INVERT IS AT LEAST EIGHTEEN INCHES ABOVE THE CROWN OF THE SEWER, AND IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.
  - C) IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE, BOTH THE WATER MAIN AND SEWER MUST BE CONSTRUCTED WITH WATER MAIN QUALITY PIPE AND JOINTS THAT COMPLY WITH 35 ILL. ADM. CODE 653.119 AND SHALL BE PRESSURE TESTED IN ACCORDANCE WITH "AWWA STANDARD FOR INSTALLATION OF DUCTILE-IRON WATER MAINS AND THEIR APPURTENANCES," ANSI/AWWA C600-93 (1994)(NO LATER EDITIONS OR AMENDMENTS) FOR A WORKING PRESSURE EQUAL TO OR GREATER THAN THE MAXIMUM POSSIBLE SURCHARGE HEAD TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.
- 2.) WATER-SEWER LINE CROSSINGS
  - A) WHENEVER POSSIBLE, SEWERS CROSSING WATER MAINS SHALL BE LAID WITH THE SEWER BELOW THE WATER MAIN WITH THE CROWN OF THE SEWER A MINIMUM OF 18 INCHES BELOW THE INVERT OF THE WATER MAIN. THE VERTICAL SEPARATION SHALL BE MAINTAINED ON EACH SIDE OF THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER IS AT LEAST 10 FEET. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. ADEQUATE SUPPORT SHALL BE PROVIDED FOR THE WATER MAINS TO PREVENT DAMAGE DUE TO SETTLING OF THE SEWER TRENCH.
  - B) WHERE A SEWER CROSSES UNDER A WATER MAIN AND IT IS NOT POSSIBLE TO PROVIDE AN 18-INCH VERTICAL SEPARATION, THE FOLLOWING SPECIAL CONSTRUCTION METHODS SHALL BE SPECIFIED:
    - i) THE SEWER SHALL EITHER BE CONSTRUCTED WITH WATER MAIN PIPE AND JOINTS THAT COMPLY WITH 35 ILL. ADM. CODE 653.119 AND SHALL BE PRESSURE TESTED IN ACCORDANCE WITH "AWWA STANDARD FOR INSTALLATION OF DUCTILE-IRON WATER MAINS AND THEIR APPURTENANCES," ANSI/AWWA C600-93 (1994)(NO LATER EDITIONS OR AMENDMENTS) FOR A WORKING PRESSURE EQUAL TO OR GREATER THAN THE MAXIMUM POSSIBLE SURCHARGE HEAD OR SHALL BE ENCASED IN A CARRIER PIPE WITH THE ENDS SEALED, THAT, ALONG WITH THE JOINTS, COMPLIES WITH 35 ILL. ADM CODE 653.119.
    - ii) THE WATER MAIN QUALITY SEWER OR CARRIER PIPE SHALL EXTEND ON EACH SIDE OF THE CROSSING TO A POINT WHERE THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER IS AT LEAST 10 FEET.
    - iii) FOR THE REQUIRED LENGTH OF THE WATER MAIN QUALITY SEWER OR CARRIER PIPE, OMIT THE SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE FOOT OVER THE CROWN OF THE SEWER AND USE SELECTED EXCAVATED MATERIAL (CLASS IV) AND COMPACT TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY.
    - iv) POINT LOADS BETWEEN THE SEWER OR SEWER CASING AND THE WATER MAIN ARE PROHIBITED.
    - v) ADEQUATE SUPPORT SHALL BE PROVIDED FOR THE WATER MAIN TO PREVENT DAMAGE DUE TO SETTLING OF THE SEWER TRENCH.
  - C) WHERE IT IS NOT POSSIBLE FOR A PROPOSED SEWER TO CROSS UNDER AN EXISTING WATER MAIN, THE SPECIFICATIONS SHALL REQUIRE THE CONSTRUCTION METHODS SET OUT IN SUBSECTION (c)(2)(B) ABOVE AND SHALL REQUIRE THAT ANY SELECT GRANULAR BACKFILL ABOVE THE CROWN OF THE WATER MAIN BE REMOVED WITHIN THE WIDTH OF THE PROPOSED SEWER TRENCH AND BE REPLACED WITH SELECT EXCAVATED MATERIAL (CLASS IV) COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY. WHERE A PROPOSED SEWER MUST CROSS OVER A PROPOSED WATER MAIN, AN 18-INCH VERTICAL SEPARATION SHALL BE MAINTAINED.
- 3.) SEWER MANHOLE SEPARATION FROM WATER MAIN

NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE.

GEOMETRIC AND PAVING AND EARTHWORK NOTES

1. THE GRADING OPERATIONS ARE TO BE CLOSELY SUPERVISED AND INSPECTED, PARTICULARLY DURING THE REMOVAL OF UNSUITABLE MATERIAL AND THE CONSTRUCTION OF EMBANKMENTS OR BUILDING PADS, BY THE SOILS ENGINEER OR HIS REPRESENTATIVE. ALL TESTING, INSPECTION AND SUPERVISION OF SOIL QUALITY, UNSUITABLE REMOVAL AND ITS REPLACEMENT AND OTHER SOILS RELATED OPERATIONS SHALL BE ENTIRELY THE RESPONSIBILITY OF THE SOILS ENGINEER. NO UNDERCUT SHALL BE PERFORMED WITHOUT AUTHORIZATION FROM OWNER AND ASSIGNMENT OF AN EWO NUMBER.
2. THE GRADING AND CONSTRUCTION OF THE SITE IMPROVEMENTS SHALL NOT CAUSE PONDING OF STORM WATER. ALL AREAS SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE.
3. THE PROPOSED GRADING ELEVATIONS SHOWN ON THE PLANS ARE FINISH GRADE. A MINIMUM OF SIX INCHES (6") OF TOPSOIL IS TO BE PLACED BEFORE FINISH GRADE ELEVATIONS ARE ACHIEVED.
4. THE SELECTED STRUCTURAL FILL MATERIAL SHALL BE PLACED IN LEVEL UNIFORM LAYERS SO THAT THE COMPACTED THICKNESS IS APPROXIMATELY SIX INCHES (6"); IF COMPACTION EQUIPMENT DEMONSTRATES THE ABILITY TO COMPACT GREATER THICKNESSES, THEN A GREATER THICKNESS MAY BE SPECIFIED. EACH LAYER SHALL BE THOROUGHLY MIXED DURING SPREADING TO INSURE UNIFORMITY.
5. EMBANKMENT MATERIAL WITHIN ROADWAY, DRIVEWAY, AND OTHER STRUCTURAL CLAY FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF NINETY-THREE PERCENT (93%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM SPECIFICATION D-1557 (MODIFIED PROCTOR METHOD), OR TO SUCH OTHER DENSITY AS MAY BE DETERMINED APPROPRIATE BY THE SOILS ENGINEER. EMBANKMENT MATERIAL FOR BUILDING PADS SHALL BE COMPACTED TO A MINIMUM OF NINETY-FIVE PERCENT (95%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 (MODIFIED PROCTOR METHOD) OR TO SUCH OTHER DENSITY AS MAY BE DETERMINED APPROPRIATE BY THE SOILS ENGINEER.
6. THE SURFACE VEGETATION, TOPSOIL AND ANY OBVIOUSLY SOFT UNDERLYING SOIL SHOULD BE STRIPPED FROM ALL AREAS TO RECEIVE STRUCTURAL FILL. IF THE UNDERLYING SUBGRADE SOILS RUT DEEPER THAN ONE INCH UNDER THE CONSTRUCTION EQUIPMENT OR IF THE MOISTURE CONTENT EXCEEDS THAT NEEDED FOR PROPER COMPACTION, THE SOIL SHALL BE SCARIFIED, DRIED AND RECOMPACTED TO THE REQUIRED SPECIFICATIONS (SEE SECTION 301.03 OF THE IDOT SPECIFICATIONS).
7. COMPLETED GRADING (FINISHED FINE GRADE) FOR PROPOSED PAVEMENT SUBGRADE AREAS, BUILDING PADS, AND YARD/OPEN SPACE AREAS SHALL BE WITHIN A TOLERANCE OF PLUS OR MINUS ONE-TENTH OF A FOOT (0.1") OF DESIGN SUBGRADE ELEVATIONS.
8. THE SUBGRADE FOR PROPOSED STREET AND PAVEMENT AREAS SHALL BE PROOF-ROLLED BY THE CONTRACTOR IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE AND ANY UNSTABLE AREAS ENCOUNTERED SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER AND SOILS ENGINEER. ANY UNDERCUT AND REPLACE NECESSARY WILL BE MEASURED FOR PAVEMENT AT THE CONTRACT UNIT PRICE.
9. MATERIALS TESTING IS REQUIRED BY THE MUNICIPALITY AND SHALL BE IN ACCORDANCE WITH THE MUNICIPALITY'S SUBDIVISION CONTROL ORDINANCE 2002 EDITION. REFER TO SECTIONS 5000 THROUGH 5503 OF SPECIFICATIONS FOR ROADWAYS. TESTINGS SHALL BE PROVIDED BY THE CONTRACTOR, THIS ITEM WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE VARIOUS ITEMS OF WORK. MATERIALS TESTING SHALL BE PROVIDED AND PAID FOR BY THE OWNER. THE OWNER SHALL PAY FOR THE FIRST TEST WITH SUBSEQUENT TESTING REQUIRED DUE TO FAILURE BEING BORNE BY THE CONTRACTOR.
10. IT SHALL BE THE RESPONSIBILITY OF EACH RESPECTIVE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

TRAFFIC CONTROL AND PROTECTION

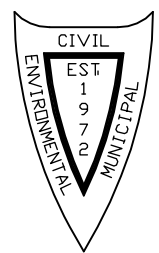
1. ALL DEVELOPERS AND CONTRACTORS SHALL PROVIDE SUITABLE TRAFFIC CONTROL FOR THEIR CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. TRAFFIC CONTROL MUST BE PROVIDED FOR ANY ACTIVITY THAT IMPACTS TRAFFIC FLOW. THIS INCLUDES, BUT IS NOT LIMITED TO, ROAD CLOSURES REQUIRING DETOURS, DAILY LANE CLOSURES, LONG TERM LANE CLOSURES, NARROW LANES, AND CONSTRUCTION VEHICLES ENTERING AND EXITING THE PUBLIC ROADWAY. ALL TRAFFIC CONTROL SET-UPS MAY BE INSPECTED BY THE MUNICIPALITY TO ENSURE THAT THEY ARE PROVIDING POSITIVE GUIDANCE TO MOTORISTS AND ARE NOT IN THEMSELVES PRESENTING A HAZARDOUS SITUATION. A REPRESENTATIVE OF THE DEVELOPER OR CONTRACTOR MUST PROVIDE PHONE NUMBERS AT WHICH THEY CAN BE REACHED 24 HOURS A DAY AND ON WEEKENDS SO THAT THEY CAN MAINTAIN TRAFFIC CONTROL DEVICES.
2. PEDESTRIANS MUST BE PROVIDED WITH A SAFE ALTERNATE ROUTE IF PEDESTRIAN FACILITIES ARE TO BE CLOSED AS A RESULT OF CONSTRUCTION ACTIVITIES. GUIDANCE MUST BE PROVIDED TO PEDESTRIANS SO THAT THEY MAY AVOID THE WORK ZONE. SAID PEDESTRIAN DETOUR PLAN (WITH SIGNAGE) IS TO BE REVIEWED AND ACCEPTED BY THE CITY IN WRITING, PRIOR TO THE COMMENCEMENT OF THE WORK.
3. THE CONTRACTOR SHALL EMPLOY THE APPROPRIATE METHODS OF TRAFFIC CONTROL IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SUCH THAT THE SAFETY OF VEHICLES, AND PEDESTRIANS IS PRESERVED AT ALL TIMES. THE ERECTION AND MAINTENANCE OF THE TRAFFIC CONTROL DEVICES SHALL BE TO THE SATISFACTION OF THE AGENCY OF JURISDICTION AND THE MUNICIPAL ENGINEER.
4. ANY TEMPORARY OPEN HOLES SHOULD BE BARRICADED AND PROTECTED IN ACCORDANCE WITH APPLICABLE STANDARDS.
5. ANY WORK THAT IMPACTS A TRAFFIC LANE ON AN ARTERIAL ROADWAY REQUIRES AN ARROWBOARD AS PART OF THE TRAFFIC CONTROL.
6. AT THE END OF EACH DAY OF WORK, THE ROADWAY MUST BE COMPLETELY REOPENED TO TRAFFIC. ANY OPEN HOLES MUST BE PLATED OR COLD PATCHED; THE MUNICIPALITY WILL NOT ALLOW THE HOLES TO BE FILLED WITH GRAVEL.
7. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER AND MUNICIPALITY A TRAFFIC CONTROL PLAN FOR ANY WORK THAT NECESSITATES SUCH A PLAN.
8. THIS ITEM OF WORK SHALL INCLUDE FURNISHING, INSTALLING, MAINTAINING, RELOCATING AND REMOVING ALL TRAFFIC CONTROL DEVICES USED FOR THE PURPOSE OF REGULATING, WARNING OR DIRECTING TRAFFIC DURING THE CONSTRUCTION OR MAINTENANCE OF THIS IMPROVEMENT.
9. THE GOVERNING FACTOR IN THE EXECUTION AND STAGING OF WORK FOR THIS PROJECT IS TO PROVIDE THE MOTORING PUBLIC WITH THE SAFEST POSSIBLE TRAVEL CONDITIONS ALONG THE ROADWAY THROUGH THIS CONSTRUCTION ZONE. THE CONTRACTOR SHALL SO ARRANGE HIS OPERATION AS TO KEEP THE CLOSING OF ANY LANE OF THE ROADWAY TO A MINIMUM.

TRAFFIC CONTROL AND PROTECTION (CONT.)

10. TRAFFIC CONTROL DEVICES INCLUDE: SIGNS AND THEIR SUPPORTS, SIGNALS, PAVEMENT MARKINGS, BARRICADES WITH SAND BAGS, CHANNELIZING DEVICES, WARNING LIGHTS, ARROWBOARDS, FLAGGERS, OR ANY OTHER DEVICE USED FOR THE PURPOSE OF REGULATING, WARNING, OR GUIDING TRAFFIC THROUGH THE CONSTRUCTION ZONE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION, INSTALLATION, AND ARRANGEMENT OF ALL TRAFFIC CONTROL DEVICES. SPECIAL ATTENTION SHALL BE GIVEN TO ADVANCE WARNING SIGNS DURING CONSTRUCTION OPERATIONS IN ORDER TO KEEP LANE ASSIGNMENT CONSISTENT WITH BARRICADE PLACEMENT AT ALL TIMES. THE CONTRACTOR SHALL COVER ALL TRAFFIC CONTROL DEVICES WHICH ARE INCONSISTENT WITH DETOUR OR LANE ASSIGNMENT PATTERNS DURING THE TRANSITION FROM ONE CONSTRUCTION STAGE TO ANOTHER.
12. CONSTRUCTION SIGNS REFERRING TO DAYTIME LANE CLOSURE DURING WORKING HOURS SHALL BE REMOVED OR COVERED DURING NON-WORKING HOURS.
13. THE CONTRACTOR SHALL COORDINATE ALL TRAFFIC CONTROL WORK ON THIS PROJECT WITH ADJOINING OR OVERLAPPING PROJECTS, INCLUDING BARRICADE PLACEMENT NECESSARY TO PROVIDE A UNIFORM TRAFFIC DETOUR PATTERN. WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES WHICH WERE FURNISHED, INSTALLED AND MAINTAINED BY HIM UNDER THIS CONTRACT, AND SUCH DEVICES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR. ALL TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL SPECIFIC AUTHORIZATION FOR RELOCATION OR REMOVAL IS RECEIVED FROM THE ENGINEER.
14. THE CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL DEVICES INSTALLED BY HIM ARE OPERATIONAL 24 HOURS A DAY, INCLUDING SUNDAYS AND HOLIDAYS.
15. THE CONTRACTOR SHALL PROVIDE A MANNED TELEPHONE ON A CONTINUOUS 24-HOUR-A-DAY BASIS TO RECEIVE NOTIFICATION OF ANY DEFICIENCIES REGARDING TRAFFIC CONTROL AND PROTECTION AND SHALL DISPATCH WORKERS, MATERIALS AND EQUIPMENT TO CORRECT ANY SUCH DEFICIENCIES. THE CONTRACTOR SHALL RESPOND TO ANY CALL FROM THE TOWNSHIP/COUNTY, STATE, OR MUNICIPALITY CONCERNING ANY REQUEST FOR IMPROVING OR CORRECTING TRAFFIC CONTROL DEVICES AND BEGIN MAKING THE REQUESTED REPAIRS WITHIN TWO HOURS FROM THE TIME OF NOTIFICATIONS.
16. WHEN TRAVELING IN LANES OPEN TO PUBLIC TRAFFIC, THE CONTRACTOR'S VEHICLES SHALL ALWAYS MOVE WITH AND NOT AGAINST OR ACROSS THE FLOW OF TRAFFIC. THESE VEHICLES SHALL ENTER OR LEAVE WORK AREAS IN A MANNER WHICH WILL NOT BE HAZARDOUS TO, OR INTERFERE WITH, TRAFFIC AND SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS. PERSONAL VEHICLES SHALL NOT PARK WITHIN THE RIGHT-OF-WAY EXCEPT IN SPECIFIC AREAS DESIGNATED BY THE MUNICIPALITY.
17. ANY DROP OFF GREATER THAN THREE INCHES, BUT LESS THAN SIX INCHES WITHIN EIGHT FEET OF THE PAVEMENT EDGE SHALL BE PROTECTED BY TYPE I OR II BARRICADES EQUIPPED WITH MONO-DIRECTIONAL STEADY BURN LIGHTS AT 100 FOOT CENTER TO CENTER SPACING. IF THE DROP OFF WITHIN EIGHT FEET OF THE PAVEMENT EDGE EXCEEDS SIX INCHES, THE BARRICADES MENTIONED ABOVE SHALL BE PLACED AT 50 FOOT CENTER TO CENTER SPACING. BARRICADES THAT MUST BE PLACED IN EXCAVATED AREAS SHALL HAVE LEG EXTENSIONS INSTALLED SUCH THAT THE TOP OF THE BARRICADE IS IN COMPLIANCE WITH THE HEIGHT REQUIREMENTS OF STANDARD 2239. VERTICAL PANELS OR OTHER DELINEATING DEVICES MAY BE SUBSTITUTED FOR TYPE I OR II BARRICADES WITH THE APPROVAL OF THE ENGINEER.
18. CHECK BARRICADES SHALL BE PLACED IN WORK AREAS PERPENDICULAR TO TRAFFIC EVERY 100 FEET, ONE (1) PER LANE AND SHOULDER, TO PREVENT MOTORISTS FROM USING WORK AREAS AS A TRAVELED WAY. ADDITIONAL CHECK BARRICADES SHALL BE PLACED IN ADVANCE OF ANY HAZARD IN THE WORK AREAS WHICH WOULD ENDANGER A MOTORIST. CHECK BARRICADES SHALL BE TYPE I OR II AND EQUIPPED WITH A FLASHING LIGHT.
19. PLACEMENT OF ALL SIGNS AND BARRICADES SHALL PROCEED IN THE DIRECTION OF FLOW OF TRAFFIC. REMOVAL OF ALL SIGNS AND BARRICADES SHALL START AT THE END OF THE CONSTRUCTION AREAS AND PROCEED TOWARD ONCOMING TRAFFIC UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
20. DELAYS TO THE CONTRACTOR CAUSED BY COMPLYING WITH THESE REQUIREMENTS WILL BE CONSIDERED INCIDENTAL TO THE ITEM FOR TRAFFIC CONTROL AND PROTECTION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
21. THIS ITEM OF WORK WILL BE MEASURED ON A LUMP SUM BASIS FOR FURNISHING, INSTALLING, MAINTAINING, RELOCATING AND REMOVING THE TRAFFIC CONTROL DEVICES REQUIRED IN THE PLANS AND THESE SPECIAL PROVISIONS. PAYMENT FOR TRAFFIC CONTROL AND PROTECTION SHALL BE CONSIDERED AS INCLUDED IN THE WORK BEING DONE OR AS SPECIFIED IN THE PLANS.
22. ADJACENT ROADWAYS MUST REMAIN OPEN TO TWO-WAY TRAFFIC AT ALL TIMES UNLESS OTHERWISE AUTHORIZED BY THE MUNICIPALITY.
23. IF NECESSARY, ANY TEMPORARY LANE CLOSURES ON ADJACENT ROADWAYS MUST BE COORDINATED WITH AND APPROVED BY MUNICIPAL STAFF.
24. DURING THE PERIOD OF TIME WHEN THE PUBLIC SIDEWALK IS CLOSED, "SIDEWALK CLOSED" SIGNS MUST BE PLACED WITH POSITIVE DIRECTION TO PEDESTRIANS. A SIGN SHOULD BE PLACED AT THE EAST & WEST EXTENTS OF THE WORK ZONE TO DIRECT PEOPLE TO USE THE SIDEWALK ALONG THE NORTH SIDE OF THE STREET.

