

PROPOSED SITE IMPROVEMENTS FOR COUNTRYSIDE MANOR ELEVATED TANK

PART OF SECTION 10, T 44 N, R 11 E
VILLAGE OF LIBERTYVILLE
LAKE COUNTY, ILLINOIS

INDEX OF SHEETS

LAST REV. DATE	
6-6-16	C1. TITLE SHEET
6-6-16	C2. STANDARD NOTES
6-6-16	C3. EXISTING CONDITIONS
6-6-16	C4. SITE DEMO PLAN
6-6-16	C5. EXISTING ELEVATED TANK
6-13-16	C6. PROPOSED SITE PLAN
6-6-16	C7. PROPOSED OFFSITE PLAN
6-6-16	C8. TANK DETAILS
6-6-16	C9. TANK DETAILS—ELECTRICAL
6-6-16	C10. STANDARD DETAILS
6-6-16	C11. STORMWATER POLLUTION PREVENTION PLAN



LOCATION MAP

STANDARD SYMBOLS

PROPOSED

	SANITARY MANHOLE (M.H.)
	STORM MANHOLE OR INLET MANHOLE (M.H. or I.M.H.)
	CATCH BASIN (C.B.)
	INLET (INL.)
	VALVE & VAULT (V.V.)
	VALVE & BOX (V.B.)
	WATER SERVICE BOX
	FIRE HYDRANT (HYD.)
	HEADWALL OR FLARED END SECTION (F.E.S.)
	DITCH
	SWALE
	8"SA SANITARY SEWER
	12"ST STORM SEWER
	6"W WATER MAIN
	STREET LIGHT
	SEE SHEET NUMBER

EXISTING

	BENCHMARK
	SANITARY MANHOLE (M.H.)
	STORM MANHOLE OR INLET MANHOLE (M.H. or I.M.H.)
	CATCH BASIN (C.B.)
	INLET (INL.)
	VALVE & VAULT (V.V.)
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	DITCH
	SWALE
	8"SA SANITARY SEWER
	12"ST STORM SEWER
	6"W WATER MAIN
	STREET LIGHT

BENCHMARK: LAKE COUNTY BM #6-34B. CHISLED
"X" ON N.W. RIM OF MANHOLE LOCATED AT THE S.E.
CORNER OF STATE ROUTE 137 AND EAST END AVENUE.
ELEVATION = 656.15 NAVD88

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EXISTING UTILITIES:

WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE REPRESENTATIVE UTILITY COMPANIES DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.

SCALE IN FEET

DMW 6-13-16 PER LCPW
MRT 6-6-16 PER LCPW

REVISIONS

DRAWN BY: DATE:

REVISIONS

DESIGNED BY: DATE: 01-19-16
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APPROVED BY: DATE: 01-19-16



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SCALE: N/A
DRAWING No. 61086
SHEET C1

COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.

TITLE SHEET

GENERAL NOTES

- THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS, AS ADOPTED JANUARY 1, 2012; THE "SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" (SEVENTH EDITION) DATED 2014; AND THE MUNICIPALITY'S CODES AND ORDINANCES ARE INCORPORATED HEREIN BY REFERENCE AND SHALL BE REFERRED TO AS THE "STANDARD SPECIFICATIONS". IN CASE OF CONFLICT, THE MUNICIPALITY'S CODES AND ORDINANCES SHALL GOVERN.
- ALL REFERENCE BY THE STANDARD SPECIFICATIONS TO BASIS OF PAYMENT IS HEREBY DELETED. COMPENSATION TO THE CONTRACTOR SHALL BE MADE ON THE BASIS OF THE UNIT PRICES AND PAY ITEMS INDICATED IN THE SCHEDULE OF PRICES, AND SUCH COMPENSATION SHALL BE CONSIDERED PAYMENT IN FULL FOR ALL WORK PERFORMED UNDER THIS CONTRACT.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE PROJECT SITE. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER BEFORE ANY WORK IS PERFORMED; OTHERWISE, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISCREPANCIES OR OMISSIONS ON THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL OBTAIN WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED. FAILING TO OBTAIN SUCH INSTRUCTION, THE CONTRACTOR WILL BE PROCEEDING AT HIS OWN RISK AND EXPENSE.
- ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED AGAINST ALL DEFECTS IN MATERIALS AND WORKMANSHIP BY THE CONTRACTOR.
- BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE OBSERVED AND APPROVED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL OF THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED.
- LINE AND GRADE STAKES WILL BE SET ONE TIME ONLY BY THE ENGINEER AT THE OWNER'S EXPENSE. CONTRACTOR'S SHALL NOTIFY THE ENGINEER THAT STAKES WILL BE NEEDED AT LEAST TWO (2) WORKING DAYS IN ADVANCE OF STARTING THEIR WORK. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT STAKES PROVIDED FOR HIS USE AND TO REPORT TO THE OWNER'S SUPERINTENDENT ANY SPECIFIC INSTANCES OF DESTROYING STAKES AND/OR MONUMENTS PROVIDED.
- WHEN THE PLANS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.
- THE CONTRACTOR AGREES TO INDEMNIFY AND HOLD THE MUNICIPALITY, OWNER, AND ENGINEER HARMLESS FROM ALL LIABILITY AND EXPENSES INCLUDING THE COST OF DEFENDING ACTIONS ARISING OUT OF THE PERFORMANCE OF THE WORK OR OUT OF ANY CLAIM BY ANY SUBCONTRACTOR OR ANYONE WHO FURNISHES MATERIAL OR LABOR.
- WHENEVER PERFORMANCE OF WORK IS INDICATED ON THE PLANS AND NO PAY ITEM IS INCLUDED IN THE CONTRACT FOR PAYMENT, THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE MADE.
- WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC., SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THIS LOOSE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY BY THE RESPONSIBLE PARTY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION. ADEQUATE LIGHTING SHALL BE MAINTAINED FROM DUSK TO DAWN AT ALL LOCATIONS WHERE CONSTRUCTION OPERATIONS WARRANT, OR AS DESIGNATED BY THE ENGINEER OR MUNICIPALITY. ALL TRAFFIC CONTROL WORK SHALL BE DONE IN ACCORDANCE WITH THE I.D.O.T. "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- REMOVED PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC., SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE AT LOCATIONS APPROVED BY THE ENGINEER. IF ON-SITE DISPOSAL IS NOT FEASIBLE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAULING AND DISPOSAL OFFSITE AT HIS OWN EXPENSE.
- WHERE OVERHANGING BRANCHES INTERFERE WITH OPERATIONS OF CONSTRUCTION, SAID BRANCHES SHALL BE TRIMMED AND SEALED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, AND THE COST SHALL BE INCIDENTAL TO THE CONTRACT. TREES SHALL BE REMOVED ONLY AFTER RECEIVING APPROVAL OF THE OWNER. THE OWNER SHALL DESIGNATE THOSE TREES WHICH ARE TO BE REMOVED. A CONTRACTOR REMOVING TREES WITHOUT THE OWNER'S APPROVAL WILL BE RESPONSIBLE FOR REPLACEMENT OF SAID TREE(S) AS DIRECTED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING TRAFFIC SIGNS, STREET SIGNS, ETC., WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND ARE NOT NOTED FOR REMOVAL OR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT LOCATIONS AS DESIGNATED BY THE ENGINEER. THIS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE MADE. DAMAGE TO THESE ITEMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. ALL SIGNS NOT REQUIRED TO BE RESET SHALL BE DELIVERED TO THE VILLAGE, CITY, OR COUNTY AS APPROPRIATE. IN ADDITION, ALL MAIL BOXES THAT INTERFERE WITH CONSTRUCTION SHALL BE SIMILARLY RELOCATED AT NO ADDITIONAL COST.
- ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER OR EXTENDED TO OUTLET INTO A PROPOSED DRAINAGEWAY OR POND. IF THIS CANNOT BE ACCOMPLISHED, THEN IT SHALL BE REPAIRED WITH NEW PIPE, OF A SIZE AND MATERIAL APPROVED BY THE ENGINEER, AND RESTORED TO AN ACCEPTABLE OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE FOR ON-SITE DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE MADE.
- EACH CONTRACTOR SHALL REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.
- THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS, OR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ELECTRIC, TELEPHONE, NATURAL GAS, AND OTHER UTILITY COMPANIES HAVE UNDERGROUND AND/OR OVERHEAD SERVICE FACILITIES IN THE VICINITY OF THE PROPOSED WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE PRESERVATION OF THESE FACILITIES. THE CONTRACTOR SHALL CALL J.U.I.L.E. AT (800) 892-0123 FOR UTILITY LOCATIONS TWO WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER BEFORE BEGINNING CONSTRUCTION THAT THE PLANS AND SPECIFICATIONS HE HAS BEEN PROVIDED ARE CURRENT.
- THE CONTRACTOR SHALL KEEP A SET OF "APPROVED" CONSTRUCTION PLANS ON THE JOB SITE. HE SHALL MAINTAIN A LEGIBLE RECORD ON THESE PLANS OF ANY FIELD TILE ENCOUNTERED OR ANY MODIFICATIONS OR ALTERATIONS TO HIS WORK. THESE PLANS AND THIS INFORMATION SHALL BE PROVIDED TO ENGINEER AT THE COMPLETION OF THE CONTRACTORS' WORK AND BEFORE FINAL PAYMENT WILL BE APPROVED.
- THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY, THE MUNICIPALITIES ENGINEER, AND GREENGARD, INC. FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING ANY CONSTRUCTION.

EARTHWORK

- ALL EARTHWORK WITHIN THE LIMITS OF THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS, AS ADOPTED JANUARY 1, 2012; THE PLANS AND SPECIFICATIONS; AND PER THE MUNICIPALITY CODES AND ORDINANCES. IN CASE OF CONFLICT, THE MUNICIPALITY CODES AND ORDINANCES SHALL GOVERN.
- THE QUANTITIES GIVEN IN THE ENGINEER'S SUMMARY FOR EARTHWORK ARE INTENDED AS A GUIDE FOR THE CONTRACTOR IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES, AND FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS.
- EARTH EXCAVATION SHALL INCLUDE, BUT NOT BE LIMITED TO, CLEARING, STRIPPING AND STOCKPIPING OF TOPSOIL, REMOVING UNSUITABLE MATERIALS, THE CONSTRUCTION OF EMBANKMENTS, NON-STRUCTURAL FILLS, FINAL SHAPING AND TRIMMING TO THE LINES, GRADES, AND CROSS SECTIONS SHOWN ON THE PLANS. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PROVISIONS OF SECTION 200 OF THE STANDARD SPECIFICATIONS. ALL UNSUITABLE OR EXCESS MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER.
- PRIOR TO BEGINNING GRADING OPERATIONS, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SOIL EROSION CONTROL SPECIFICATIONS. THE INITIAL ESTABLISHMENT OF EROSION CONTROL AND THE PLACEMENT OF FILTER FENCING, ETC., TO PROTECT ADJACENT PROPERTY SHALL OCCUR BEFORE GRADING BEGINS, AND SHALL BE IN ACCORDANCE WITH THE SOIL EROSION CONTROL SEQUENCING SCHEDULE.
- TOPSOIL EXCAVATED SHALL BE STOCKPILED ON THE SITE IN AREAS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME THAT THE TOPSOIL CAN BE USED FOR FINAL GRADING.
- PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, PROTECTIVE FENCING SHALL BE ERECTED AROUND ANY TREE DESIGNATED ON THE PLAN TO BE PRESERVED. SAID FENCE SHALL BE PLACED AS SHOWN ON THE PLAN AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.
- THE CONTRACTOR SHALL USE CARE IN GRADING NEAR TREES, SHRUBS, AND BUSHES WHICH ARE NOT TO BE REMOVED SO AS NOT TO CAUSE INJURY TO ROOTS OR TRUNKS.
- THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING FEATURES WHICH ARE NOT INDICATED ON THE PLAN TO BE REMOVED. ANY DAMAGE DONE TO THESE EXISTING FEATURES BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY HIM AT HIS OWN EXPENSE.
- UNSUITABLE MATERIAL ENCOUNTERED IN EXCAVATING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL TO THE LIMITS APPROVED BY THE ENGINEER.
- THE GRADING OPERATIONS ARE TO BE CLOSELY SUPERVISED AND INSPECTED, PARTICULARLY DURING THE REMOVAL OF UNSUITABLE MATERIAL, 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 THE RESPONSIBILITY OF THE SOILS ENGINEER.
- THE GRADING AND CONSTRUCTION OF THE SITE IMPROVEMENTS SHALL NOT CAUSE PONDING OF STORM WATER. ALL TRIBUTARY OFF-SITE AREAS SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
- THE PROPOSED GRADING ELEVATIONS SHOWN ON THE PLANS ARE FINISHED GRADES. A MINIMUM OF SIX INCHES (6") OF TOPSOIL IS TO BE PLACED BEFORE FINISHED GRADE ELEVATIONS ARE ACHIEVED.
- THE SURFACE VEGETATION, TOPSOIL, AND ANY SOFT UNDERLYING SOIL SHOULD BE STRIPPED FROM ALL AREAS THAT WILL RECEIVE CLAY FILL AND SHALL BE DONE IN A MANNER WHICH WILL MINIMIZE SOIL EROSION AND SHALL BE IN ACCORDANCE WITH THE PLANS.
- FINE GRADING FOR PROPOSED YARD/OPEN SPACE AREAS SHALL BE WITHIN A TOLERANCE OF PLUS OR MINUS ONE TENTH OF A FOOT (0.1') OF DESIGN ELEVATIONS.
- UPON COMPLETION OF THE SURFACE IMPROVEMENTS, THE EXCAVATION CONTRACTOR SHALL RESPREAD A SIX-INCH (6") LAYER OF TOPSOIL ON ALL DESIGNATED LANDSCAPE AREAS, PARKWAYS AND OTHER NON-STRUCTURAL AREAS DISTURBED BY CONSTRUCTION.
- SOIL BORING REPORTS, AVAILABLE AT THE OFFICE OF THE ENGINEER AND THE OWNER, ARE SOLELY FOR THE INFORMATION AND GUIDANCE OF THE CONTRACTORS. THE OWNER AND ENGINEER MAKE NO REPRESENTATION OR WARRANTY REGARDING THE INFORMATION CONTAINED IN THE BORING LOGS. THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATIONS AND SHALL PLAN HIS WORK ACCORDINGLY.
- EACH CONTRACTOR SHALL REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.