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Aurora, Illinois 60502-9675  
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E-Mail: cadd@cemcon.com Website: www.cemcon.com

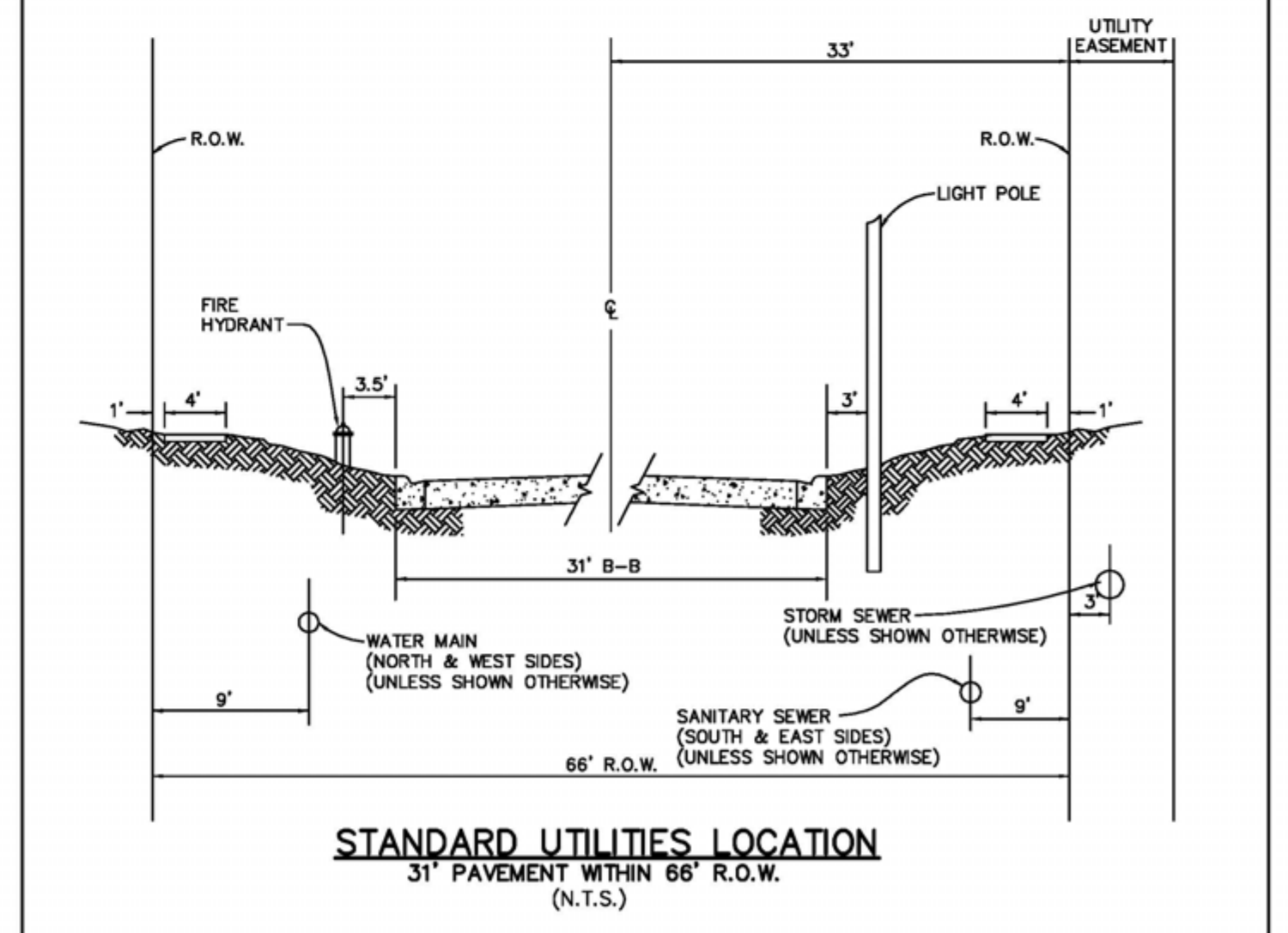
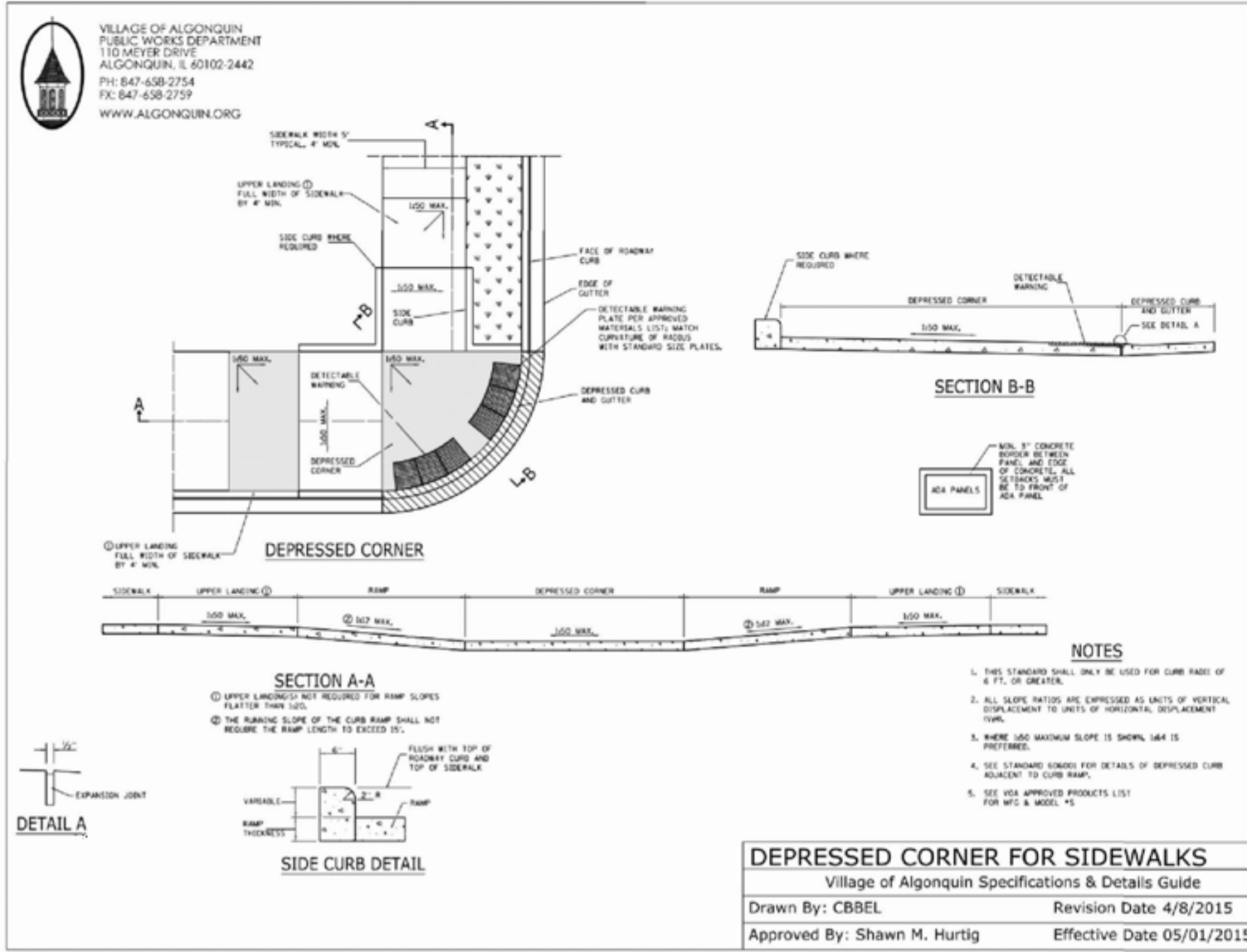
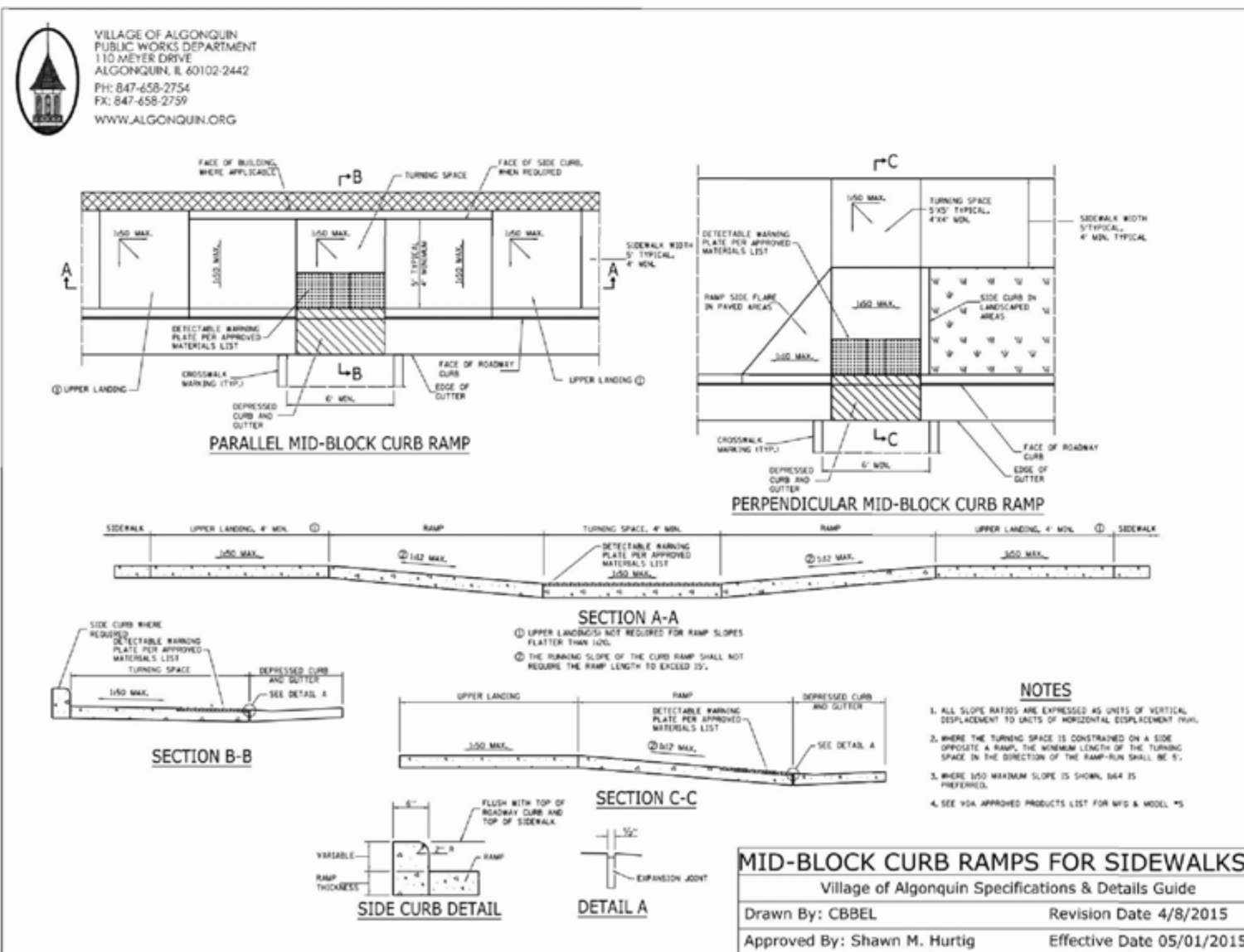
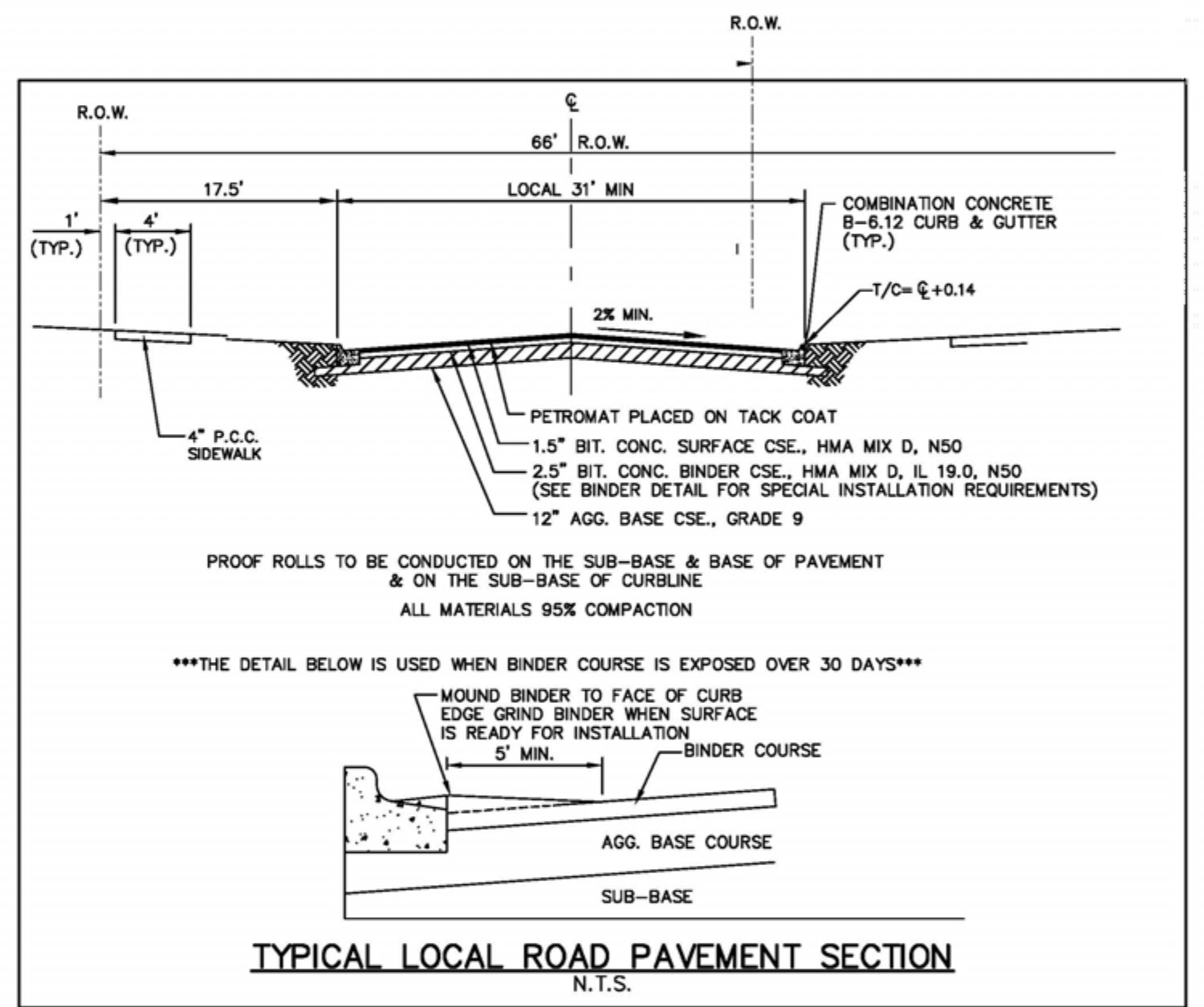
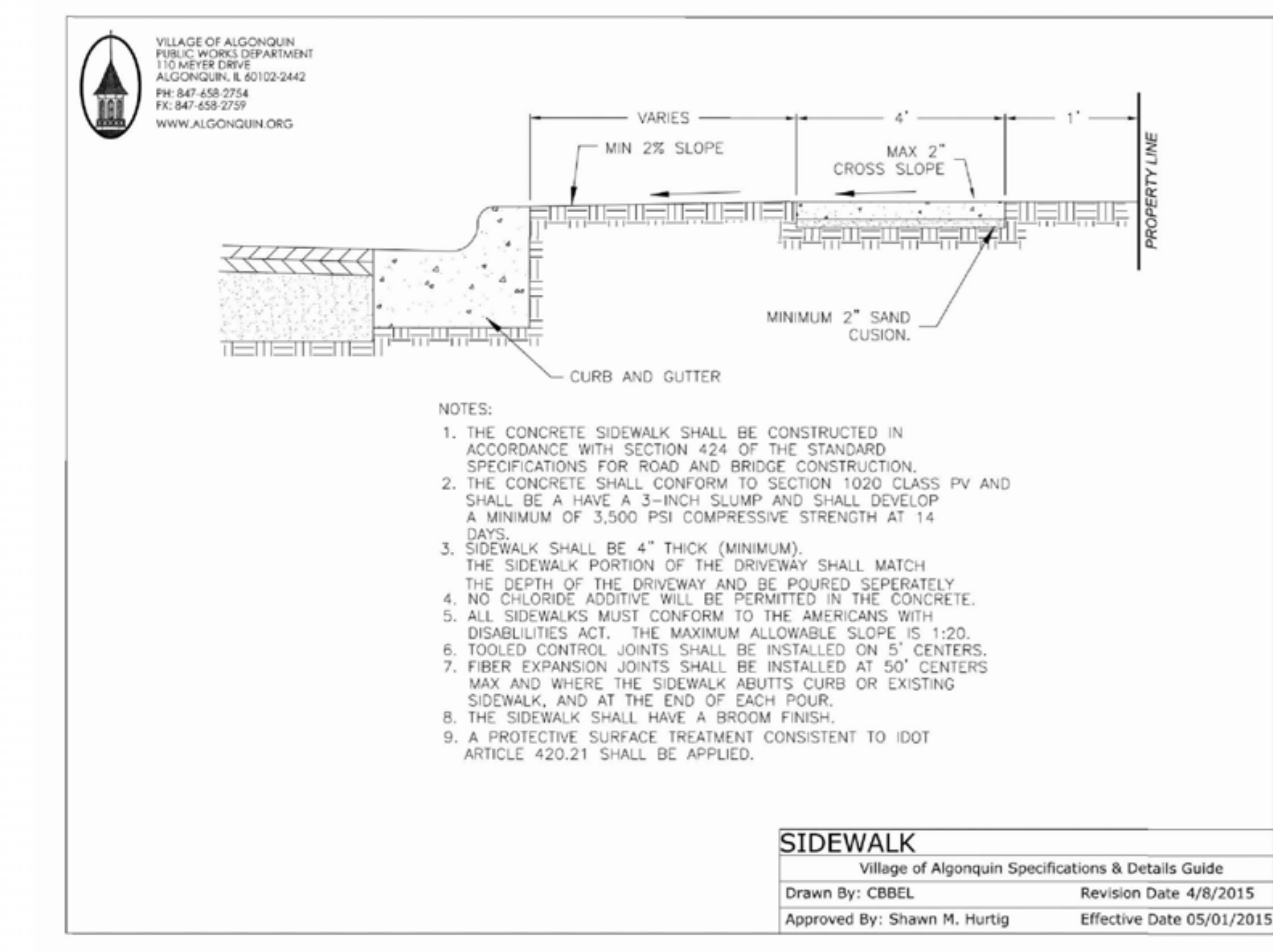
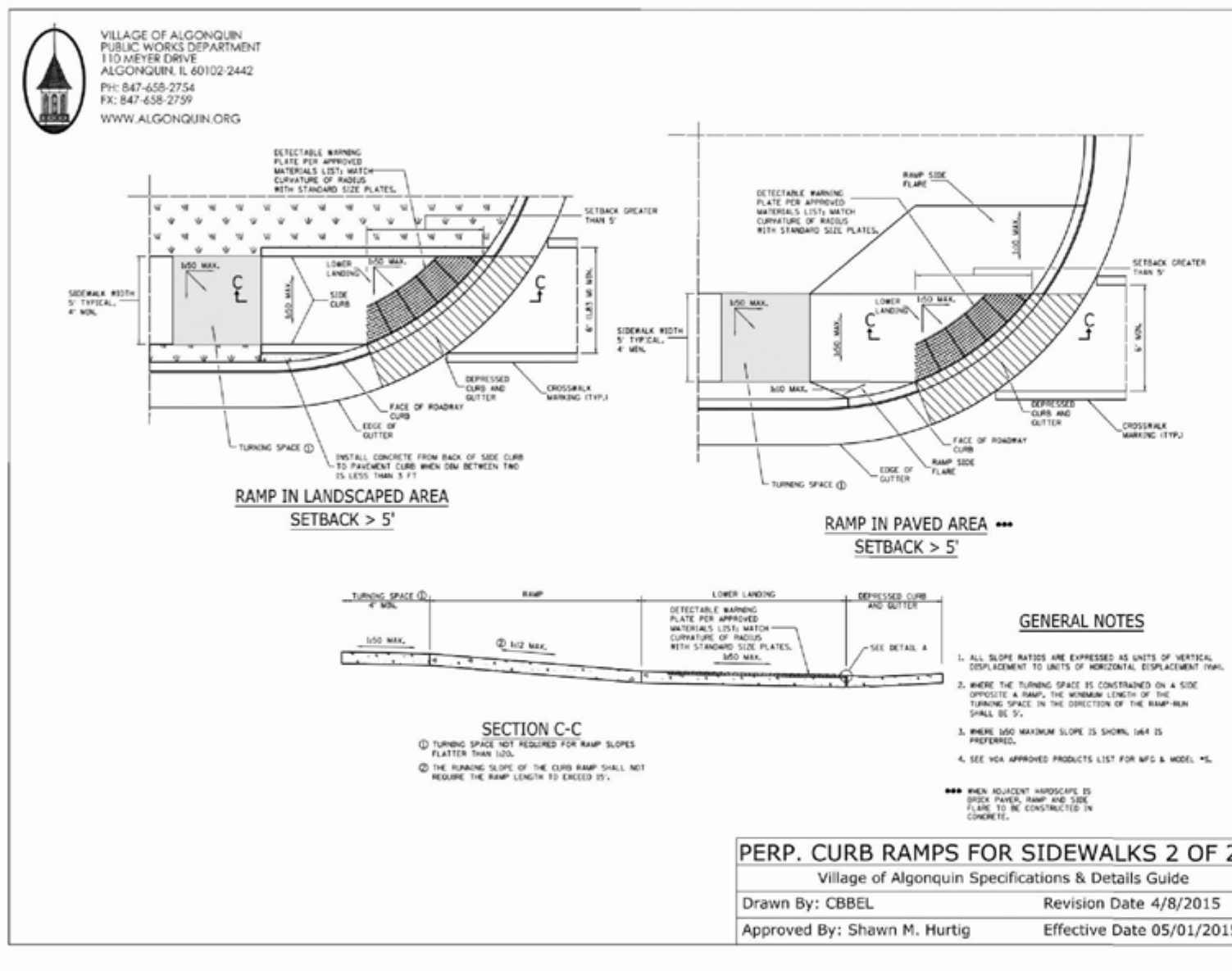
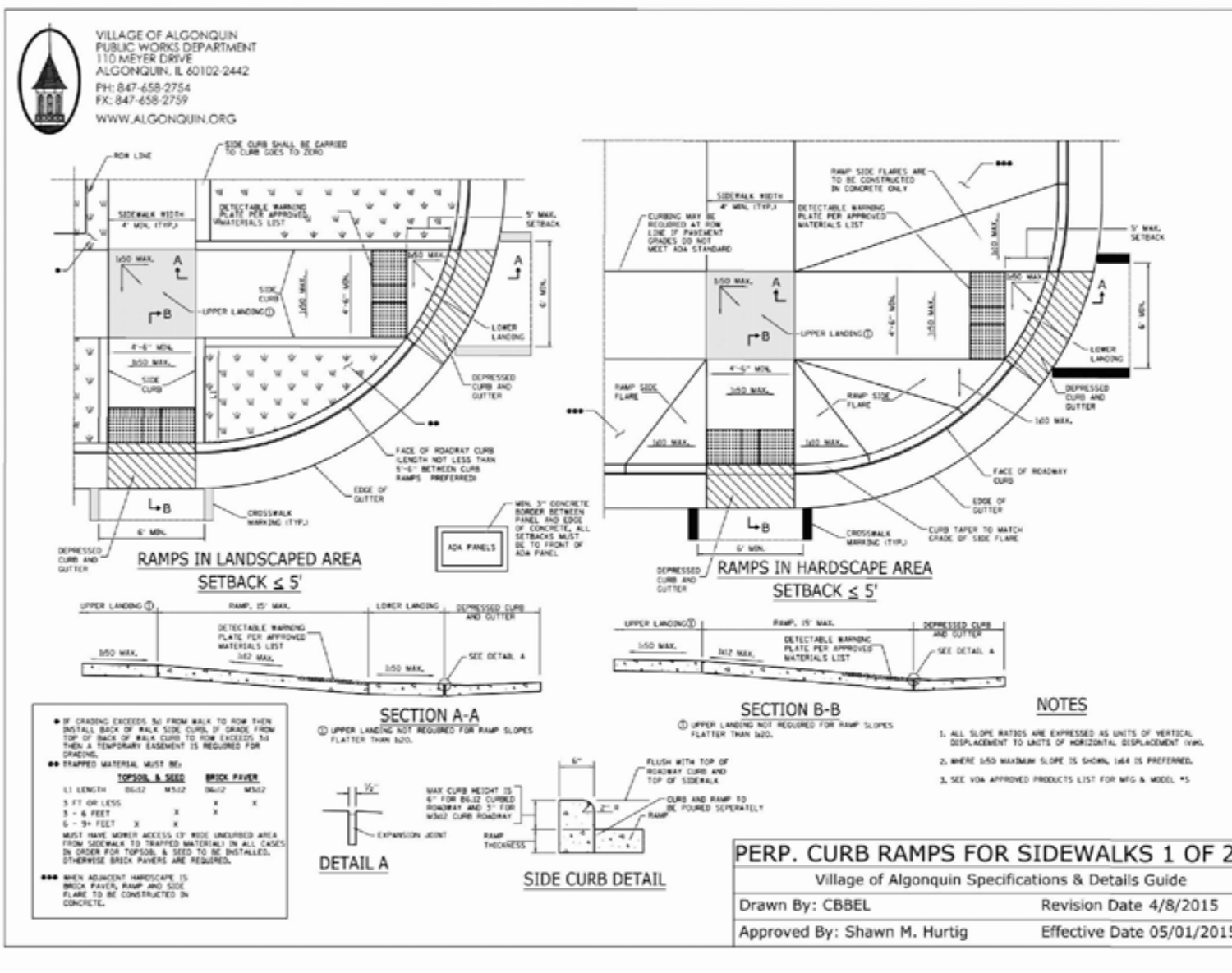
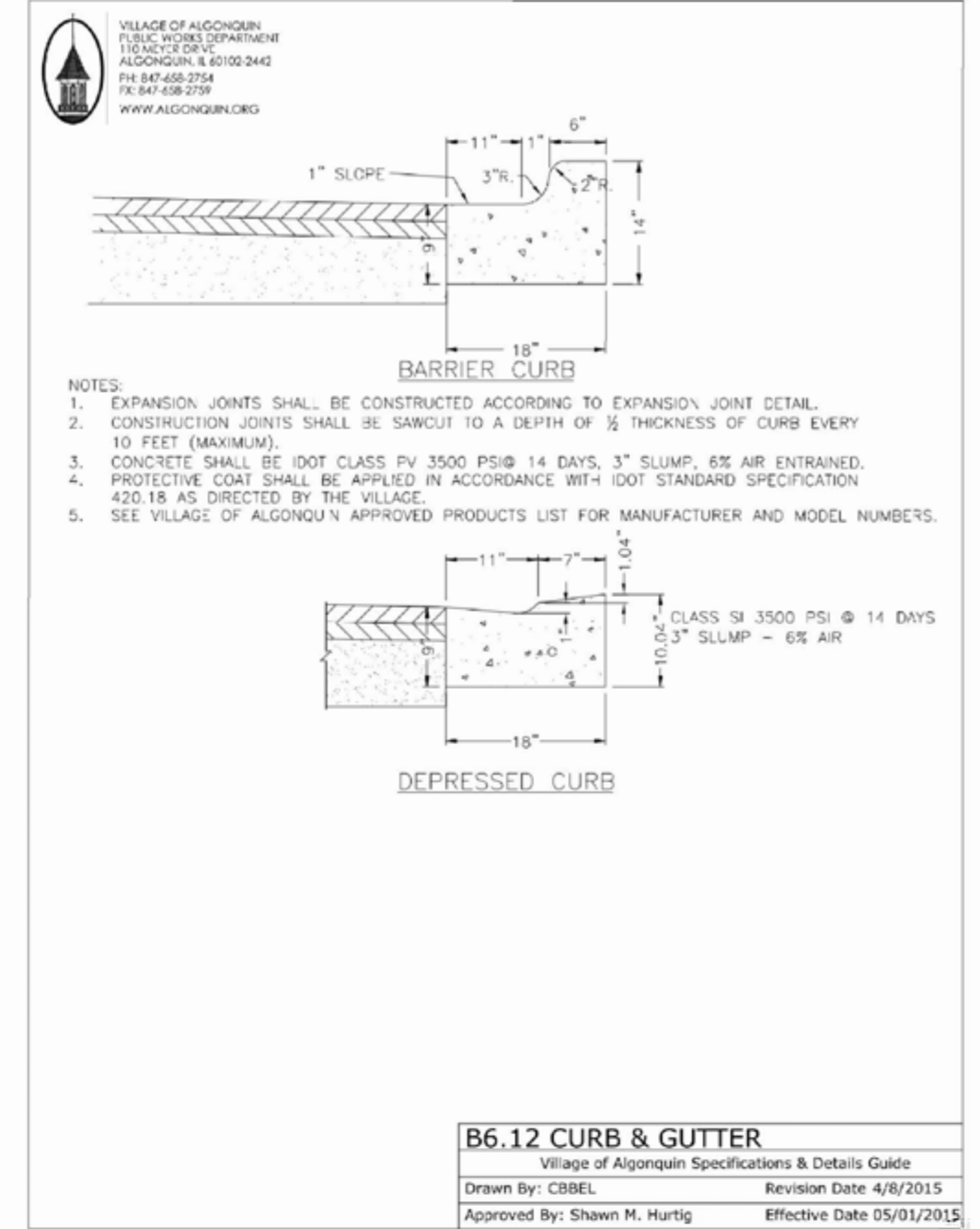
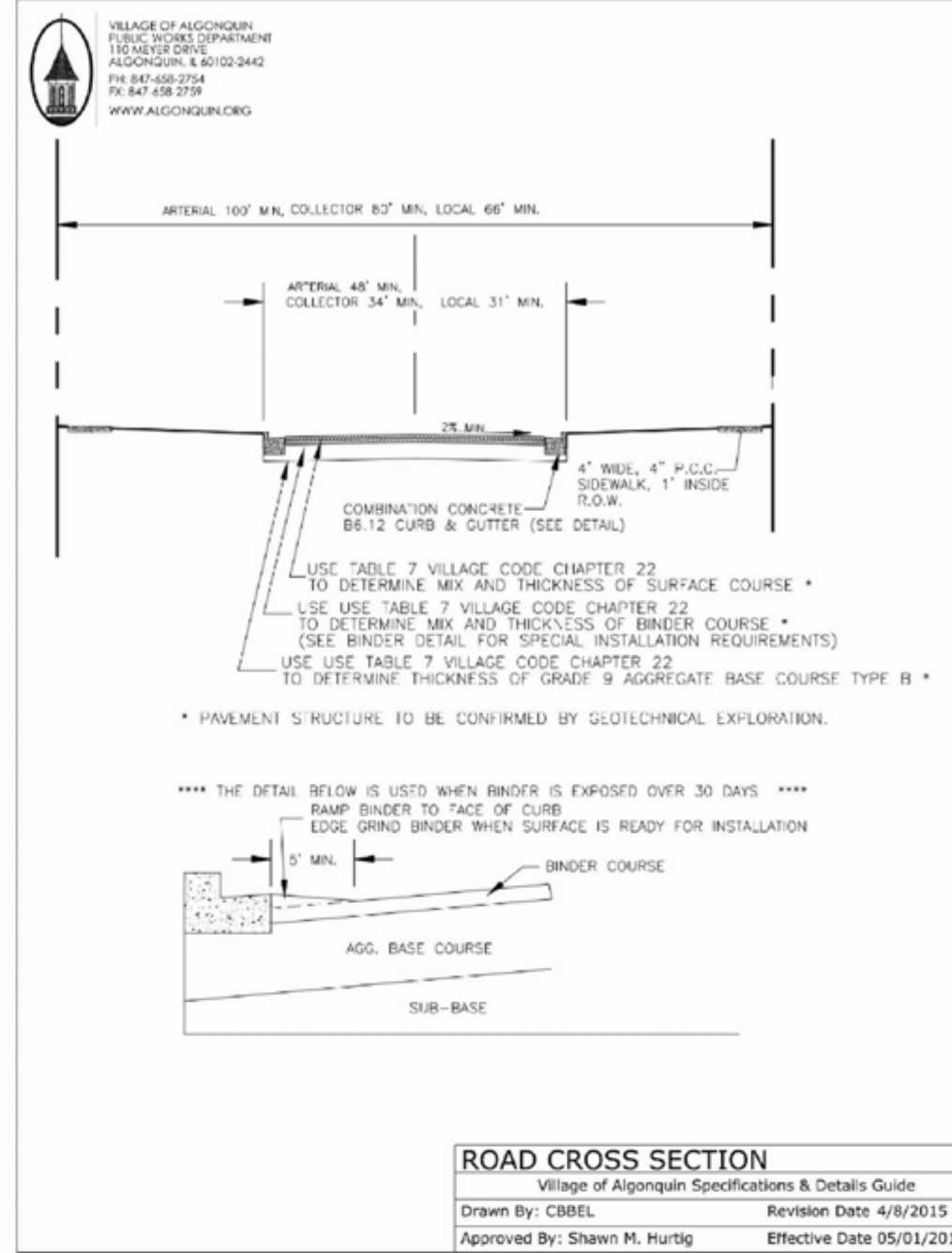
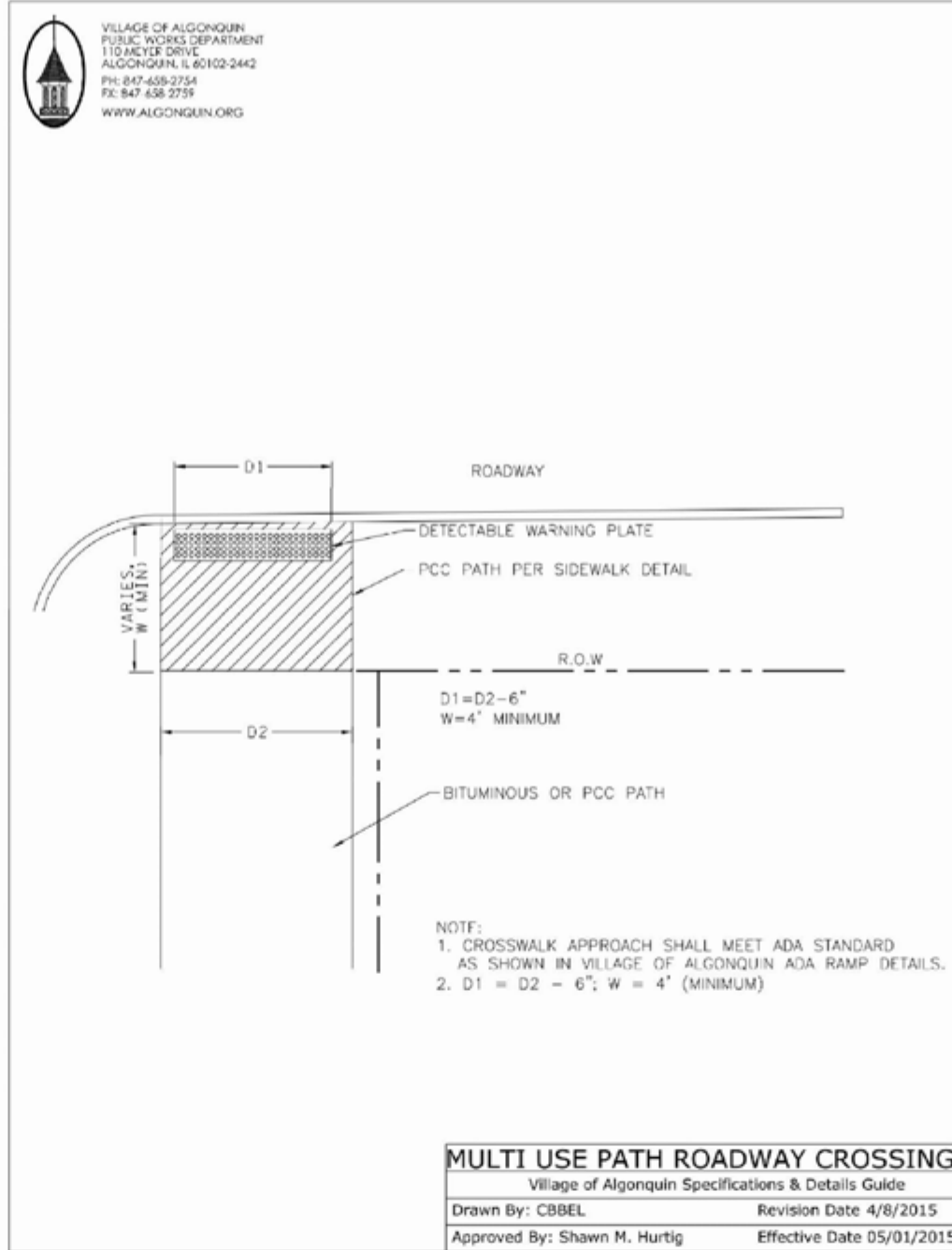
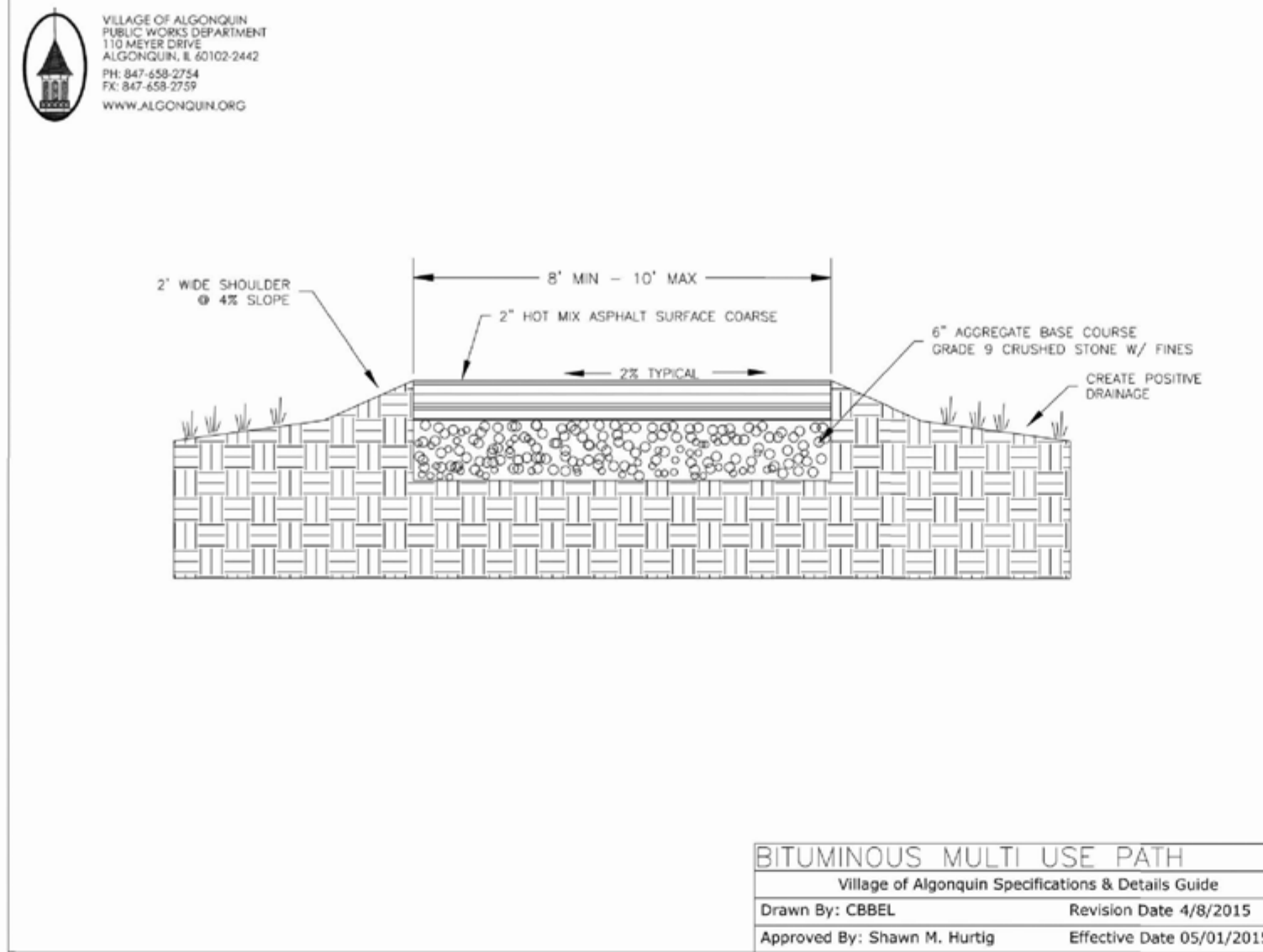
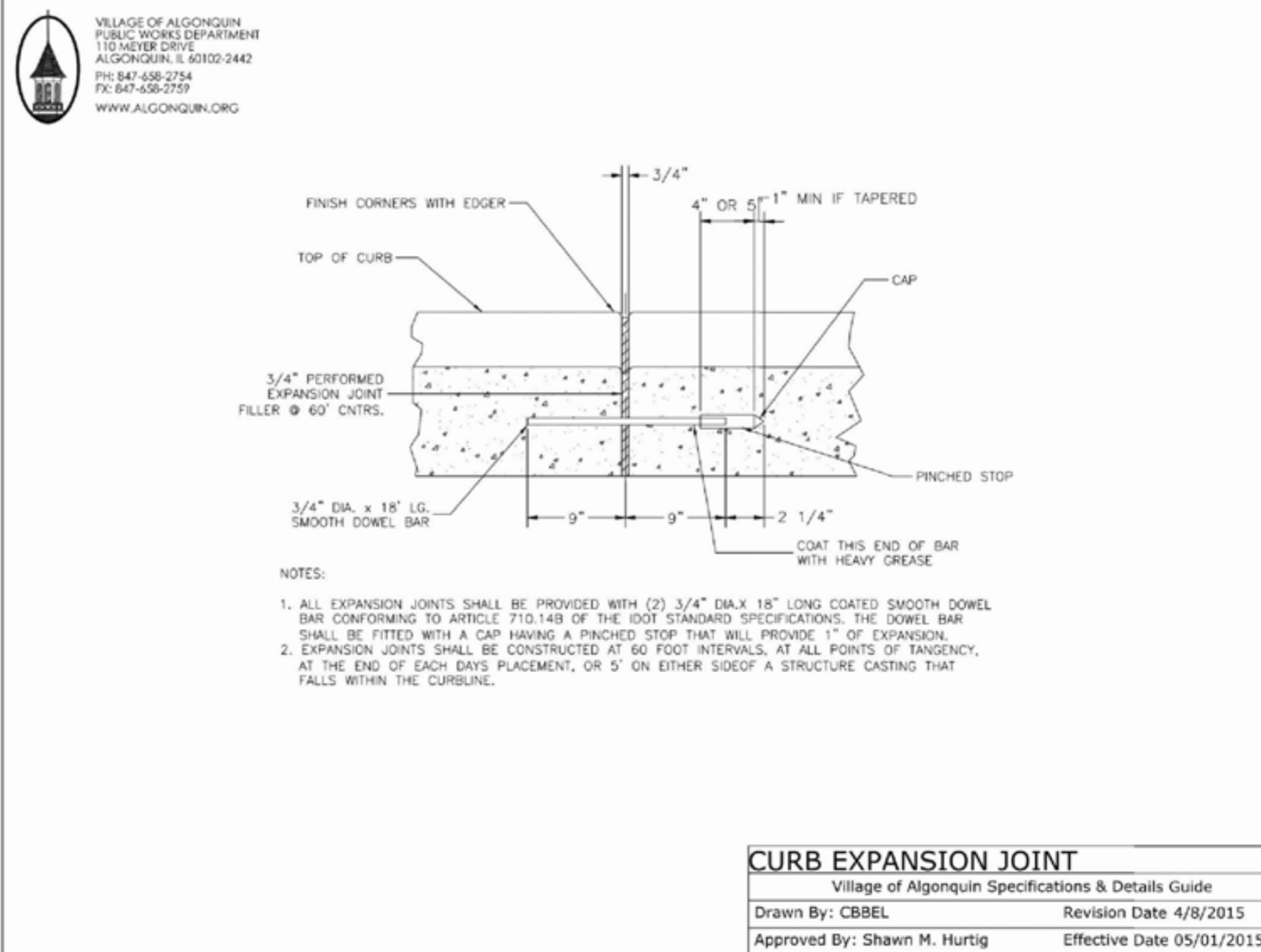
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NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