UNDERGROUND UTILITIES

- GENERAL:**
- SEWER AND WATER MAIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS" (SEVENTH EDITION), DATED 2014; AND THE MUNICIPALITY'S CODES AND ORDINANCES CURRENTLY IN EFFECT.
 - TRENCH BACKFILL SHALL BE PROVIDED BENEATH AND WITHIN TWO FEET (2') OF ALL EXISTING AND PROPOSED PAVEMENTS. TRENCH BACKFILL SHALL BE SELECT GRANULAR BACKFILL CA-6 AND THOROUGHLY COMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
 - THE FOLLOWING REQUIREMENTS SHALL BE ADHERED TO WHEN THE WATER MAIN MUST PASS UNDERNEATH THE STORM OR SANITARY SEWER, OR BE PLACED HORIZONTALLY CLOSER THAN TEN FEET (10'):
- HORIZONTAL:**
- WATER MAINS MAY BE LOCATED CLOSER THAN TEN (10') FEET TO A SEWER LINE WHEN:
 - LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10') FEET; AND
 - THE WATER MAIN INVERT IS AT LEAST EIGHTEEN (18") INCHES ABOVE THE CROWN OF THE SEWER; AND
 - THE WATER MAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.
 - WHEN IT IS IMPOSSIBLE TO MEET THE ABOVE REQUIREMENT, BOTH THE WATER MAIN AND DRAIN OR SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE OR PVC PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION. THE DRAIN OR SEWER SHALL BE PRESSURE TESTED TO THE MAXIMUM EXPECTED SURCHARGE HEAD BEFORE BACKFILLING.
- VERTICAL:**
- A WATER MAIN SHALL BE SEPARATED FROM A SEWER SO THAT ITS INVERT IS A MINIMUM OF EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATER MAINS CROSS STORM SEWERS, SANITARY SEWERS, OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATER MAIN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATER MAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN.
 - BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE, OR PVC PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION WHEN:
 - IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED IN (A) ABOVE; OR
 - THE WATER MAIN PASSES UNDER A SEWER OR DRAIN.
 - A VERTICAL SEPARATION OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATER MAIN SHALL BE MAINTAINED WHERE A WATER MAIN CROSSES UNDER A SEWER. SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLING AND BREAKING THE WATER MAIN.
 - CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN (10) FEET.
4. THE COST OF ALL REQUIRED TESTING ON UNDERGROUND IMPROVEMENTS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION COST OF THAT IMPROVEMENT.
5. NO STRUCTURE MAY HAVE MORE THAN EIGHT INCHES (8") OF PRECAST CONCRETE ADJUSTING RINGS.
- WATER MAIN:**
- WATER MAIN AND FITTINGS SHALL BE DUCTILE IRON PIPE (CLASS 52) CONFORMING TO ASA A21.51, WITH "PUSH-ON" JOINTS CONFORMING TO ASA A21.11. PIPE SHALL BE CEMENT-LINED TO CONFORM WITH ASA A21.4 OR POLYVINYL CHLORIDE (PVC) PIPE, SDR 21 CONFORMING TO AWWA C-900 AND C-905 STANDARDS WITH ELASTOMERIC JOINTS CONFORMING TO ASTM D-3139. THE RUBBER GASKETS SHALL CONFORM TO ASTM F477 STANDARDS. ALL FITTINGS SHALL BE DUCTILE IRON PIPE CONFORMING TO ANSI A21.10 OR A21.11. CONTRACTOR SHALL INSTALL UTILITY MARKING TAPE ALONG THE CENTERLINE OF THE ENTIRE PIPELINE.
 - ALL DUCTILE IRON WATER MAIN SHALL HAVE FOUR-INCH (4") GRANULAR BEDDING (1/4" TO 3/4" GRADATION) EXTENDED TO THE SPRINGLINE OF THE PIPE. COST OF BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE OF THE PIPE.
 - THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A TABULAR LISTING OF EACH AND EVERY SERVICE CONNECTION AND THEIR LOCATIONS RELATIVE TO PERMANENT FIXED OBJECTS SUCH AS MANHOLES, FIRE HYDRANTS, STREET LIGHTS, ETC. EACH SERVICE CONNECTION SHALL BE ACCURATELY LOCATED BY A SERIES OF THREE (3) PRECISE INTERSECTING LOCATION MEASUREMENTS. THE DEPTH AS MEASURED FROM FINISHED GRADE SHALL ALSO BE PROVIDED.
 - ALL WATER MAINS SHALL HAVE A MINIMUM OF FIVE AND ONE-HALF FEET (5-1/2') COVER MEASURED FROM THE TOP OF THE MAIN TO FINISHED GRADE.
 - WATER MAIN FITTINGS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE OF THE PIPE.
 - FIRE HYDRANTS SHALL BE THE MUNICIPALITY'S STANDARD WITH AUXILIARY VALVES AND BOXES. HYDRANTS SHALL BE LOCATED THREE FEET (3') FROM THE BACK OF CURB TO THE STREET SIDE PORT CAP, AND AS SHOWN ON THE PLANS.
 - VALVES SHALL BE "MUELLER" OR APPROVED EQUAL AND INSTALLED IN PRE-CAST CONCRETE VALVES.
 - ALL FITTINGS, TEES, BENDS, ETC. NECESSARY FOR THE CONSTRUCTION OF THE WATER MAIN SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE FOR WATER MAIN. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL FITTINGS, TEES, BENDS, ETC. NECESSARY TO COMPLETE THE WATER MAIN CONSTRUCTION IN ACCORDANCE WITH THE PLANS, WITH THE UNDERSTANDING THAT SUCH ITEMS MAY NOT BE LABELED ON THE PLANS.
 - THRUST BLOCKING SHALL BE INSTALLED ON WATERMAINS AT ALL BENDS, TEES, ELBOWS, ETC.