CONSTRUCTION SPECIFICATIONS – GENERAL NOTES

TRAILS OF WOODS CREEK – PHASE 1 & 2

FILE NAME: GENNOTES	DSGN. BY: CRM	JOB NO.: 402.136	FLD. BK./PG.:	SHEET NO.
DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = N/A	03 of 52





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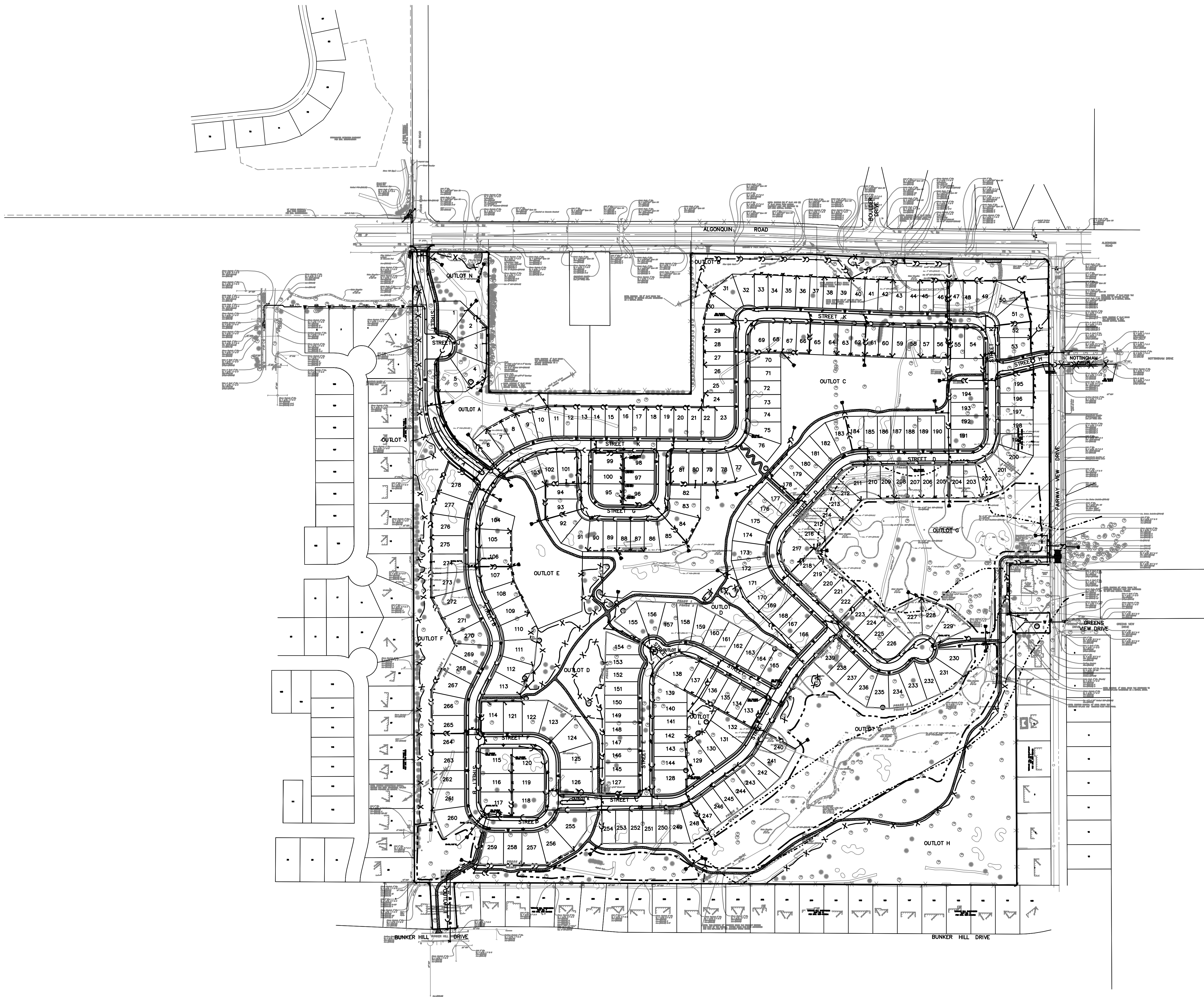
## STREET PAVEMENT DESIGN AND DETAILS

### TRAILS OF WOODS CREEK – PHASE 1 & 2

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DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = N/A	



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LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		STORM SEWER
		STORM MANHOLE
		CATCH BASIN
		INLET
		CLEANOUT
		SLOPE INLET BOX
		HEADWALL
		END SECTION
		SUMP DRAIN CONDUIT
		SANITARY SEWER
		SANITARY MANHOLE
		WATERMAIN
		WATER VALVE IN VAULT
		FIRE HYDRANT
		ACUITY LED 23' MOUNTING HEIGHT w/8' ARM
		ACUITY LED 32' MOUNTING HEIGHT w/10' ARM
		CLAY COLLAR
		EXISTING DRAIN TILE

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REVISIONS		
NO.	DATE	DESCRIPTION

OVERALL SITE PLAN  
TRAILS OF WOODS CREEK – PHASE 1 & 2

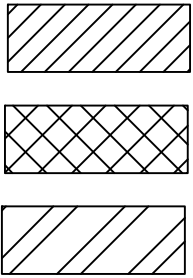
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DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = 200'	05 of 52



Notes:

1. ALL ON-SITE FIELD TILES AND GOLF COURSE DRAINS NOT CONNECTED TO THE PROPOSED STORM SEWER SHALL BE REMOVED COMPLETELY
2. ANY WELL AND SEPTIC SHALL BE PROPERLY SEALED AND ABANDONED THROUGH THE PERMITTING PROCESS OF THE STATE AND COUNTY
3. ALL TRESS NOT SHOWN TO BE SAVED SHALL BE REMOVED AND DISPOSED

LEGEND



ASPHALT OR CONCRETE  
SURFACE TO BE REMOVED

BUILDING AND FOUNDATION  
TO BE REMOVED

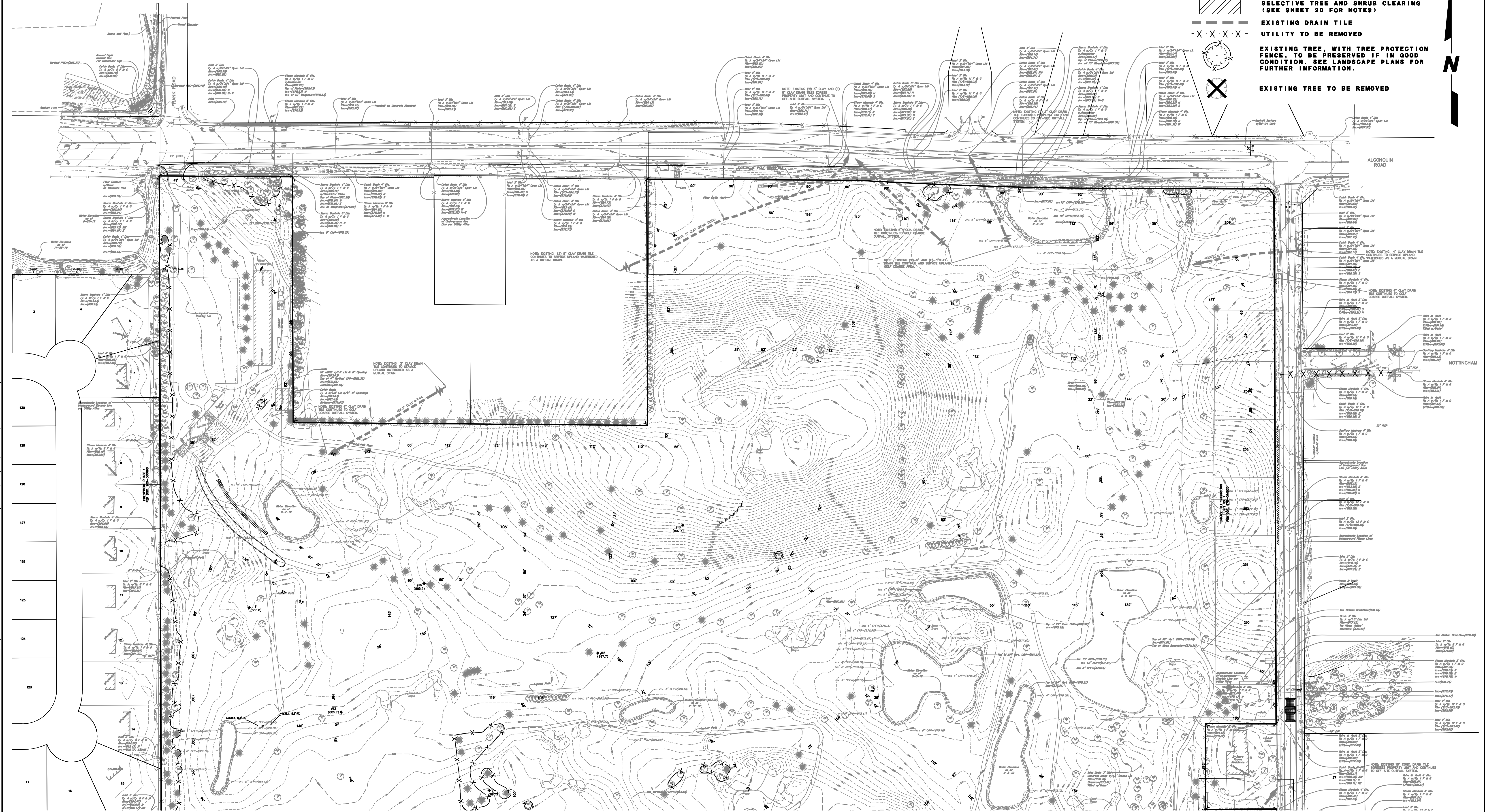
SELECTIVE TREE AND SHRUB CLEARING  
(SEE SHEET 20 FOR NOTES)

EXISTING DRAIN TILE

UTILITY TO BE REMOVED

EXISTING TREE, WITH TREE PROTECTION  
FENCE, TO BE PRESERVED IF IN GOOD  
CONDITION. SEE LANDSCAPE PLANS FOR  
FURTHER INFORMATION.

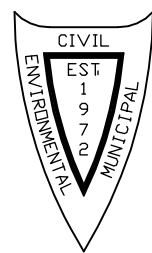
EXISTING TREE TO BE REMOVED



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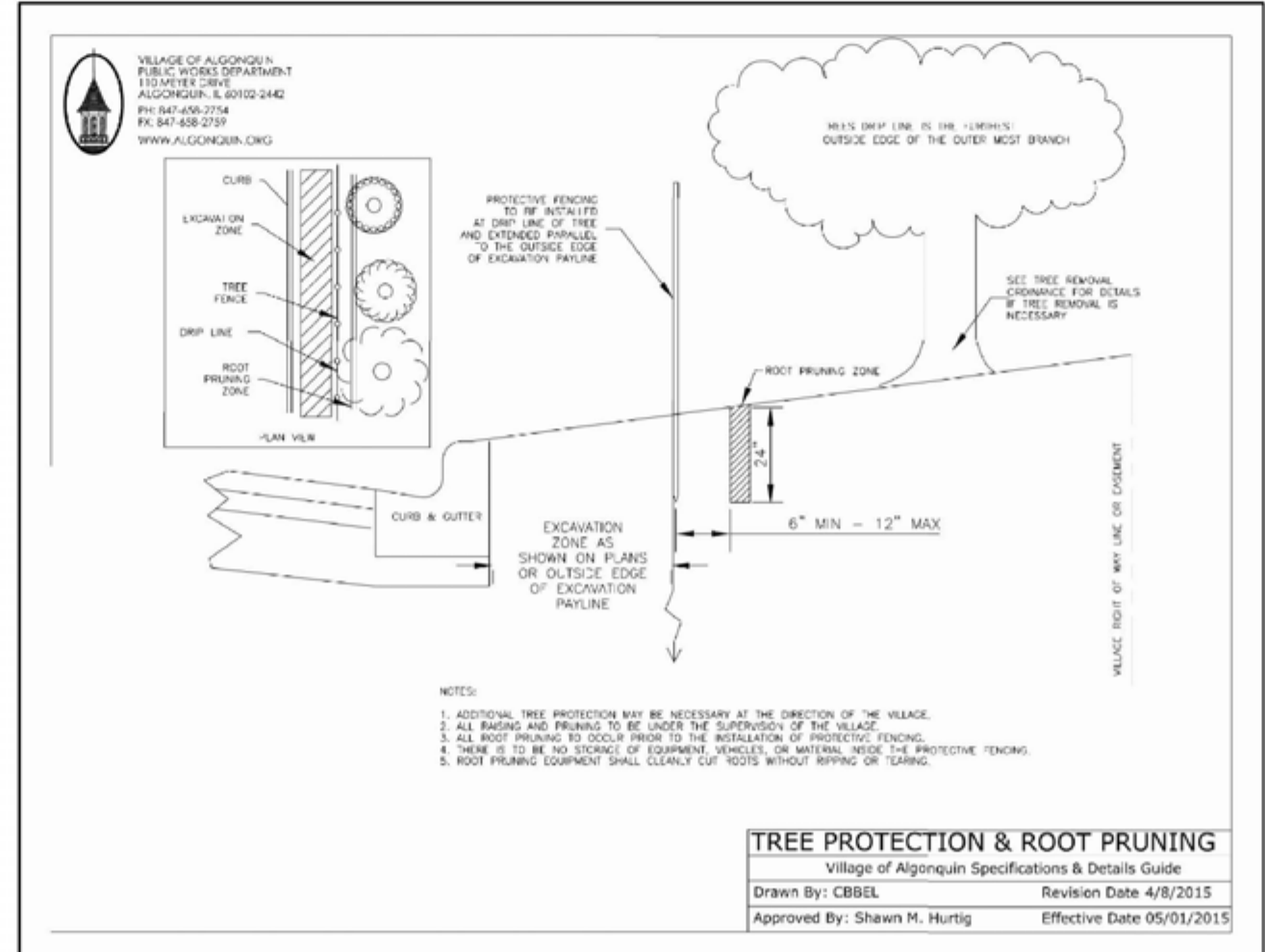
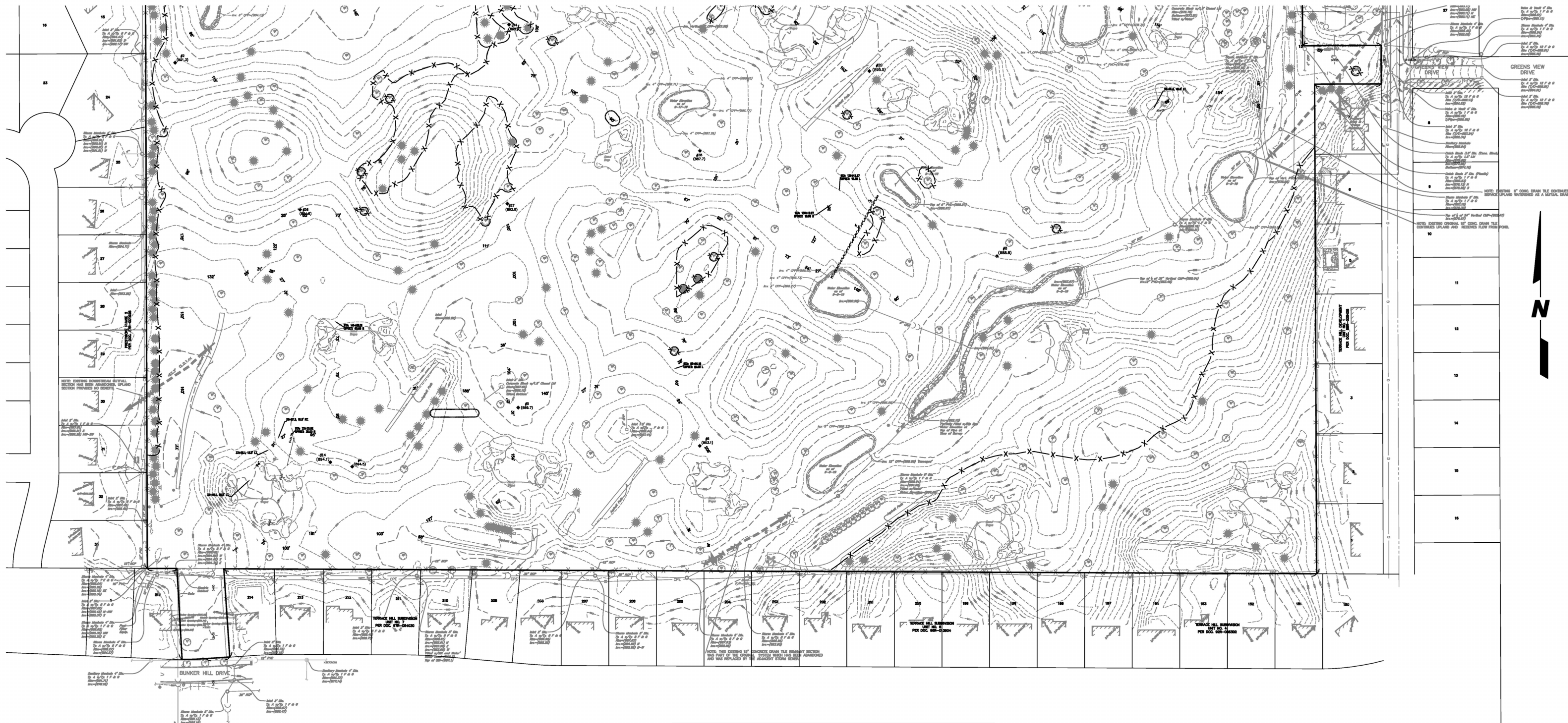
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DEMOLITION TREE PROTECTION AND SOIL BORING PLAN  
TRAILS OF WOODS CREEK – PHASE 1 & 2

FILE NAME: OVRDEMO	DSGN. BY: CRM	JOB NO.: 402136	F.LD. BK./PG.:	SHEET NO.
DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = 100'	06 of 52



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- LEGEND**
- ASPHALT OR CONCRETE SURFACE TO BE REMOVED
  - BUILDING AND FOUNDATION TO BE REMOVED
  - SELECTIVE TREE AND SHRUB CLEARING (SEE SHEET 20 FOR NOTES)
  - EXISTING DRAIN TILE
  - UTILITY TO BE REMOVED
  - EXISTING TREE, WITH TREE PROTECTION FENCE, TO BE PRESERVED IF IN GOOD CONDITION. SEE LANDSCAPE PLANS FOR FURTHER INFORMATION.
  - EXISTING TREE TO BE REMOVED

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DEMOLITION TREE PROTECTION AND SOIL BORING PLAN				
TRAILS OF WOODS CREEK - PHASE 1 & 2				
FILE NAME: OVRDEMO	DSGN. BY: CRM	JOB NO.: 402.136	FLD. BK./PG.:	SHEET NO.
DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = 100'	07 of 52



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MATCH LINE (SEE BELOW)

MATCH LINE (SEE ABOVE)

SEE SHEET 10

SEE SHEET 10

### LEGEND

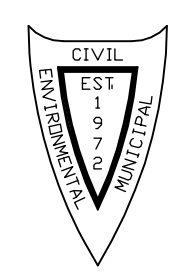
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		CATCH BASIN
		INLET
		CLEANOUT
		SLOPE INLET BOX
		HEADWALL
		END SECTION
		SUMP DRAIN CONDUIT
		SANITARY SEWER
		SANITARY MANHOLE
		WATERMAIN
		WATER VALVE IN VAULT
		FIRE HYDRANT
		LOCAL STREET LIGHT
		COLLECTOR STREET LIGHT
		CLAY COLLAR
		EXISTING DRAIN TILE
		SCALED LIMITS OF FEMA ZONE A PER FIRM
		EXISTING 100YR FLOODPLAIN PER CEMCON STUDY
		PROPOSED 100YR FLOODPLAIN PER CEMCON STUDY
		NUMBERING SYSTEM USED ON PLANS FOR DRAINAGE STRUCTURE IDENTIFICATION
		NUMBERING SYSTEM USED ON PLANS FOR SANITARY MANHOLE IDENTIFICATION
		NUMBERING SYSTEM USED ON PLANS FOR FIRE HYDRANT IDENTIFICATION
		NUMBERING SYSTEM USED ON PLANS FOR VALVE VAULT IDENTIFICATION
		NUMBERING SYSTEM USED FOR LIGHT POLE/STREET LIGHT IDENTIFICATION

NOTE: ALL SANITARY SEWER SHALL BE 8 INCH DIA. UNLESS OTHERWISE NOTED.