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SCALE IN FEET

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MRT 6-6-16
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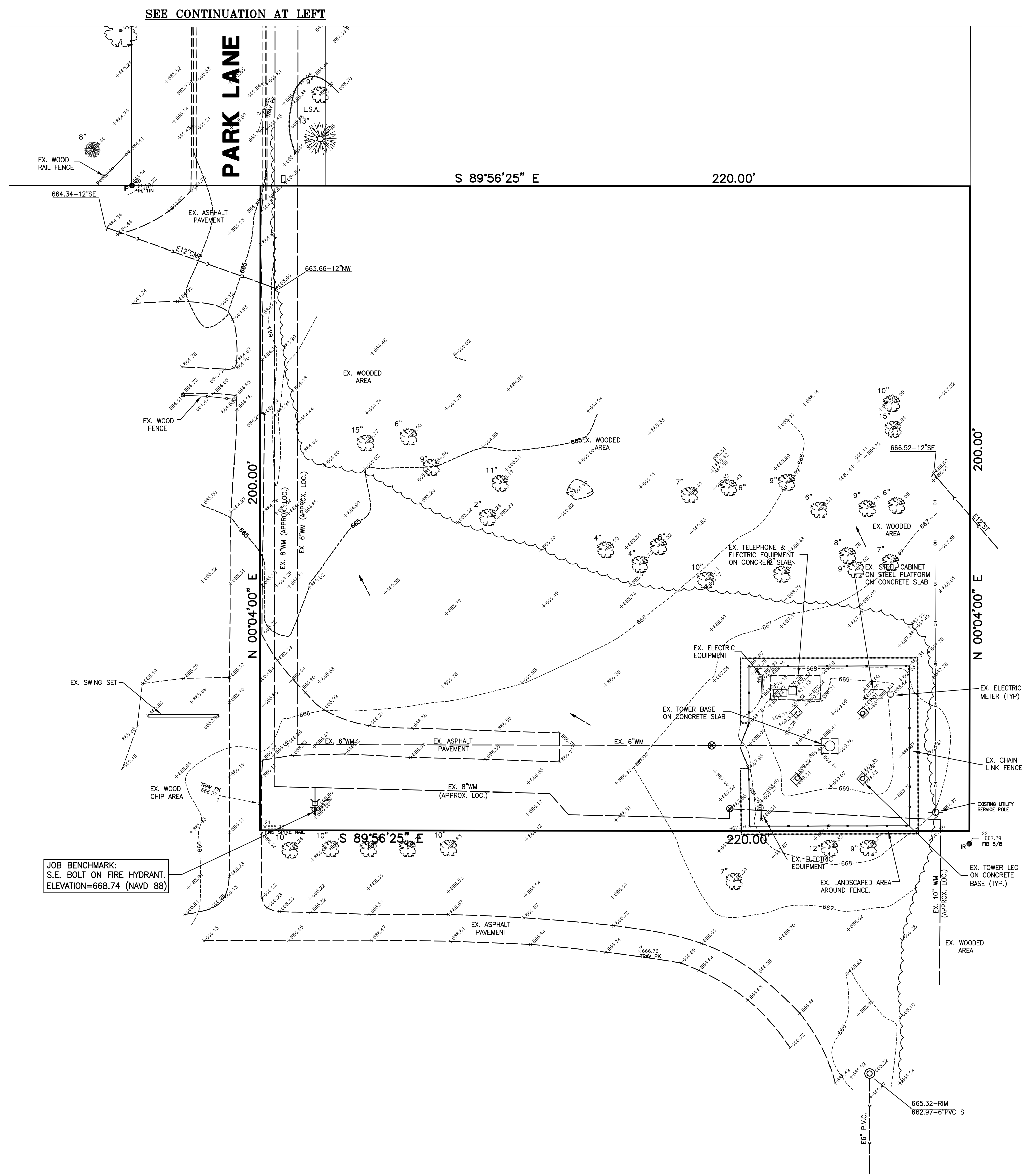
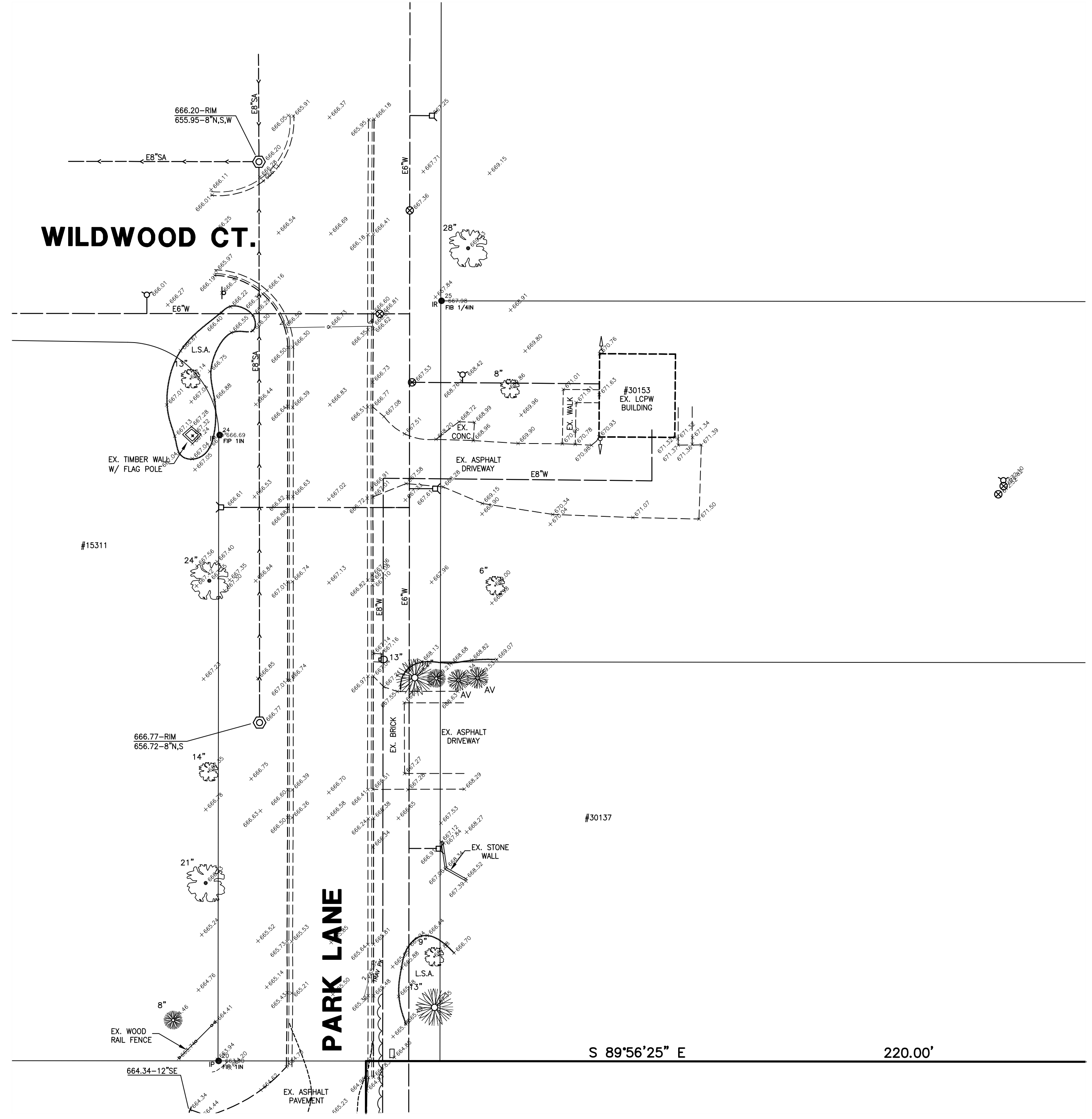
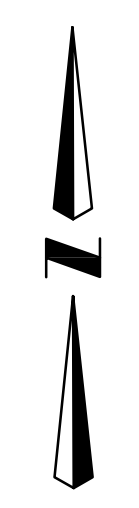
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APPROVED BY: DATE: DMW 01-19-16



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SCALE: NONE
DRAWING No. 61086
SHEET C2

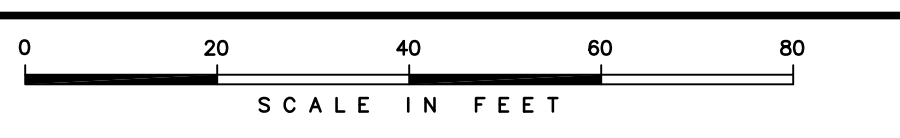
COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.
STANDARD NOTES



LEGEND

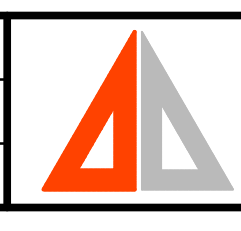
- 104 CONTOUR
- 105.08 SPOT ELEVATION
- 10 DECIDUOUS TREE W/DIA.
- 12 CONIFEROUS TREE W/DIA.
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN
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- UTILITY POLE
- LIGHT STANDARD
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- DITCH
- SWALE
- DIRECTION SURFACE DRAINAGE
- FENCE
- DOWNSPOUT

SOURCE BENCHMARK:
LAKE COUNTY BM #6-34B.
CHISELED "X" ON N.W. RIM OF
MANHOLE LOCATED AT THE S.E.
CORNER OF STATE ROUTE 137
AND EAST END AVENUE.
ELEVATION=656.15 (NAVD 88)



SCALE IN FEET

DESIGNED BY:	MRT	DATE:	01-19-16
CHECKED BY:	DRF	DATE:	01-19-16
APPROVED BY:	DMW	DATE:	01-19-16
DRAWN BY:	PER LCPW	DATE:	6-6-16
REVISIONS:			