ALL WATERMAIN SHALL BE 8 INCH DIA. UNLESS OTHERWISE NOTED.

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NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

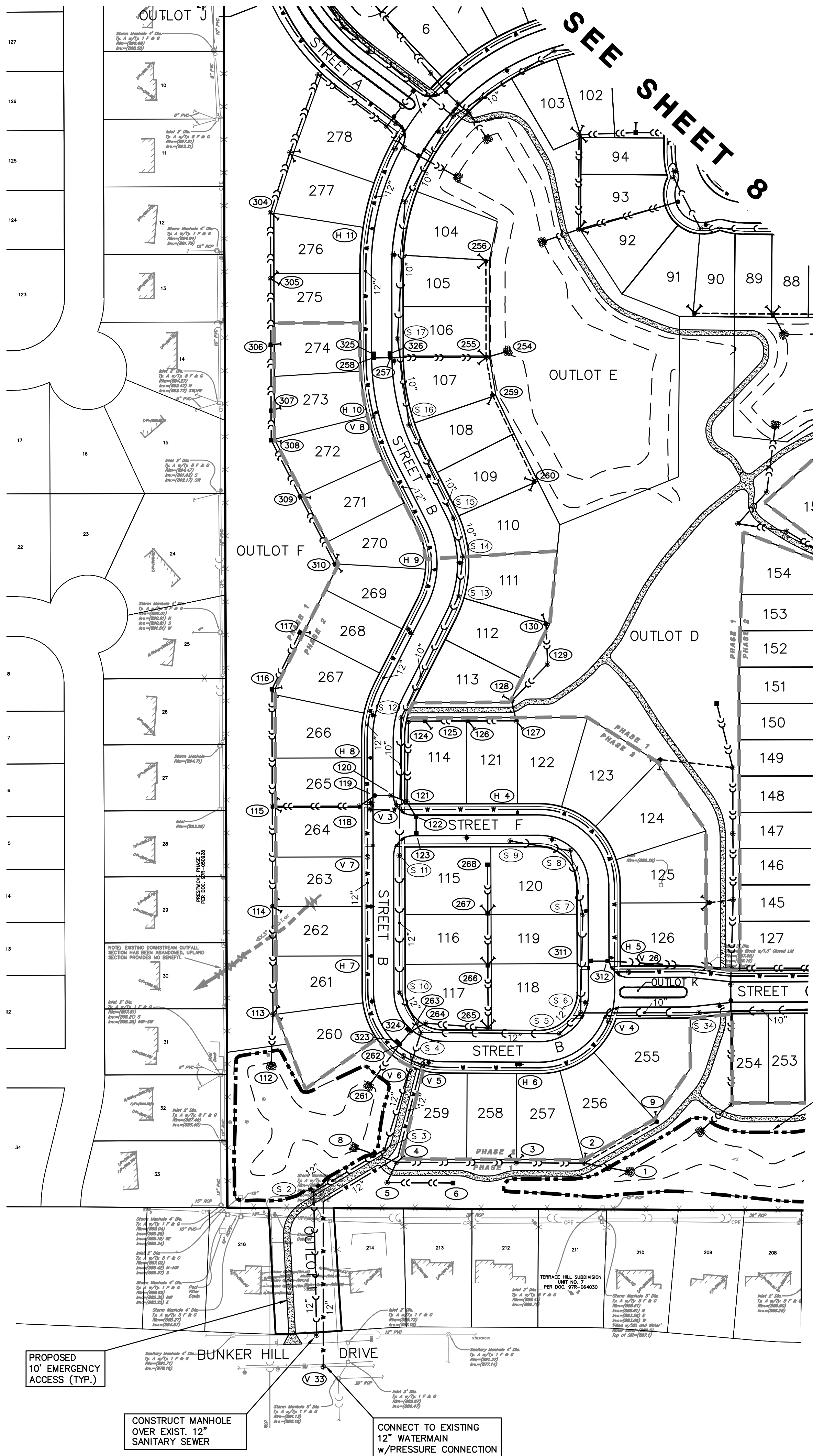
### MASTER UTILITY PLAN

#### TRAILS OF WOODS CREEK – PHASE 1 & 2

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DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = 100'	08 of 52



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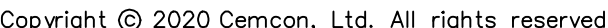
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		STORM MANHOLE
		CATCH BASIN
		INLET
		CLEANOUT
		SLOPE INLET BOX
		HEADWALL
		END SECTION
		SUMP DRAIN CONDUIT
		SANITARY SEWER
		SANITARY MANHOLE
		WATERMAIN
		WATER VALVE IN VAULT
		FIRE HYDRANT
		ACUITY LED 23' MOUNTING HEIGHT w/8' ARM
		ACUITY LED 32' MOUNTING HEIGHT w/10' ARM
		CLAY COLLAR
		EXISTING DRAIN TILE
		SCALED LIMITS OF FEMA ZONE A PER FIRM
		EXISTING 100YR FLOODPLAIN PER CEMCON STUDY
		PROPOSED 100YR FLOODPLAIN PER CEMCON STUDY
		NUMBERING SYSTEM USED ON PLANS FOR DRAINAGE STRUCTURE IDENTIFICATION
		NUMBERING SYSTEM USED ON PLANS FOR SANITARY MANHOLE IDENTIFICATION
		NUMBERING SYSTEM USED ON PLANS FOR FIRE HYDRANT IDENTIFICATION
		NUMBERING SYSTEM USED ON PLANS FOR VALVE VAULT IDENTIFICATION
		NUMBERING SYSTEM USED FOR LIGHT POLE/STREET LIGHT IDENTIFICATION

**NOTE. ALL SANITARY SEWER SHALL BE 8 INCH DIA. UNLESS OTHERWISE NOTED.**

**ALL WATERMAIN SHALL BE 8 INCH DIA. UNLESS OTHERWISE NOTED.**

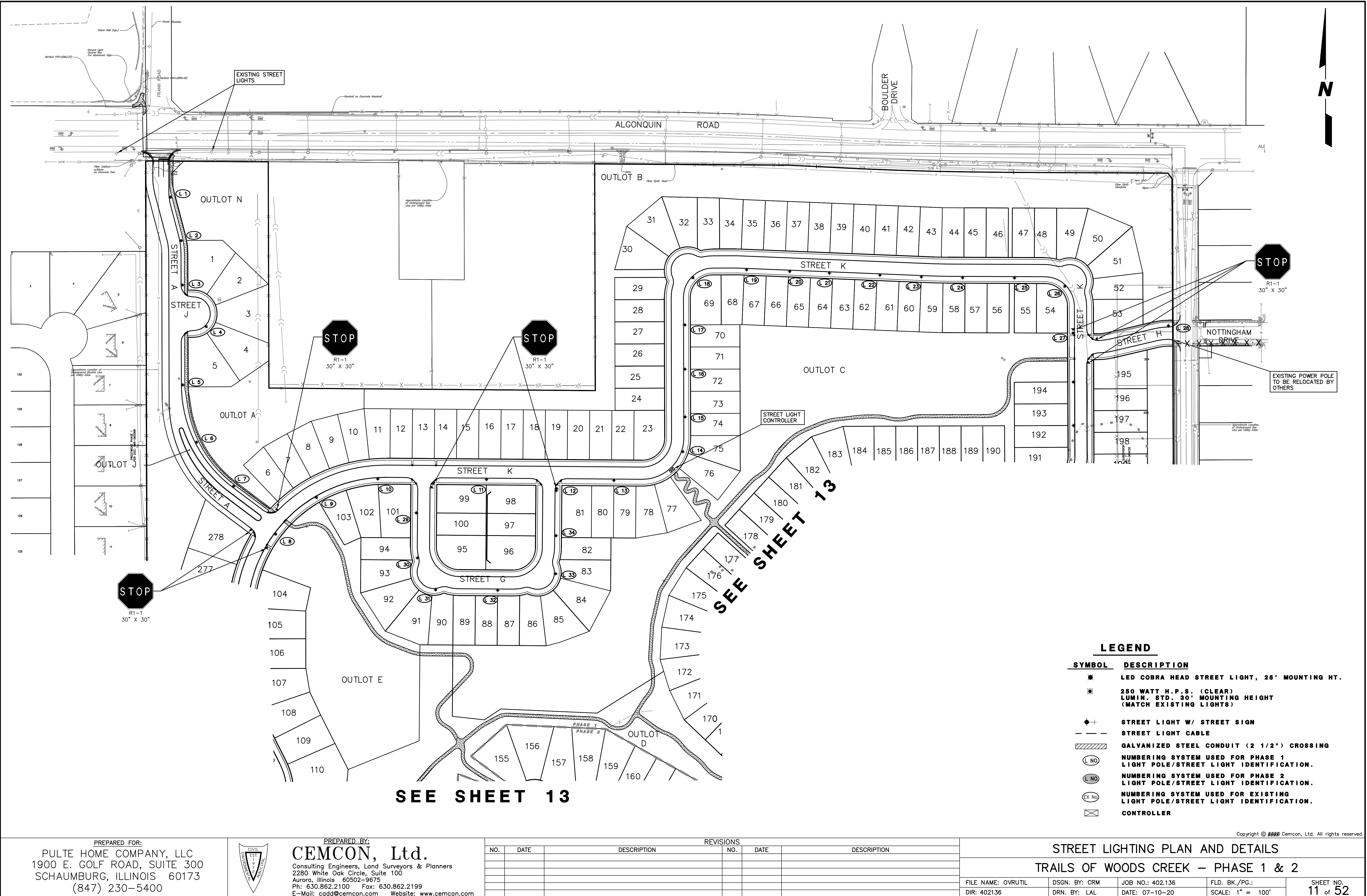
NO.	DATE	DESCRIPTION
REVISIONS		
PREPARED FOR:		
PULTE HOME COMPANY, LLC 1900 E. GOLF ROAD, SUITE 300 SCHAUMBURG, ILLINOIS 60173 (847) 230-5400		
PREPARED BY:		
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MASTER UTILITY PLAN		
TRAILS OF WOODS CREEK - PHASE 1 & 2		
JOB NO.: 402136	DATE: 07-10-20	SHEET NO. 09 of 52
DSGN. BY: CRM	DRN. BY: LAL	
FILE NAME: OVRUTIL	FLD. BK./PG.:	
DIR: 402136		SCALE: 1" = 100'



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LEGEND

SYMBOL	DESCRIPTION
●	LED COBRA HEAD STREET LIGHT, 25' MOUNTING HT.
⊙	250 WATT H.P.S. (CLEAR) LUMIN. STD. 30' MOUNTING HEIGHT (MATCH EXISTING LIGHTS)
⊕	STREET LIGHT W/ STREET SIGN
---	STREET LIGHT CABLE
▨	GALVANIZED STEEL CONDUIT (2 1/2") CROSSING
(L NO)	NUMBERING SYSTEM USED FOR PHASE 1 LIGHT POLE/STREET LIGHT IDENTIFICATION.
(L NO)	NUMBERING SYSTEM USED FOR PHASE 2 LIGHT POLE/STREET LIGHT IDENTIFICATION.
(EX NO)	NUMBERING SYSTEM USED FOR EXISTING LIGHT POLE/STREET LIGHT IDENTIFICATION.
⊠	CONTROLLER

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STREET LIGHTING PLAN AND DETAILS  
TRAILS OF WOODS CREEK – PHASE 1 & 2

FILE NAME: OVRUTIL	DSGN. BY: CRM	JOB NO.: 402.136	FLD. BK./PG.:	SHEET NO.
DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = 100'	11 of 52



NOTES:

1. Luminaires to be Cobra Head Style, Painted Black with Full Cut Off Optics LED Lamps and Multi-Top Ballasts.
2. Pole to be 25' Mounting Height Round Tapered Aluminum Pole Powder Coated black with Davit Type Arms
3. Foundation to be Metal Screw In Type.
4. Conduit layout to be coordinated by Contractor with COMED Design.

5. Pole and Light Fixtures, Conduit and wire schedule, voltage drop calculations and all cut sheets to be provided to the Village for approval prior to ordering of Materials.
6. Street light standards shall be mounted on a metal screw-in type foundation located 42 inches behind the curb, except where the distance between the curb and sidewalk prohibits this location. Breakaway couplings or transformer bases shall be utilized in accordance with IDOT District 1 General Guidelines for Lighting Design, latest edition, Table D.2.2 and D.2.3 or current Article.

7. The lighting controller shall be U.L. 508A listed control panel and require a 120/240V, 100-amp, 1Ø, 3-wire ComEd metered electric service. The controller shall be protected by a 100-amp, 2-pole, 600V-rated circuit breaker and controlled by a mechanically held/electrically operated 100-amp-rated, 2-pole lighting contactor with a time delay relay operated photocell and HOA override switch. All branch circuits shall be protected by minimum 20-amp, 240V-rated, 2-pole circuit breaker. All internal cabinet control wiring shall be MTWtype conductors. All external wiring shall be XLP-type USE copper conductors. The maximum voltage drop on any branch circuit may not exceed 5 percent.

8. Conduits used for street lighting shall be HDPE Sch. 40 duct and buried a minimum of 30 inches below grade and 24 inches behind the curb (or 24 inches from the edge of the shoulder). Where conductors cross under existing streets or private drives, they shall run in rigid galvanized steel (RGS) conduit and the RGS conduit shall extend a minimum of 5 feet on each side of all streets and driveways.

9. Conductors: All proposed wiring used for electric services, branch circuits, and pole wiring shall be cross-linked polyethylene SLP Type USE copper conductors. No splicing of conductors shall be allowed other than in pole handholes. All splicing shall be by means of compression couplings that are sealed in heat shrink-type boots and sealing mastic. All current carrying conductors shall be fused. All fusing shall be by means of single pole or double pole in-line fuse kits connected to the load side pole wiring spliced within the pole handhole. All wiring and splices shall have enough cable slack to be withdrawn 18 inches minimum outside of the pole handhole. The conductor colors for the street lighting branch circuit wiring shall be "A" phase (red), "B" phase (black), neutral (white) and ground (green). If receptacle circuit wiring is installed in the same conduit as the street lighting, the phase conductor shall be (blue), the neutral shall be (white) and ground (green). If multiple receptacle circuits are to be installed, then the phase conductors shall be different colors than identified above. Phase tapping shall not be allowed. All branch circuit wiring shall be labeled on the load side of the circuit breaker in which it originates and also in the pole handholes. The label shall indicate controller number and circuit number. The light standard shall also carry the same identification but shall also include the pole number.

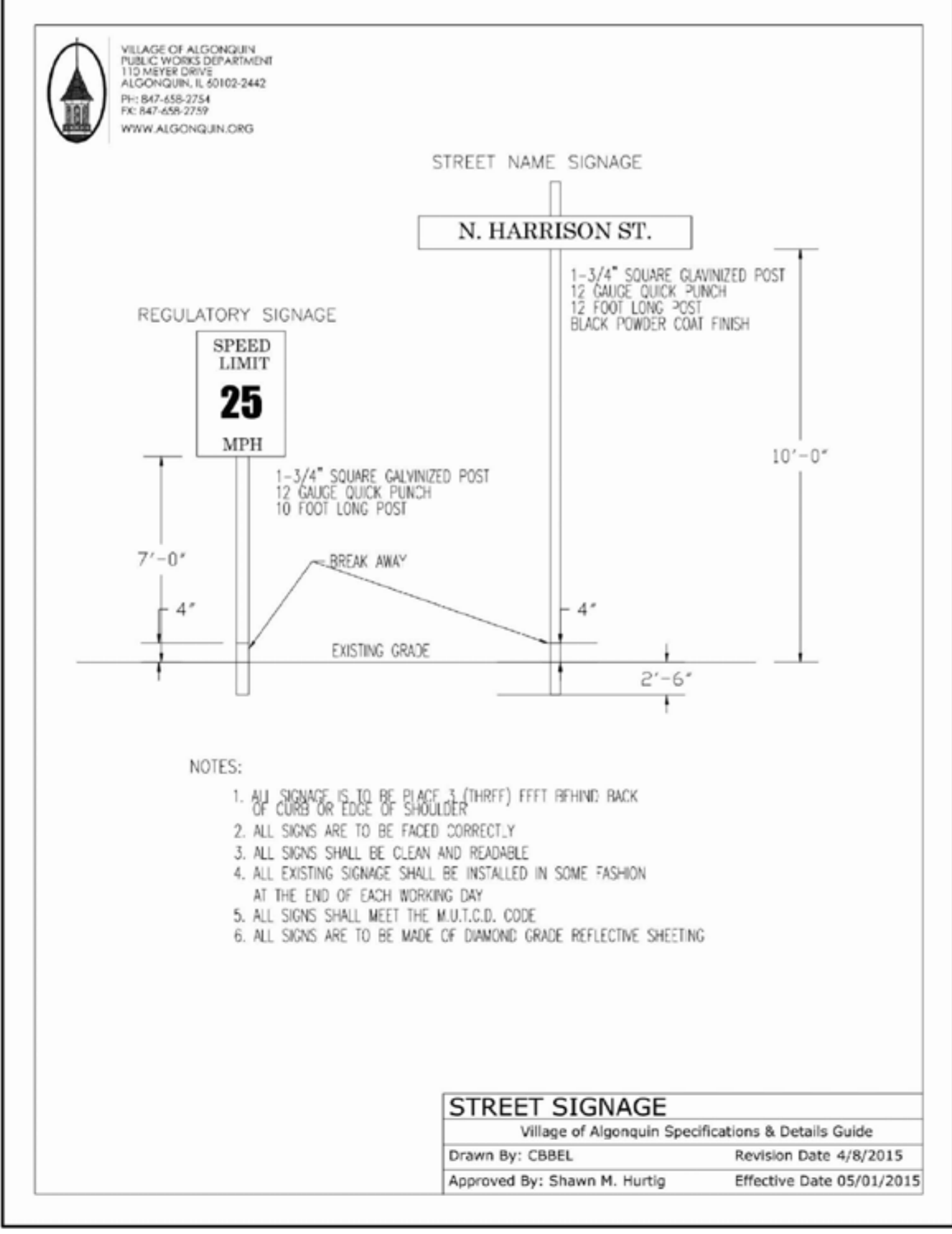
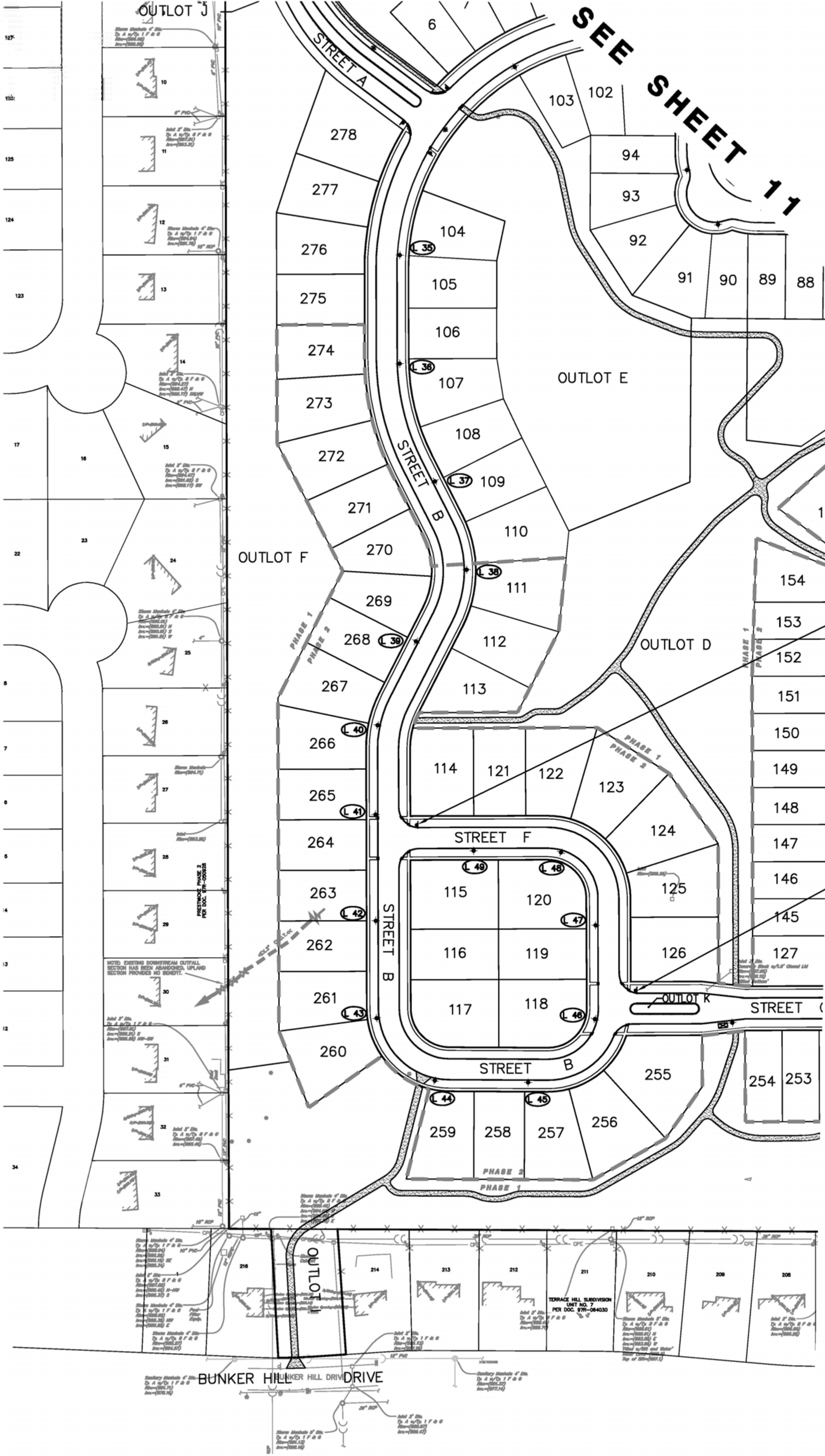
10. All controls shall be mounted in a black powder coated aluminum NEMA 3R, IDOT Type 3 minimum size enclosure, and shall include a stainless steel plate labeled "Street Lighting" on the door. The cabinet shall not exceed IDOT Type 3 in size and be mounted on a 4-foot-high by 3-inch diameter black powder coated traffic signal post with a clamshell base. The concrete foundation shall be 4 feet deep consisting of four vertical rods and #3 rings 12 inches on center for reinforcing. The top of the base shall be 2 1/2 (+/- 1/2-inch) inches above the finished adjoining grade, the top of curb, or edge of the shoulder, whichever is highest. The base shall include the required number of feeder conduits with standard radii and a 2-inch minimum service conduit connected directly to the meter socket as required by Commonwealth Edison. All feeder and supply conduit shall enter the cabinet from the bottom. A triangular ground field with a minimum of 3/8 inches by 10-foot ground rods exothermally welded and installed in 3 individual 12-inch by 12-inch composite concrete handholes.

11. Streetlights shall be controlled by a lighting controller mounted photocell. A hand-off-auto switch shall provide the manual operation of a mechanically held contactor of 100 amperes minimum capacity. Each service center shall have a duplex GFCI 120-volt receptacle and door-switch operated maintenance light mounted inside the cabinet.

12. The receptacle circuits shall operate as listed in Section 22.06-H3b herein. The receptacles shall be housed in a separately metered traffic box enclosure mounted back to back with the street lighting controller. The electric service to the controller shall be a 120/240V, 1Ø, 3-wire, 100-amp service. If service is to be larger than 100-amp, Village approval shall be required. The receptacle enclosure shall include a 240-volt-rated surge suppressor protecting a 240V, two-pole main rated breaker. The controller shall have one 120V control circuit for manual operation of the circuits with a time clock override. The second circuit shall be a 120-volt maintenance circuit which shall include a 120-volt duplex GFCI receptacle and a door-switch operated maintenance light. The receptacle circuit breakers shall be controlled by mechanically held/electrically-operated lighting contactor feeding a main lug only 12-position light panel with independent neutral and ground bus bars.

13. Electric service to the controller for the street lighting system shall be run underground a minimum of 30 inches deep from the Commonwealth Edison service source, either overhead or underground to the lighting controller. The proposed load to serve shall determine the size of the service entrance conductors. Service conductors shall be 600-volt XLP-Type USE-type and shall be installed in a minimum 2-inch hot-dipped rigid conduit that shall be a continuous unspliced cable run from the lighting controller to the Commonwealth Edison service source. The minimum size service wires shall be #2 copper conductors.

14. All underground feeders shall be tested in accordance with IDOT Standard Specifications for Road and Bridge Construction, latest edition, Art. 801.13 "Testing" or current article. All testing shall be done in the presence of the Public Works Director or designee.



LEGEND	
SYMBOL	DESCRIPTION
	LED COBRA HEAD STREET LIGHT, 25' MOUNTING HT.
	260 WATT H.P.S. (CLEAR) LUMIN. STD. 30' MOUNTING HEIGHT (MATCH EXISTING LIGHTS)
	STREET LIGHT W/ STREET SIGN
	STREET LIGHT CABLE
	GALVANIZED STEEL CONDUIT (2 1/2") CROSSING
	NUMBERING SYSTEM USED FOR PHASE 1 LIGHT POLE/STREET LIGHT IDENTIFICATION.
	NUMBERING SYSTEM USED FOR PHASE 2 LIGHT POLE/STREET LIGHT IDENTIFICATION.
	NUMBERING SYSTEM USED FOR EXISTING LIGHT POLE/STREET LIGHT IDENTIFICATION.
	CONTROLLER

REVISIONS		
NO.	DATE	DESCRIPTION
PREPARED FOR:		
PULTE HOME COMPANY, LLC		
1900 E. GOLF ROAD, SUITE 300		
SCHAUMBURG, ILLINOIS 60173		
(847) 230-5400		
PREPARED BY:		
CEMCON, Ltd.		
Consulting Engineers, Land Surveyors & Planners		
2280 White Oak Circle, Suite 100		
Aurora, Illinois 60502-9675		
Ph: 630.862.2100 Fax: 630.862.2199		
E-Mail: cadd@cemcon.com Website: www.cemcon.com		
STREET LIGHTING PLAN AND DETAILS		
TRAILS OF WOODS CREEK - PHASE 1 & 2		
JOB NO.: 402136	DATE: 07-10-20	SHEET NO. 12 of 52
DSGN. BY: CRM	DRN. BY: LAL	
FILE NAME: OVRUTIL	FLD. BK./PG.:	
DIR: 402136	SCALE: 1" = 100'	



PLOT FILE CREATED: 7/13/2020 8:43 AM BY JEFF CEBULA DRAWING LAST SAVED: 7/13/2020 8:39 AM BY JEFF CEBULA DRAWING PATH: P:\402136\DWG\ENG DRAWINGS\FINAL DRAFTING\OVRUTIL.DWG