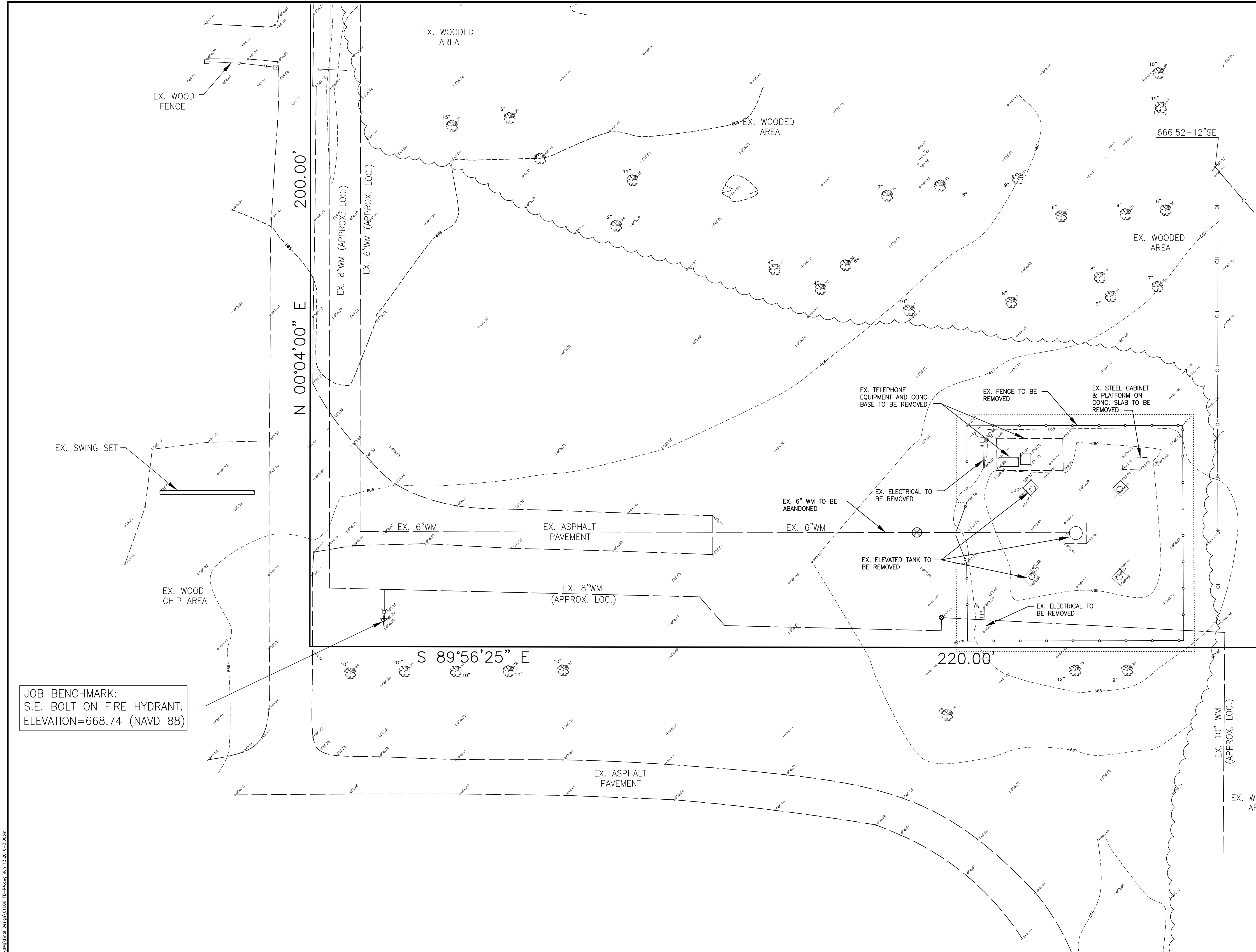
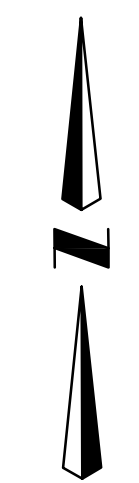


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PHONE: 847-634-3883 FAX: 847-634-0687
E-MAIL: 231@GREENGARDINC.COM ILL. REGISTRATION NO. 184-000995

SCALE: 1"=20'
DRAWING No. 61086
SHEET C3

COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.
EXISTING TOPOGRAPHY

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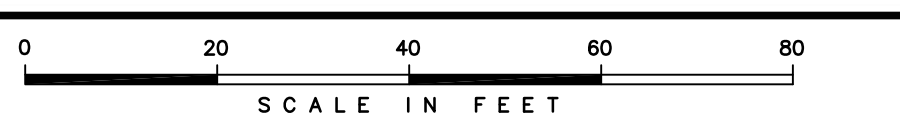
NOTE:
EXISTING ELEVATED TANK SHALL REMAIN IN OPERATION DURING CONSTRUCTION OF THE NEW ELEVATED TANK. EXISTING ELEVATED TANK SHALL BE DEMOLISHED ONCE THE NEW ELEVATED TANK IS IN SERVICE. RESTORE DISTURBED AREAS WITH TOPSOIL AND SEED.

SOURCE BENCHMARK:
LAKE COUNTY BM #6-34B.
CHISELED "X" ON N.W. RIM OF MANHOLE LOCATED AT THE S.E. CORNER OF STATE ROUTE 137 AND EAST END AVENUE.
ELEVATION=656.15 (NAVD 88)

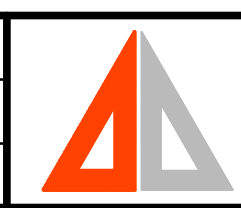
JOB BENCHMARK:
S.E. BOLT ON FIRE HYDRANT.
ELEVATION=668.74 (NAVD 88)

LEGEND

- 104 --- CONTOUR
- x 105.08 SPOT ELEVATION
- 10" DECIDUOUS TREE W/DIA.
- 12" CONIFEROUS TREE W/DIA.
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN
- INLET
- WATER SERVICE BOX
- VALVE & VAULT
- FIRE HYDRANT
- UTILITY POLE
- LIGHT STANDARD
- STORM CULVERT
- 8"SA --- SANITARY SEWER
- E12"ST --- STORM SEWER
- E6"W --- WATER MAIN
- DITCH --- DITCH
- SWALE --- SWALE
- DIRECTION SURFACE DRAINAGE --- DIRECTION SURFACE DRAINAGE
- FENCE --- FENCE
- or ○ DOWNSPOUT