SEE SHEET 12

SEE SHEET 11

OUTLOT C

OUTLOT G

OUTLOT E

OUTLOT D

OUTLOT M

OUTLOT D

OUTLOT L

OUTLOT K

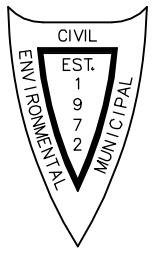
OUTLOT H

FAIRWAY VIEW DRIVE

GREENS VIEW DRIVE

### LEGEND

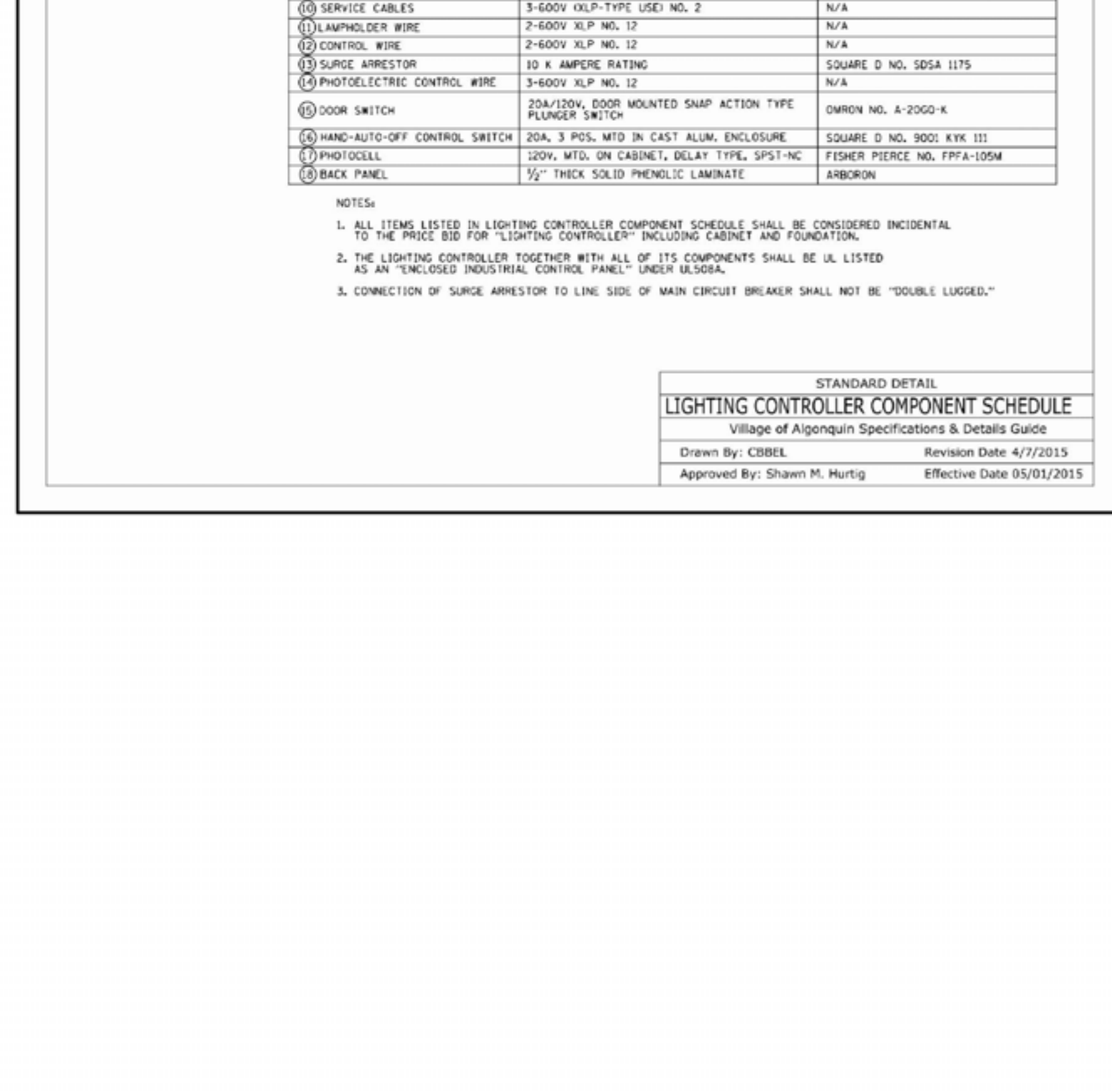
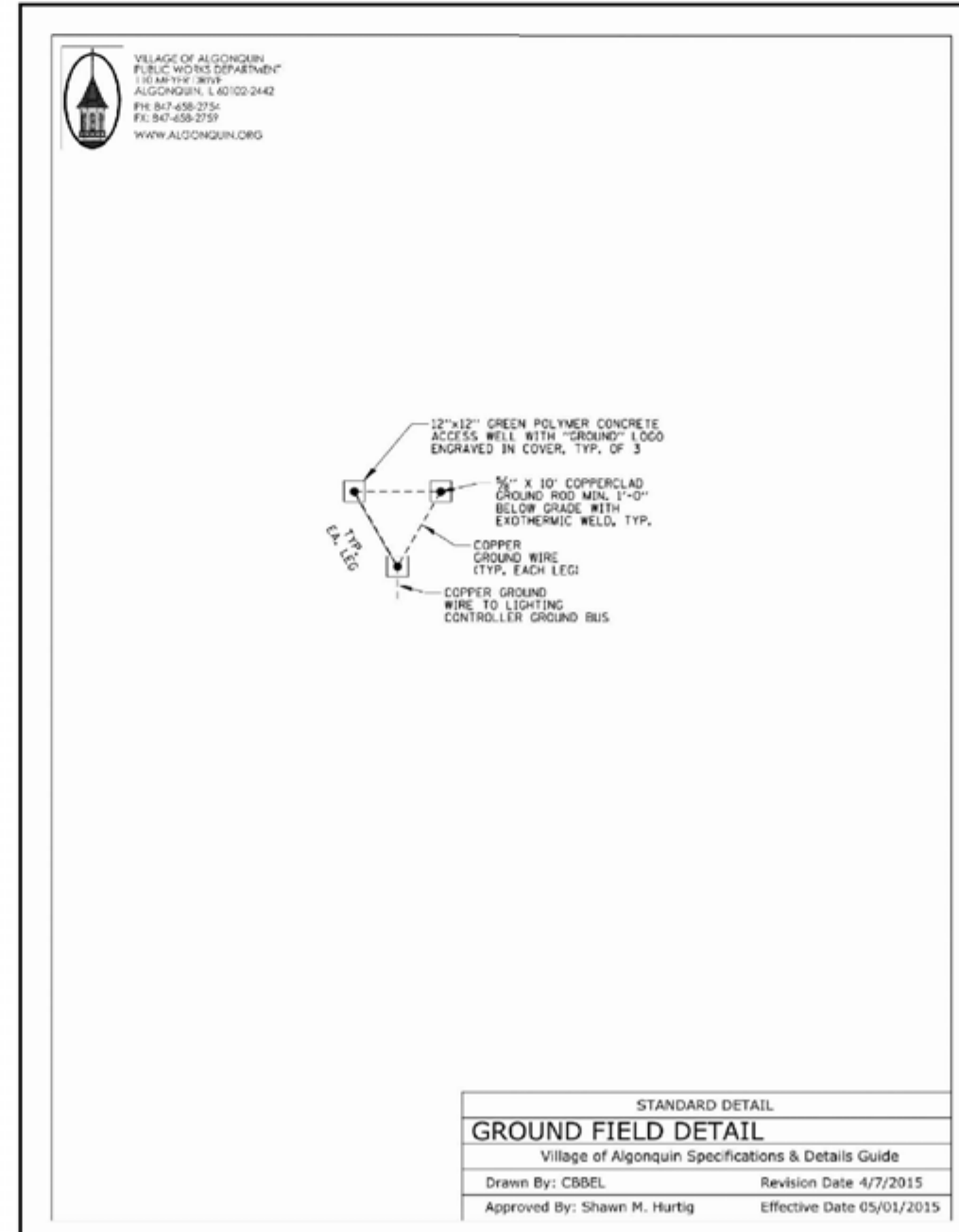
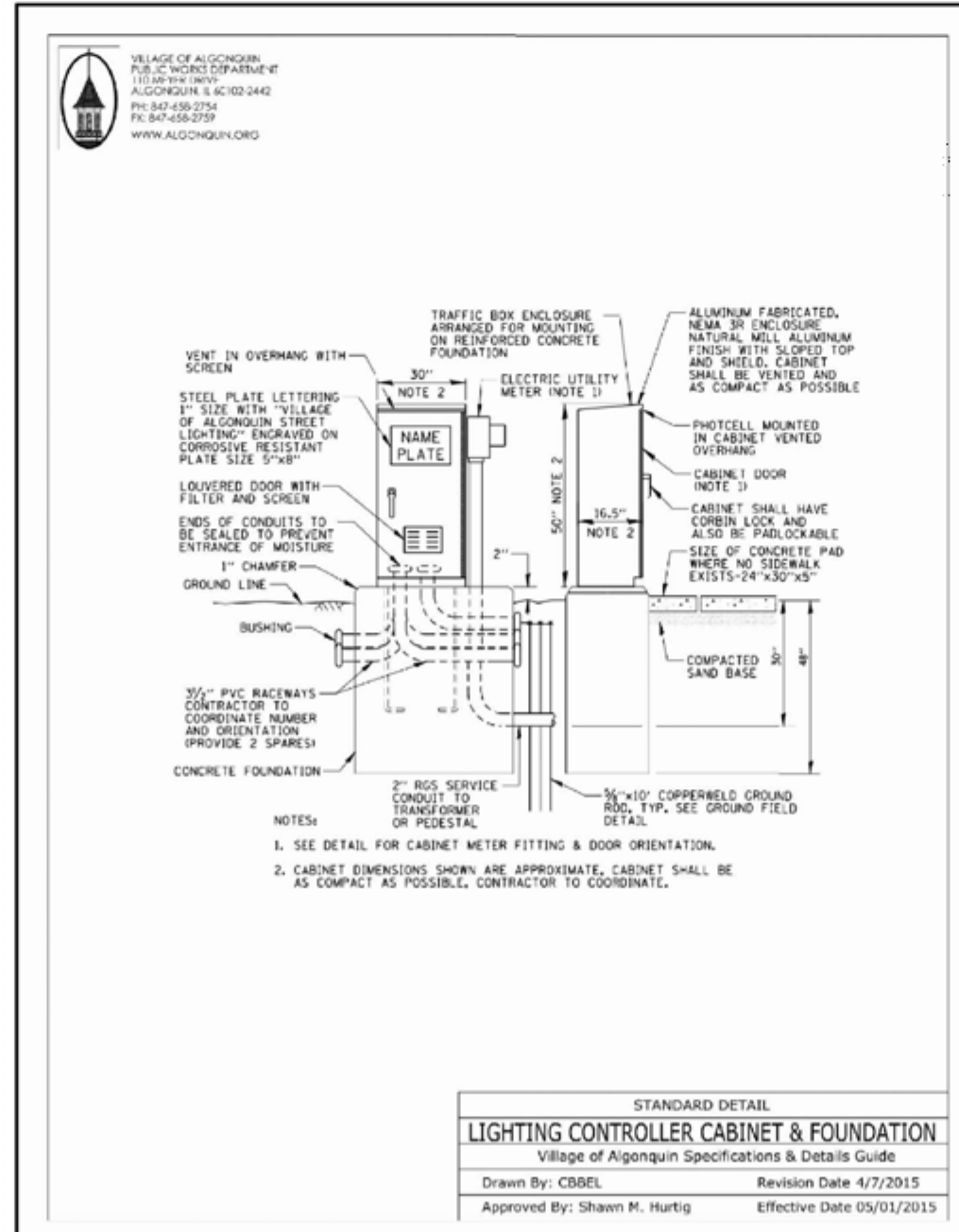
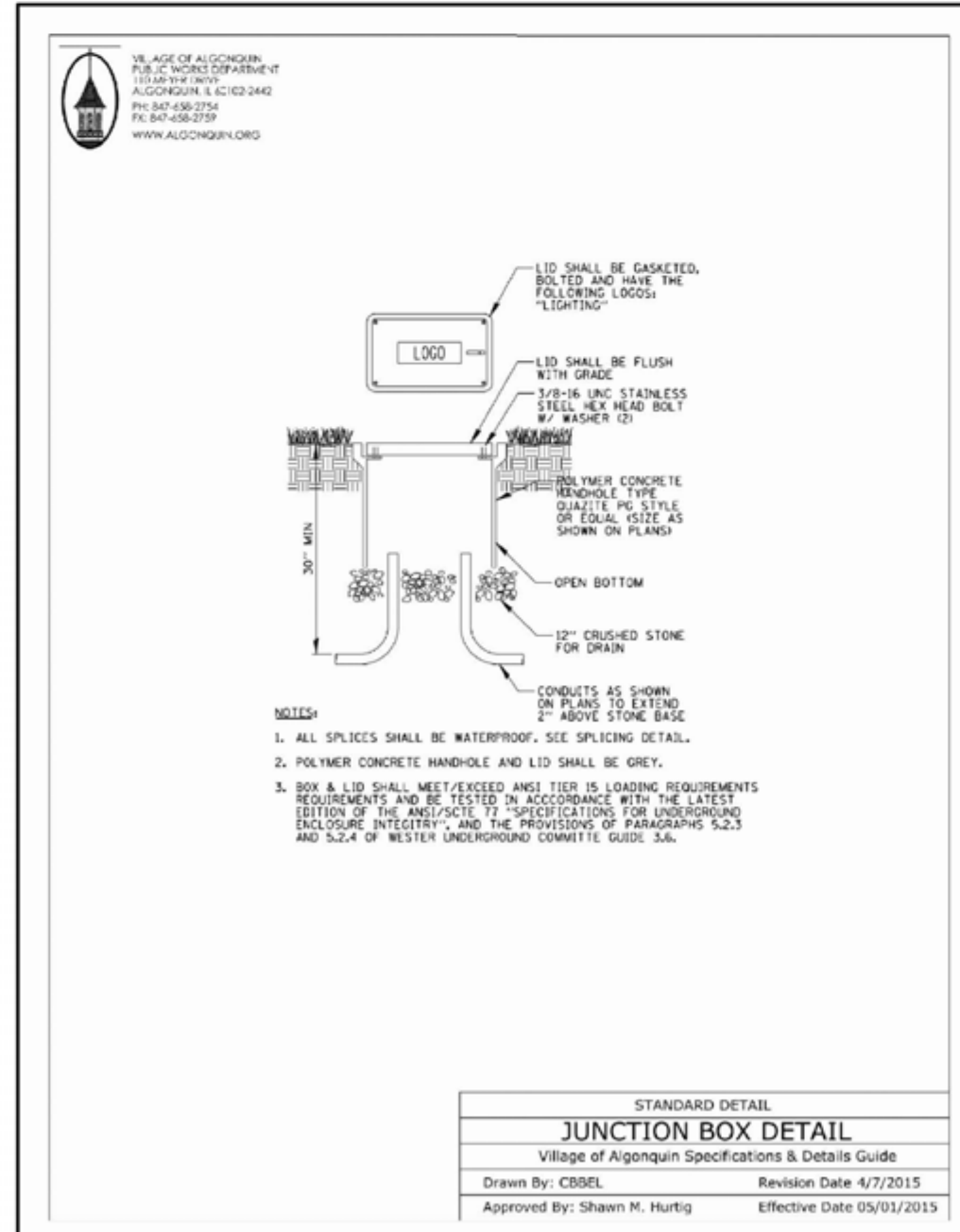
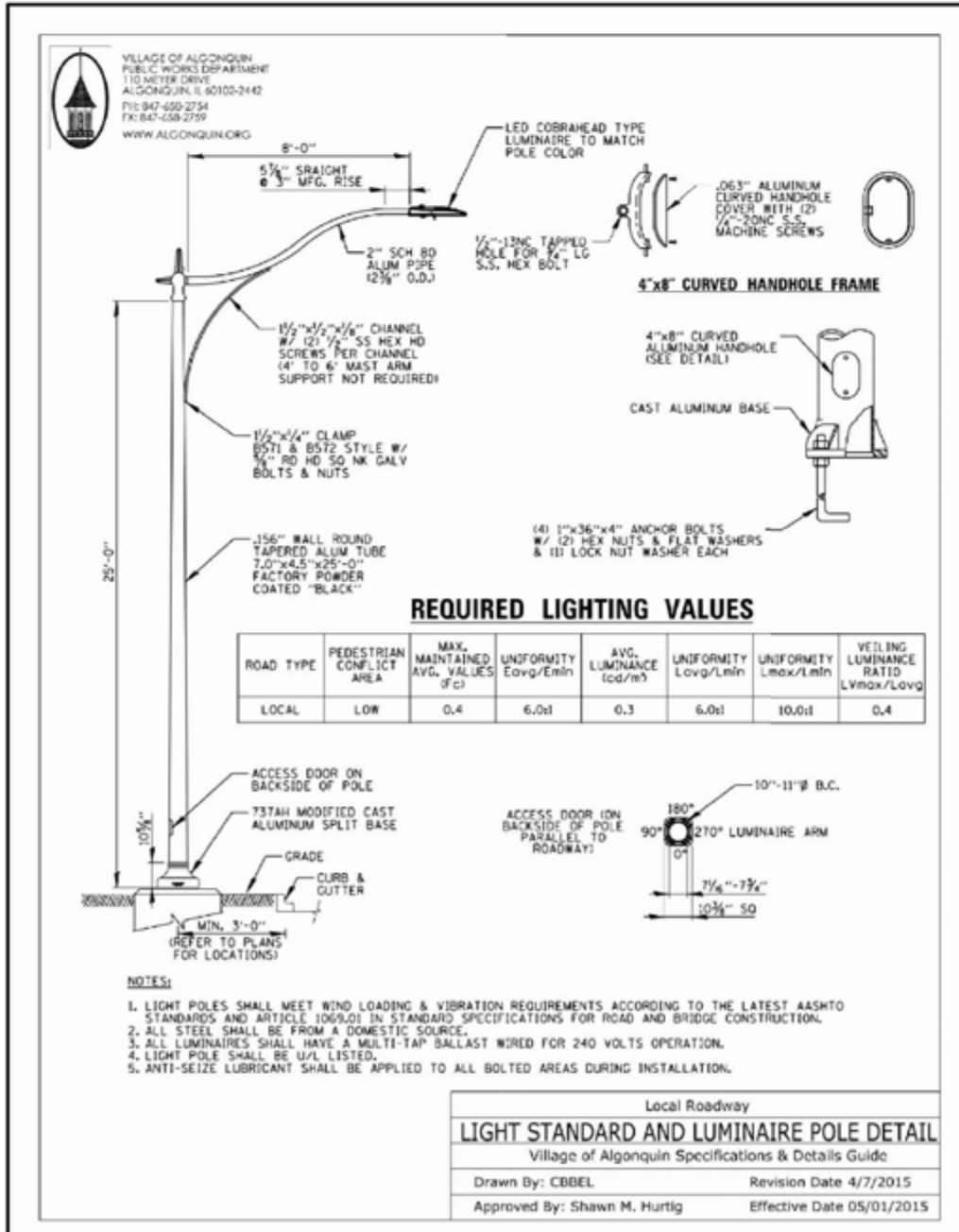
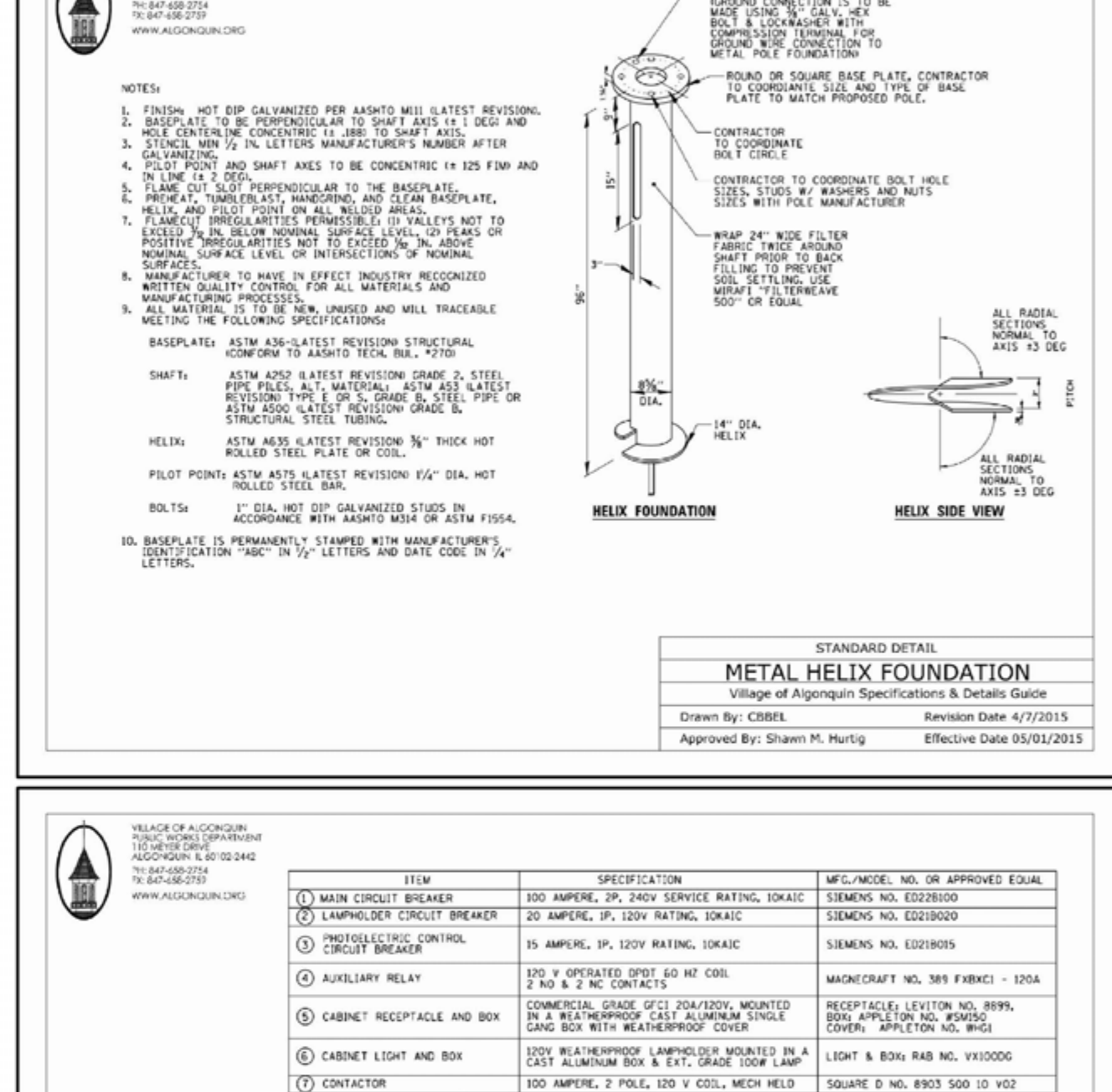
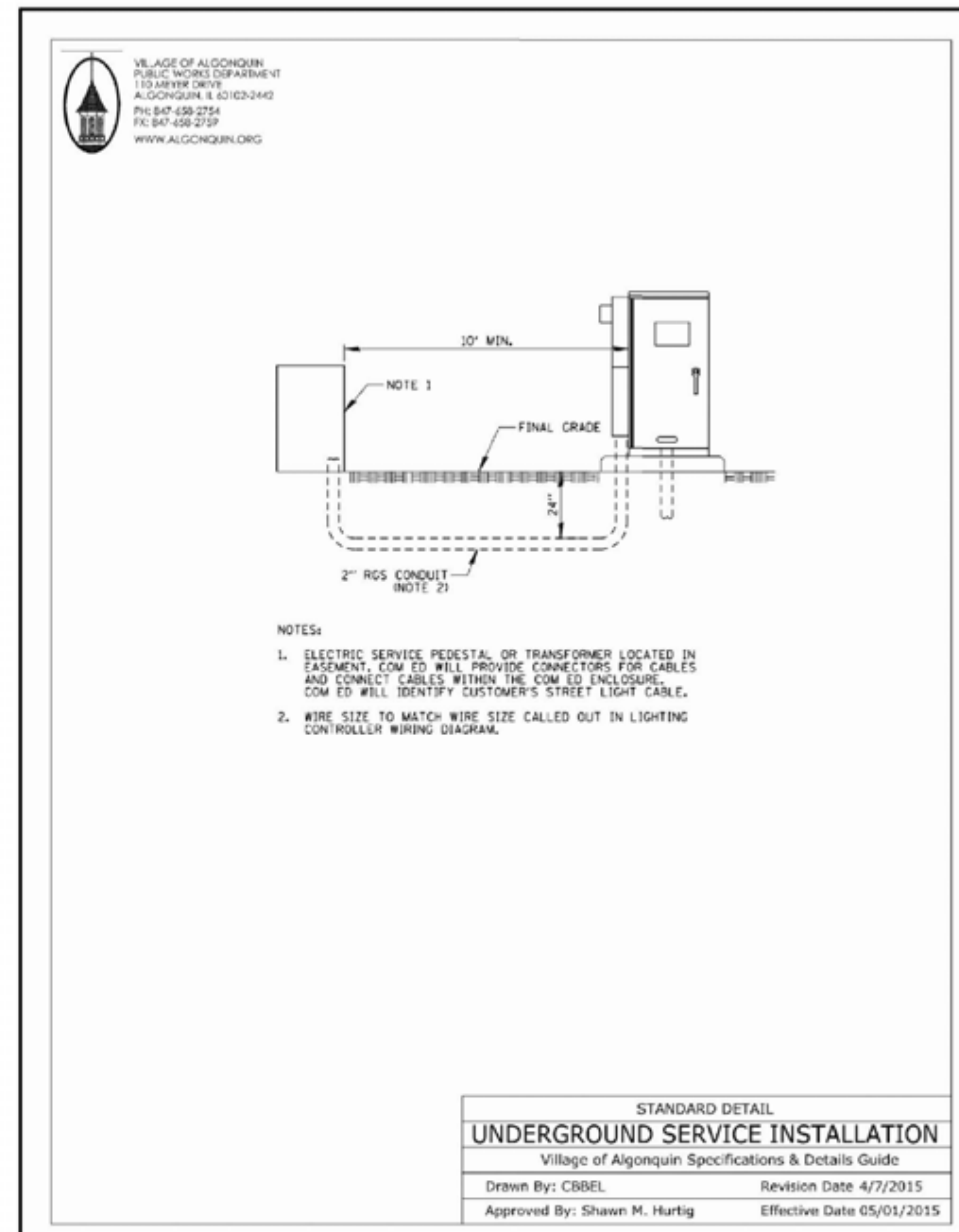
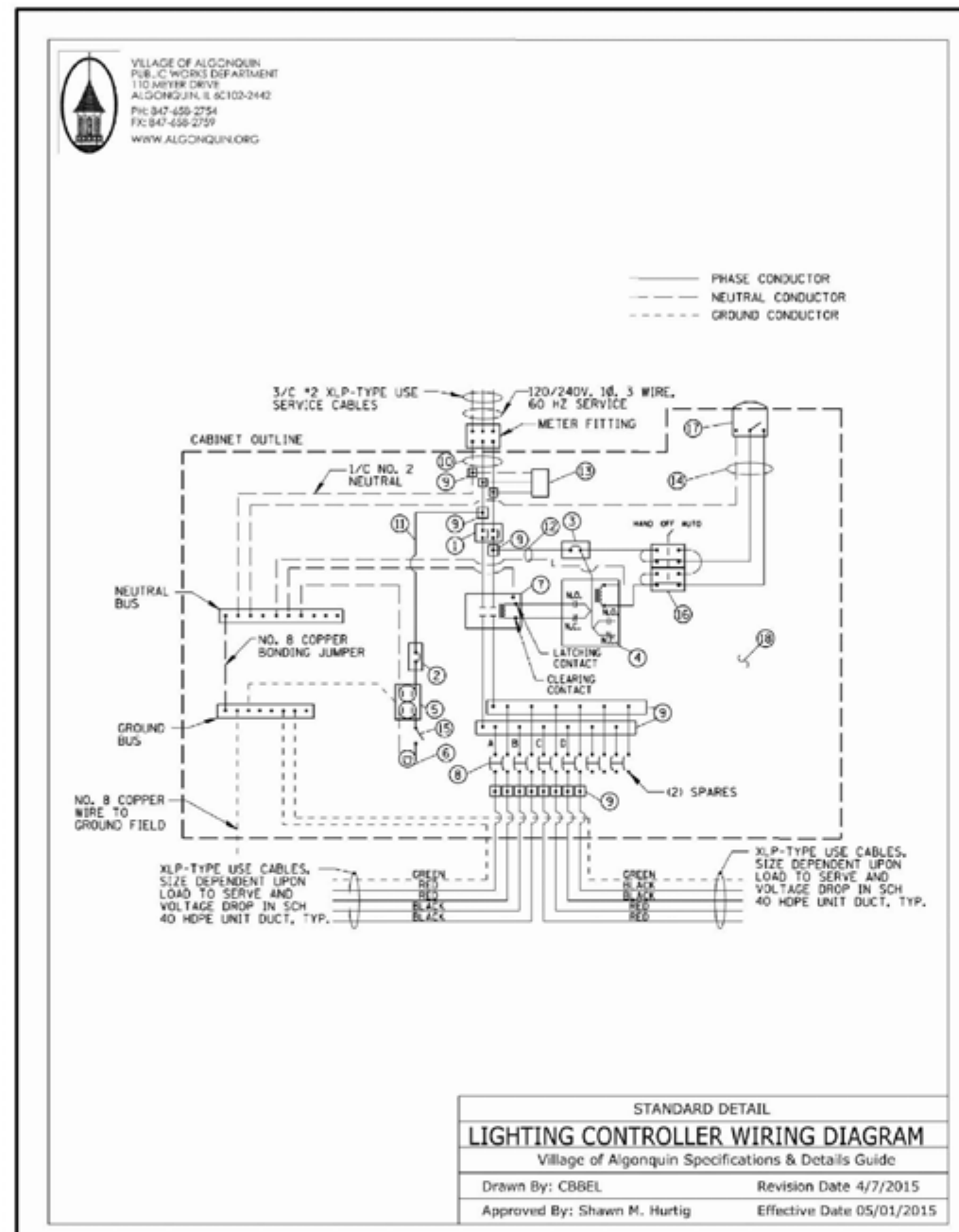
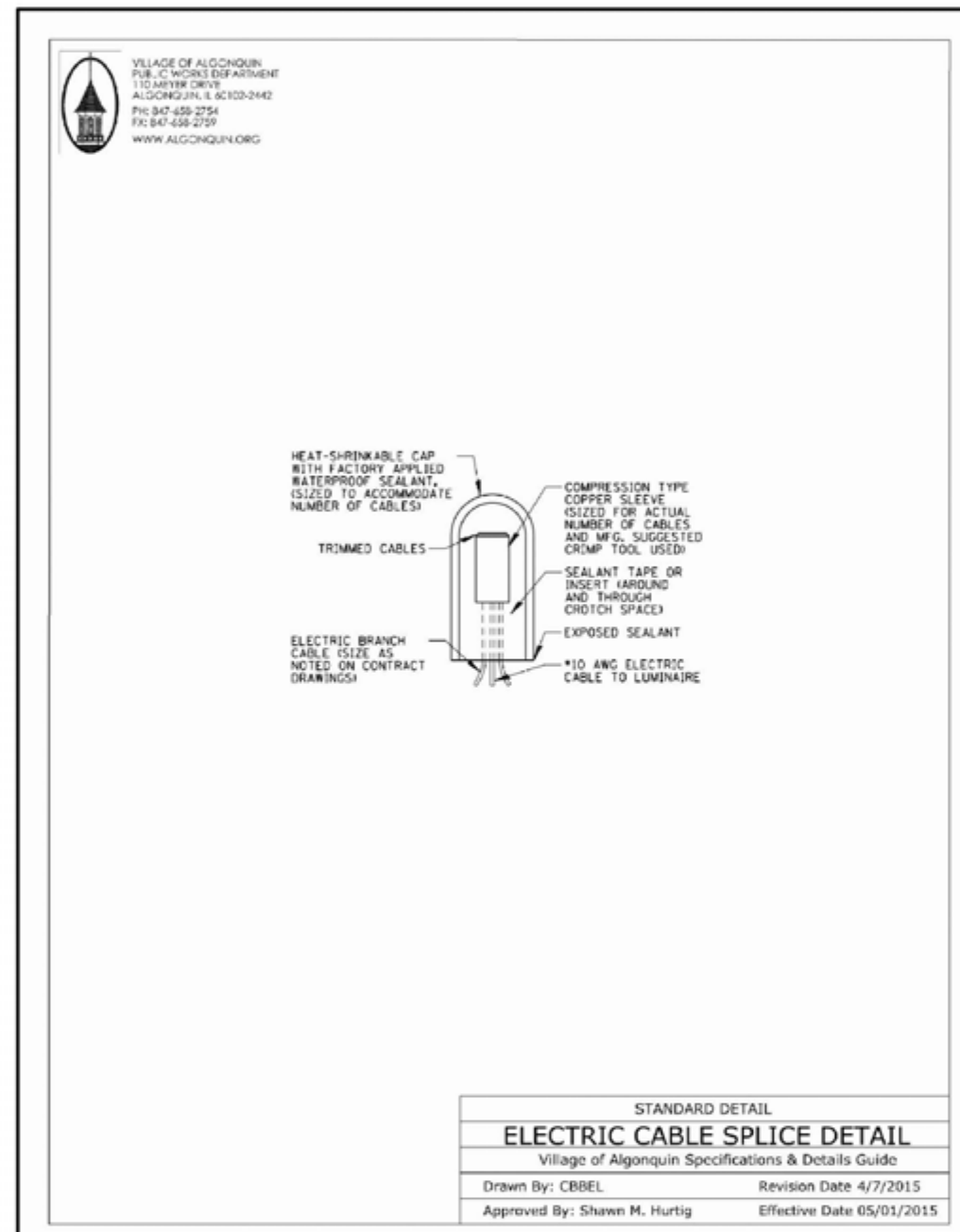
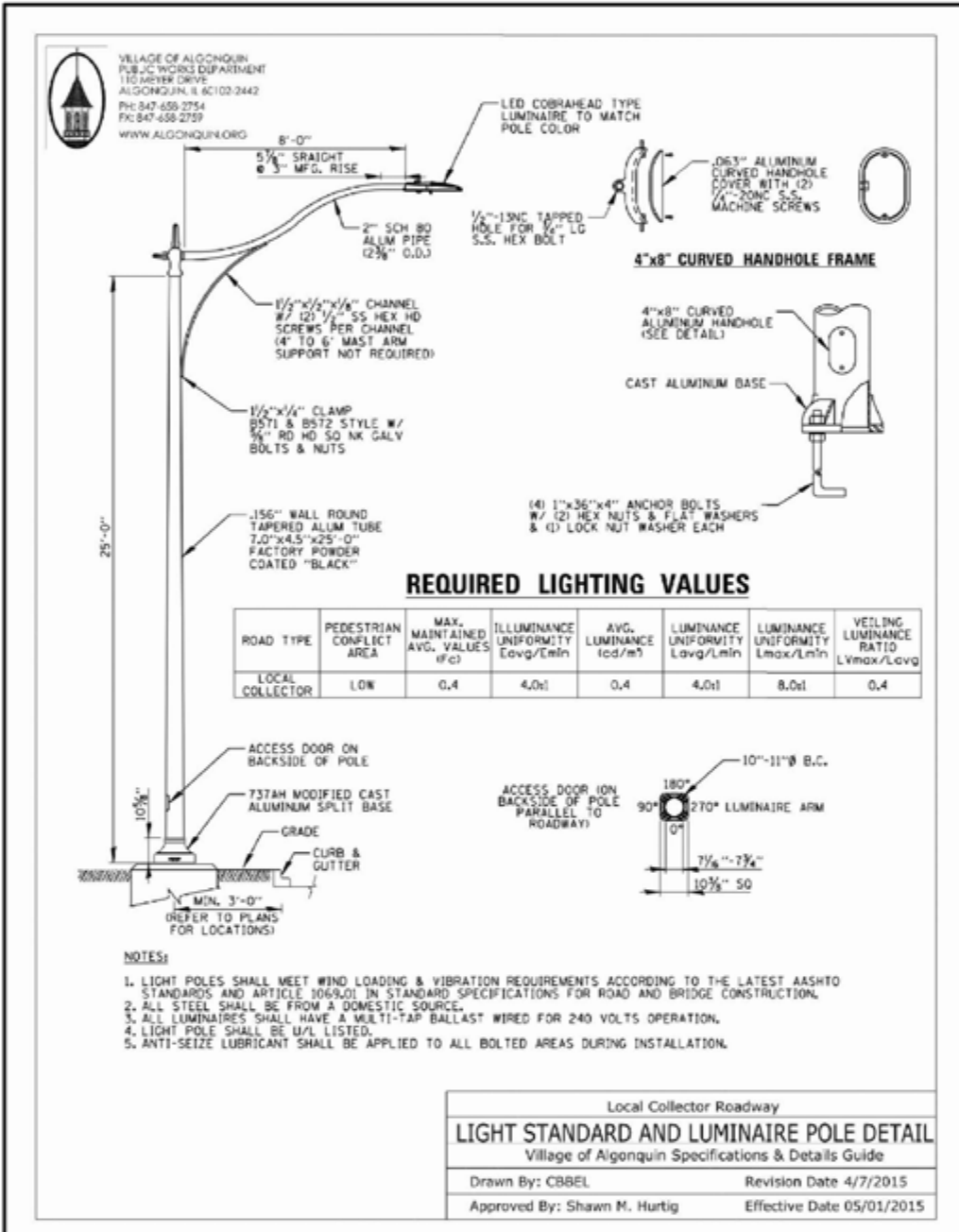
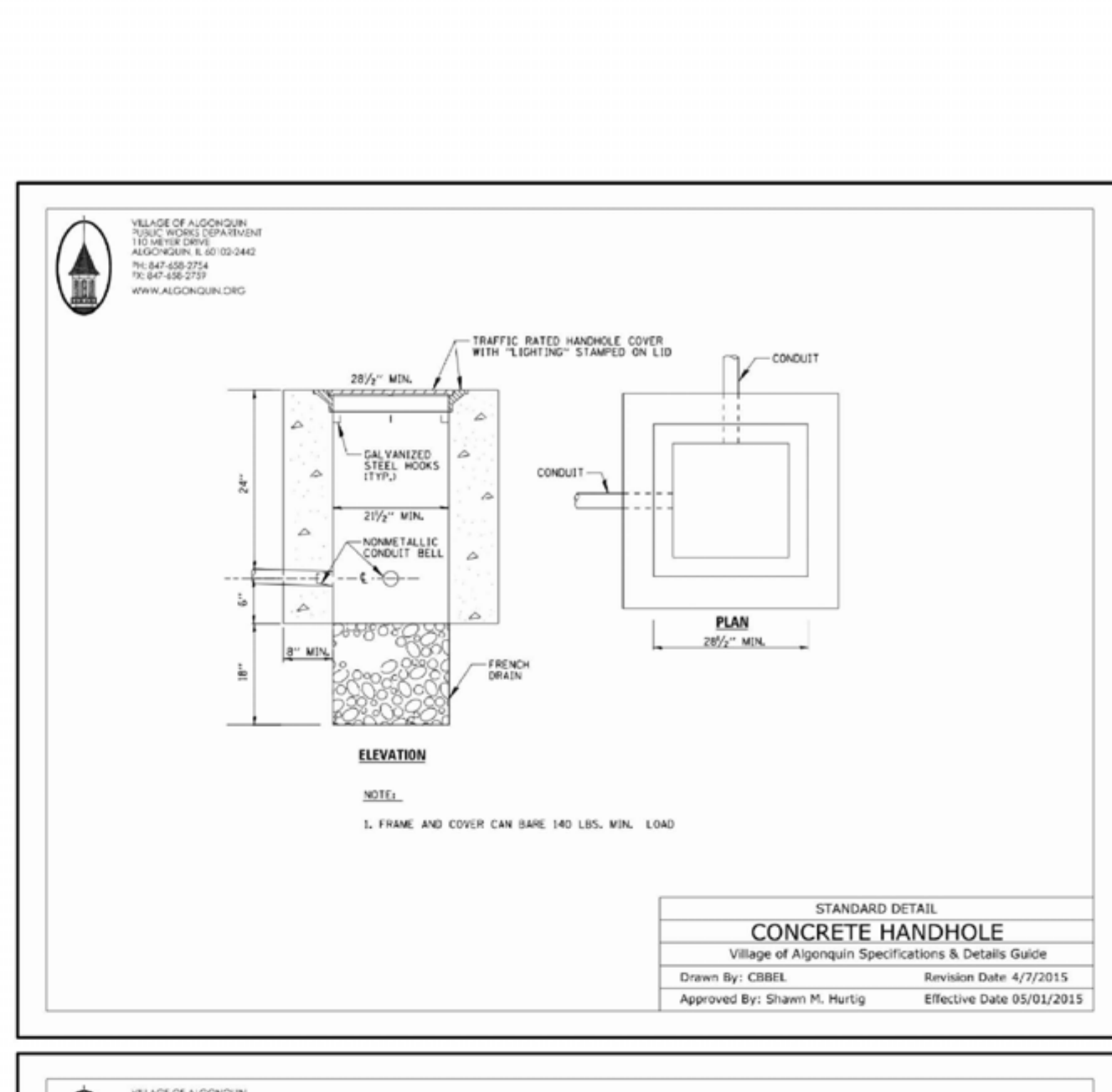