DESIGNED BY:	DATE:	01-19-16
CHECKED BY:	DATE:	01-19-16
APPROVED BY:	DATE:	01-19-16
DRF		

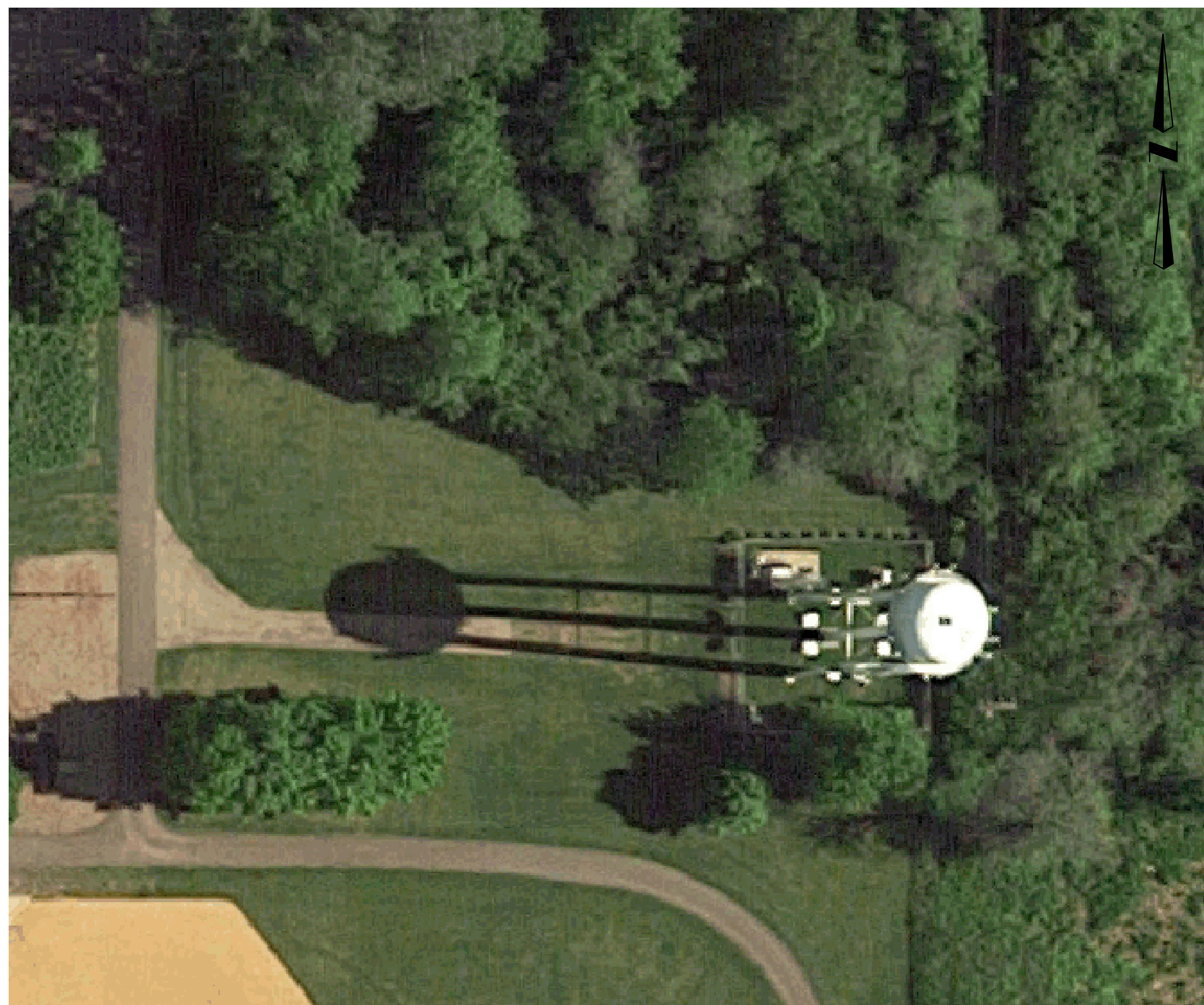


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SCALE: 1"=10'
DRAWING No. 61086
SHEET C4

COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.
SITE DEMOLITION PLAN

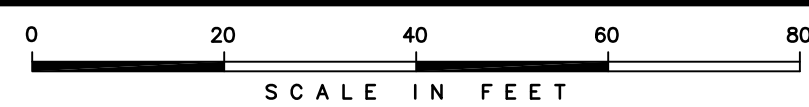
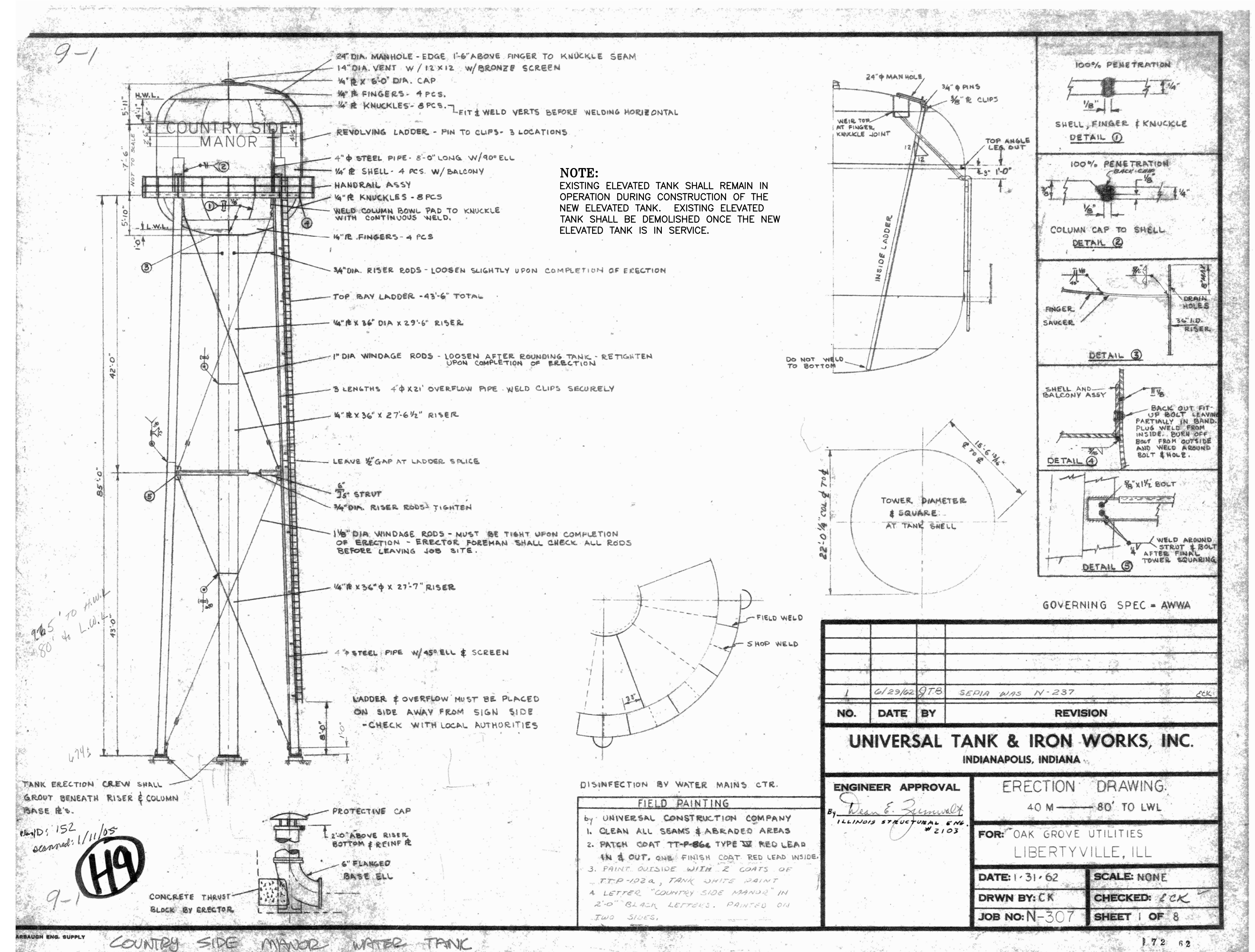
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AERIAL VIEW



AERIAL OBLIQUE VIEW



SCALE IN FEET

MRT 6-6-16 PER LCPW

REVISIONS

DRAWN BY: DATE:

REVISIONS

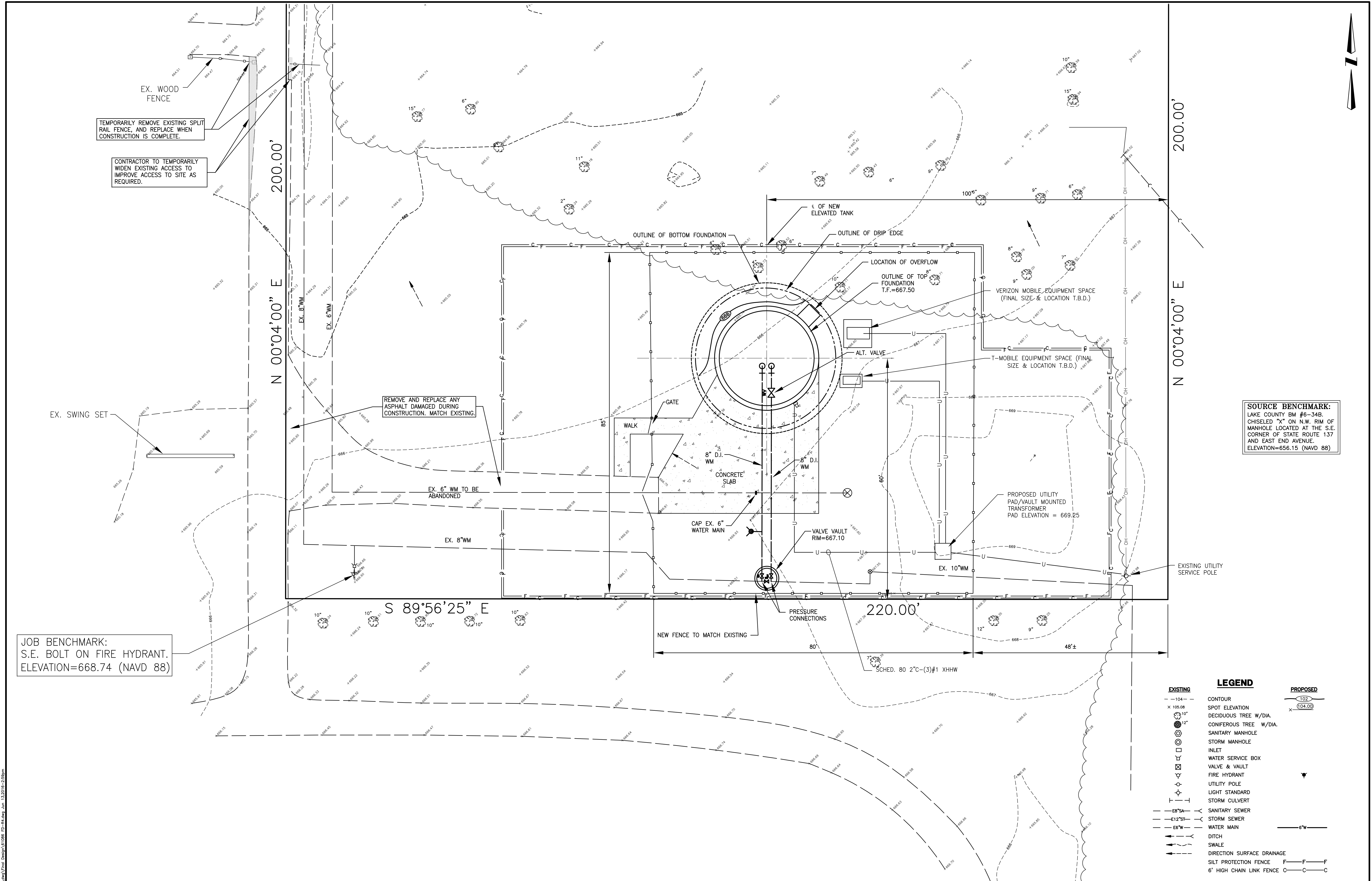
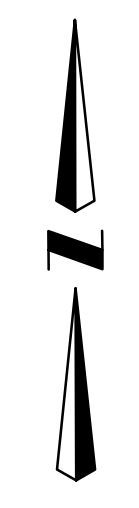
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 CHECKED BY: DRF DATE: 01-19-16
 APPROVED BY: DRF DATE: 01-19-16



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SCALE: N.T.S.
 DRAWING No. 61086
 SHEET C5

COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, ILL.
 EXISTING ELEVATED TANK



TEMPORARILY REMOVE EXISTING SPLIT RAIL FENCE, AND REPLACE WHEN CONSTRUCTION IS COMPLETE.

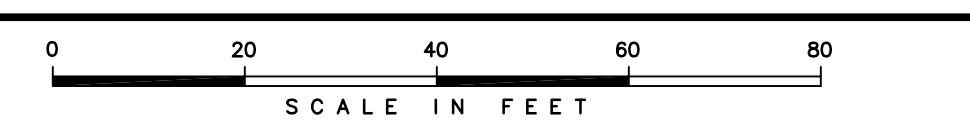
CONTRACTOR TO TEMPORARILY WIDEN EXISTING ACCESS TO SITE AS REQUIRED.

REMOVE AND REPLACE ANY ASPHALT DAMAGED DURING CONSTRUCTION. MATCH EXISTING.

JOB BENCHMARK:
S.E. BOLT ON FIRE HYDRANT.
ELEVATION=668.74 (NAVD 88)

SOURCE BENCHMARK:
LAKE COUNTY BM #6-34B.
CHISELED "X" ON N.W. RIM OF
MANHOLE LOCATED AT THE S.E.
CORNER OF STATE ROUTE 137
AND EAST END AVENUE.
ELEVATION=656.15 (NAVD 88)

EXISTING		LEGEND		PROPOSED	
-104-	CONTOUR	102		102	
x 105.08	SPOT ELEVATION	(104.00)		(104.00)	
(10')	DECIDUOUS TREE W/DIA.				
(12')	CONIFEROUS TREE W/DIA.				
(S)	SANITARY MANHOLE				
(SM)	STORM MANHOLE				
(I)	INLET				
(WSB)	WATER SERVICE BOX				
(V&V)	VALVE & VAULT				
(FH)	FIRE HYDRANT				
(UP)	UTILITY POLE				
(LS)	LIGHT STANDARD				
(SC)	STORM CULVERT				
(SS)	SANITARY SEWER				
(ST)	STORM SEWER				
(WM)	WATER MAIN				
(D)	DITCH				
(S)	SWALE				
(SD)	DIRECTION SURFACE DRAINAGE				
(SFP)	SILT PROTECTION FENCE	F	F	F	F
(CLF)	6' HIGH CHAIN LINK FENCE	C	C	C	C



DESIGNED BY:	DATE:	DMW	6-13-16	PER LCPW	
CHECKED BY:	DATE:	MRT	6-6-16	PER LCPW	
APPROVED BY:	DATE:	DRF	01-19-16		
REVISIONS					

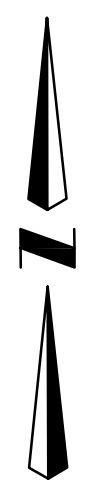
DESIGNED BY:	DATE:	DRF	01-19-16
CHECKED BY:	DATE:	DRF	01-19-16
APPROVED BY:	DATE:	DRF	01-19-16

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SCALE:	1"=10'
DRAWING No.	61086
SHEET	C6

COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.
PROPOSED SITE PLAN

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CONNECT EXISTING 8" WATER MAIN TO EXISTING 6" WATER MAIN. TYPE OF CONNECTION TO BE DETERMINED IN FIELD.

OPEN CUT PAVEMENT SAW CUT EX. PAVEMENT REPLACE WITH 2" CL I SURFACE COURSE ON 8" BAM BASE

#15311

DISCONNECT EXISTING WATER SERVICE FROM 6" MAIN. RECONNECT SERVICE TO 8" MAIN.

666.77-RIM
656.72-8"N,S

CLOSE EXISTING CORPORATION STOP. REMOVE EXISTING B-BOX.

CAP EXISTING 6" MAIN. 6" MAIN SOUTH OF CAP IS TO BE ABANDONED IN PLACE.

EXISTING 6" MAIN TO BE ABANDONED IN PLACE.

DISCONNECT EXISTING WATER SERVICE FROM 6" MAIN. RECONNECT SERVICE TO 8" MAIN.

SOURCE BENCHMARK:
LAKE COUNTY BM #6-34B.
CHISELED "X" ON N.W. RIM OF MANHOLE LOCATED AT THE S.E. CORNER OF STATE ROUTE 137 AND EAST END AVENUE.
ELEVATION=656.15 (NAVD 88)

PARK LANE

S 89°56'25" E 220.00'

EXISTING	LEGEND	PROPOSED
---104---	CONTOUR	---102---
x 105.08	SPOT ELEVATION	x (104.00)
○ 10"	DECIDUOUS TREE W/DIA.	
● 12"	CONIFEROUS TREE W/DIA.	
⊙	SANITARY MANHOLE	
⊙	STORM MANHOLE	
□	INLET	
□	WATER SERVICE BOX	
⊠	VALVE & VAULT	
⊙	FIRE HYDRANT	
⊙	UTILITY POLE	
⊙	LIGHT STANDARD	
⊠	STORM CULVERT	
---	SANITARY SEWER	---
---	STORM SEWER	---
---	WATER MAIN	---
---	DITCH	---
---	SWALE	---
---	DIRECTION SURFACE DRAINAGE	---
---	SILT PROTECTION FENCE	---
---	6' HIGH CHAIN LINK FENCE	---