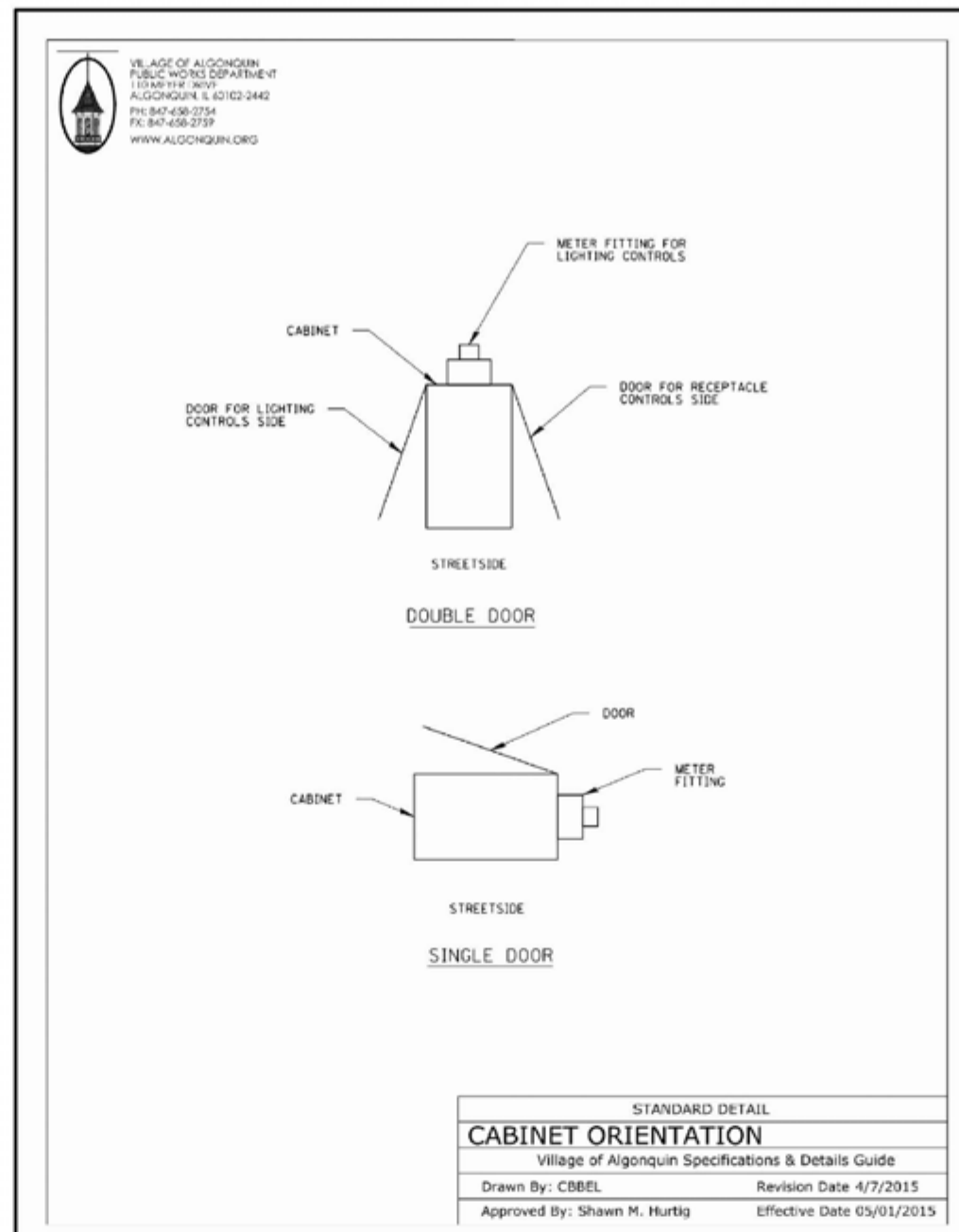
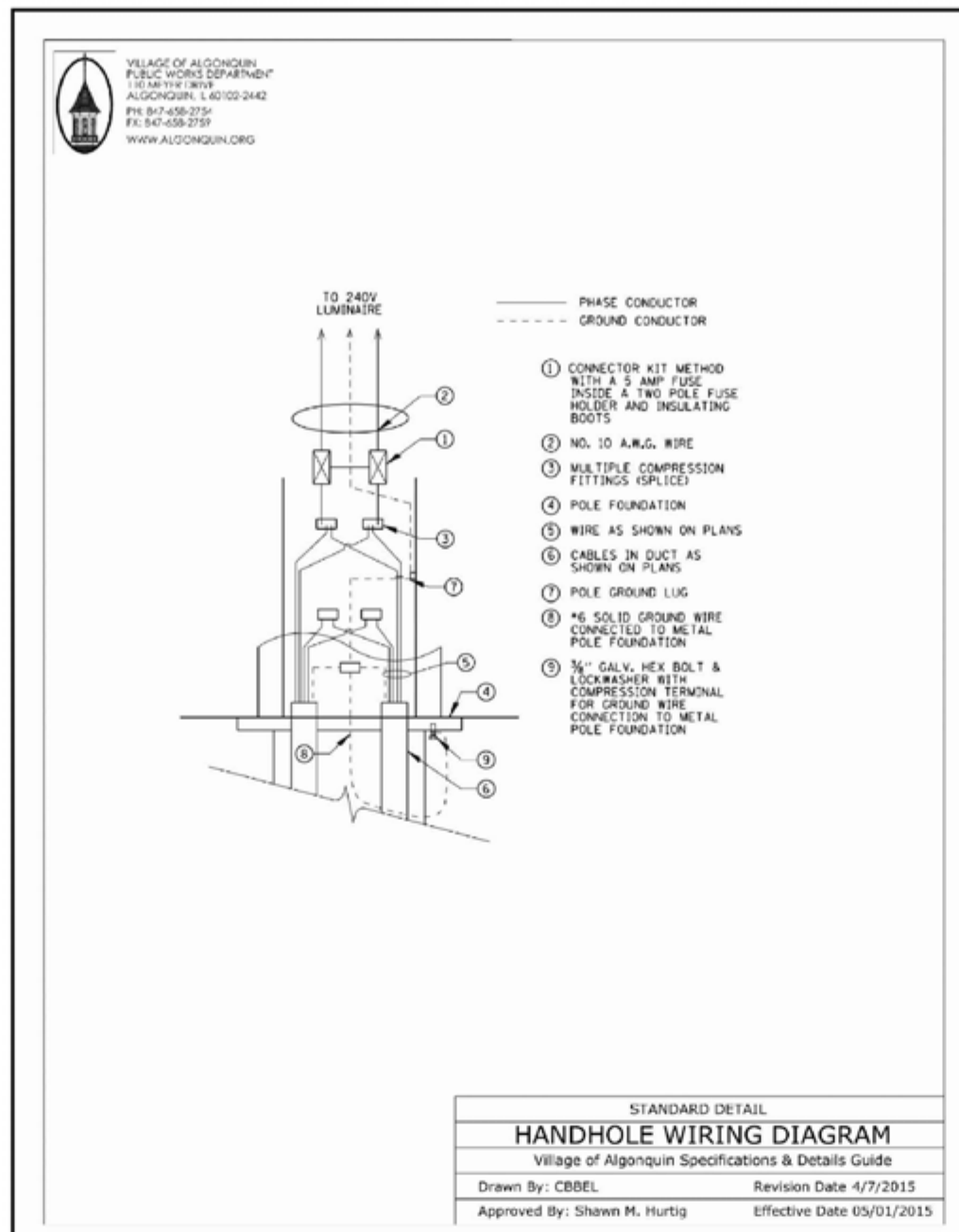
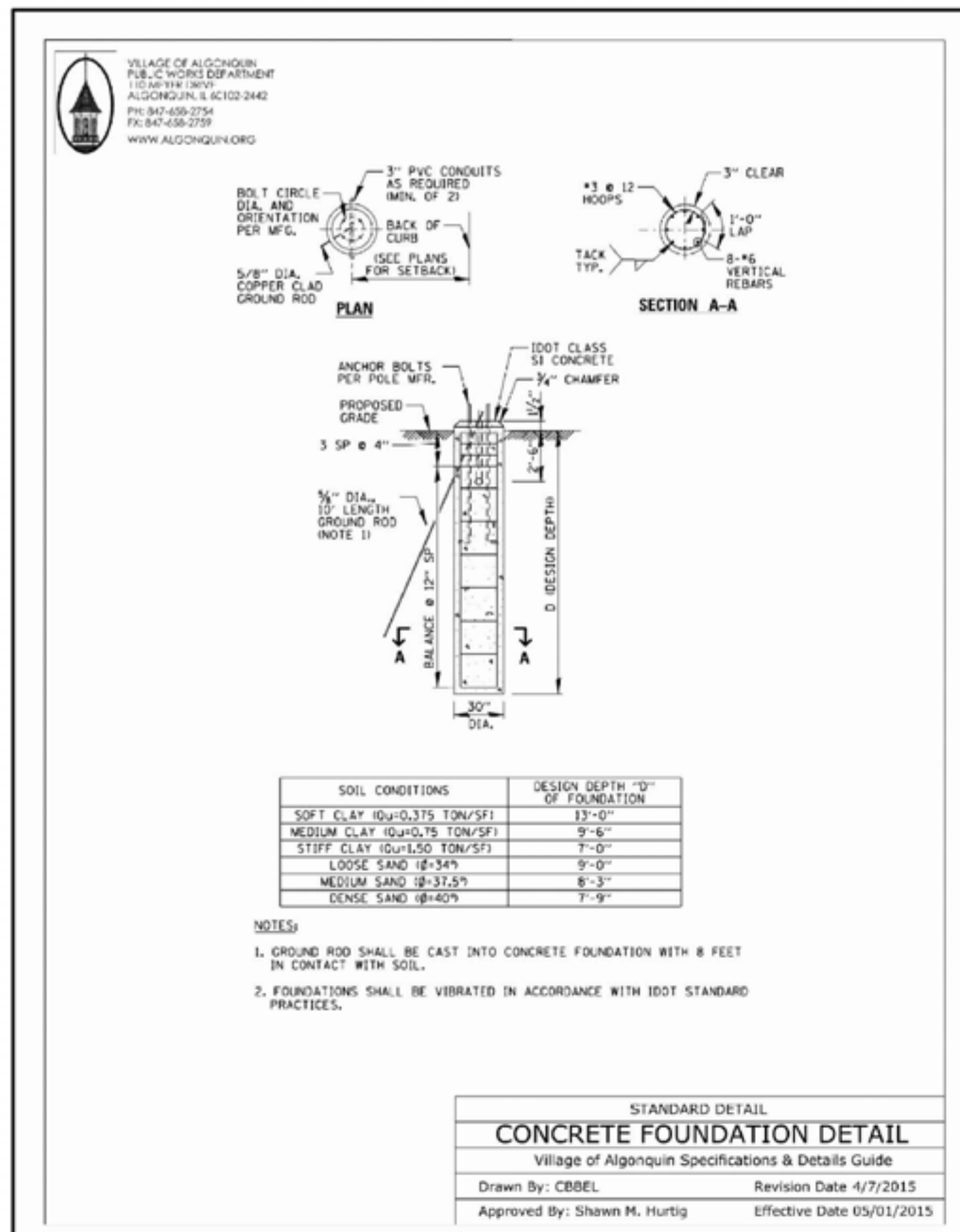
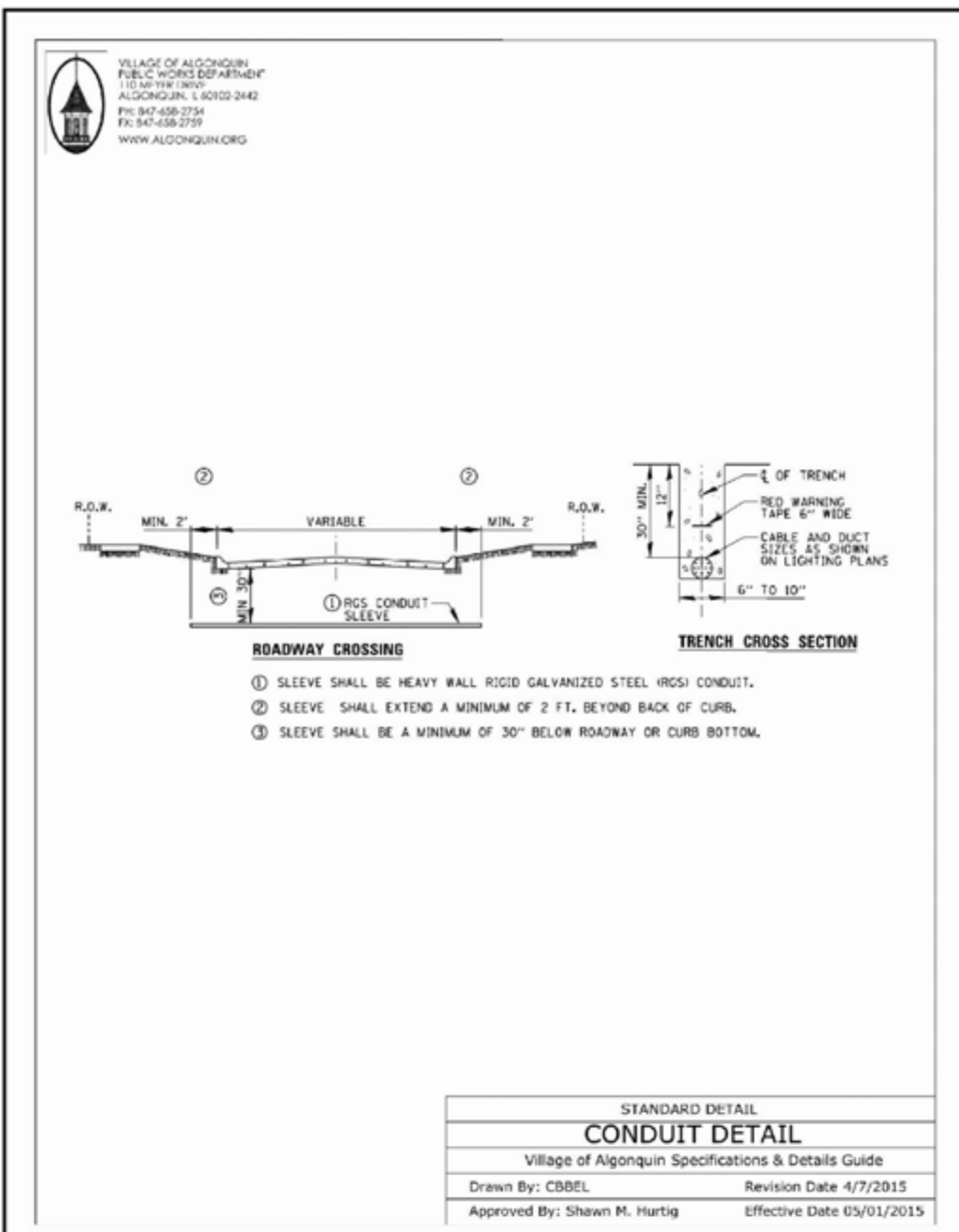
SYMBOL	DESCRIPTION
●	LED COBRA HEAD STREET LIGHT, 25' MOUNTING HT.
⊙	250 WATT H.P.S. (CLEAR) LUMIN. STD. 30' MOUNTING HEIGHT (MATCH EXISTING LIGHTS)
⊕	STREET LIGHT W/ STREET SIGN
---	STREET LIGHT CABLE
▨	GALVANIZED STEEL CONDUIT (2 1/2") CROSSING
(L NO)	NUMBERING SYSTEM USED FOR PHASE 1 LIGHT POLE/STREET LIGHT IDENTIFICATION.
(L NO)	NUMBERING SYSTEM USED FOR PHASE 2 LIGHT POLE/STREET LIGHT IDENTIFICATION.
(EX NO)	NUMBERING SYSTEM USED FOR EXISTING LIGHT POLE/STREET LIGHT IDENTIFICATION.
⊠	CONTROLLER

NO.	DATE	DESCRIPTION
REVISIONS		
PREPARED FOR:		
PULTE HOME COMPANY, LLC 1900 E. GOLF ROAD, SUITE 300 SCHAUMBURG, ILLINOIS 60173 (847) 230-5400		
PREPARED BY:		
 <b>CEMCON, Ltd.</b> Consulting Engineers, Land Surveyors & Planners 2280 White Oak Circle, Suite 100 Aurora, Illinois 60502-9675 Ph: 630.862.2100 Fax: 630.862.2199 E-Mail: cadd@cemcon.com Website: www.cemcon.com		
STREET LIGHTING PLAN AND DETAILS		
TRAILS OF WOODS CREEK – PHASE 1 & 2		
JOB NO.: 402136	DATE: 07-10-20	SHEET NO. 13 of 52
DSGN. BY: CRM	DRN. BY: LAL	
FILE NAME: OVRUTIL	FLD. BK./PG.:	
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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

STREET LIGHTING DETAILS				
TRAILS OF WOODS CREEK - PHASE 1 & 2				
FILE NAME: OVRUTL	DSGN. BY: CRM	JOB NO.: 402.136	F.L.D. BK./PG.:	SHEET NO.
DIR: 402136	DRN. BY: LAL	DATE: 07-10-20	SCALE: 1" = 100'	14 of 52