SCALE IN FEET
0 20 40 60 80

MRT	6-6-16	PER LCPW	REVISIONS	DRAWN BY:	DATE:	REVISIONS
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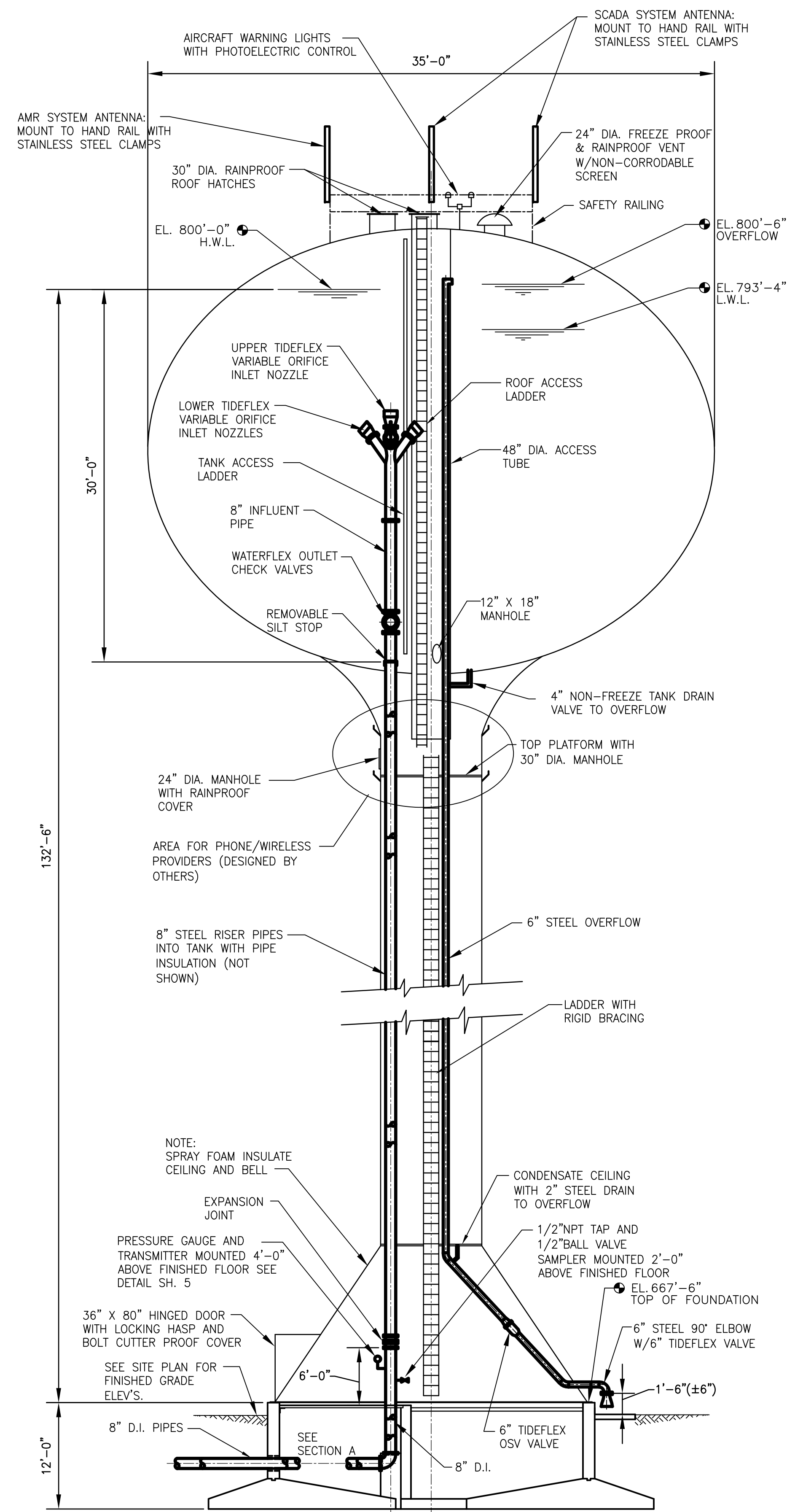
DESIGNED BY:	DATE:
MRT	01-19-16
CHECKED BY:	DATE:
DRF	01-19-16
APPROVED BY:	DATE:
DRF	01-19-16

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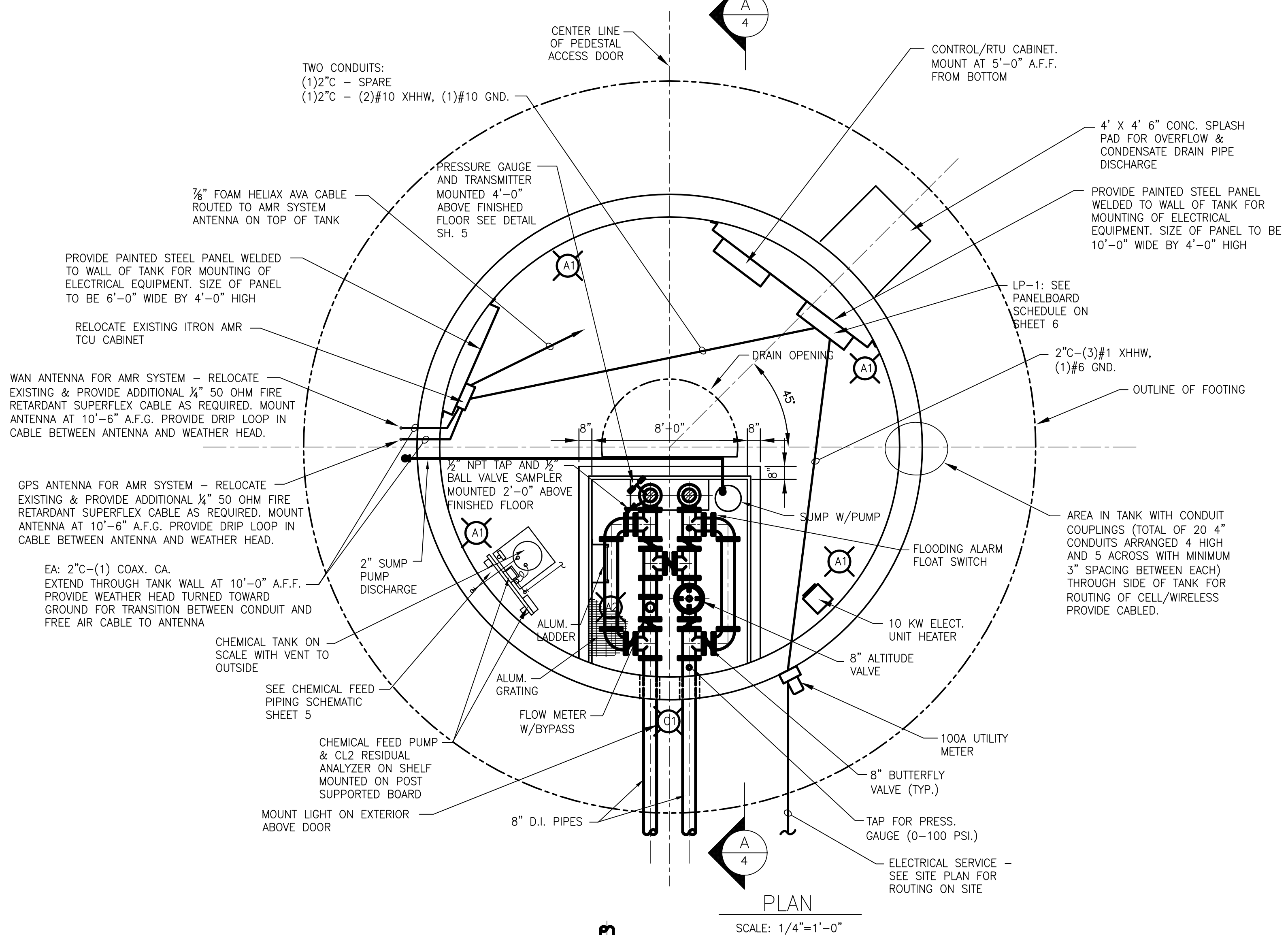
SCALE:	1"=10'
DRAWING No.	61086
SHEET	C7

COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.
PROPOSED OFFSITE PLAN

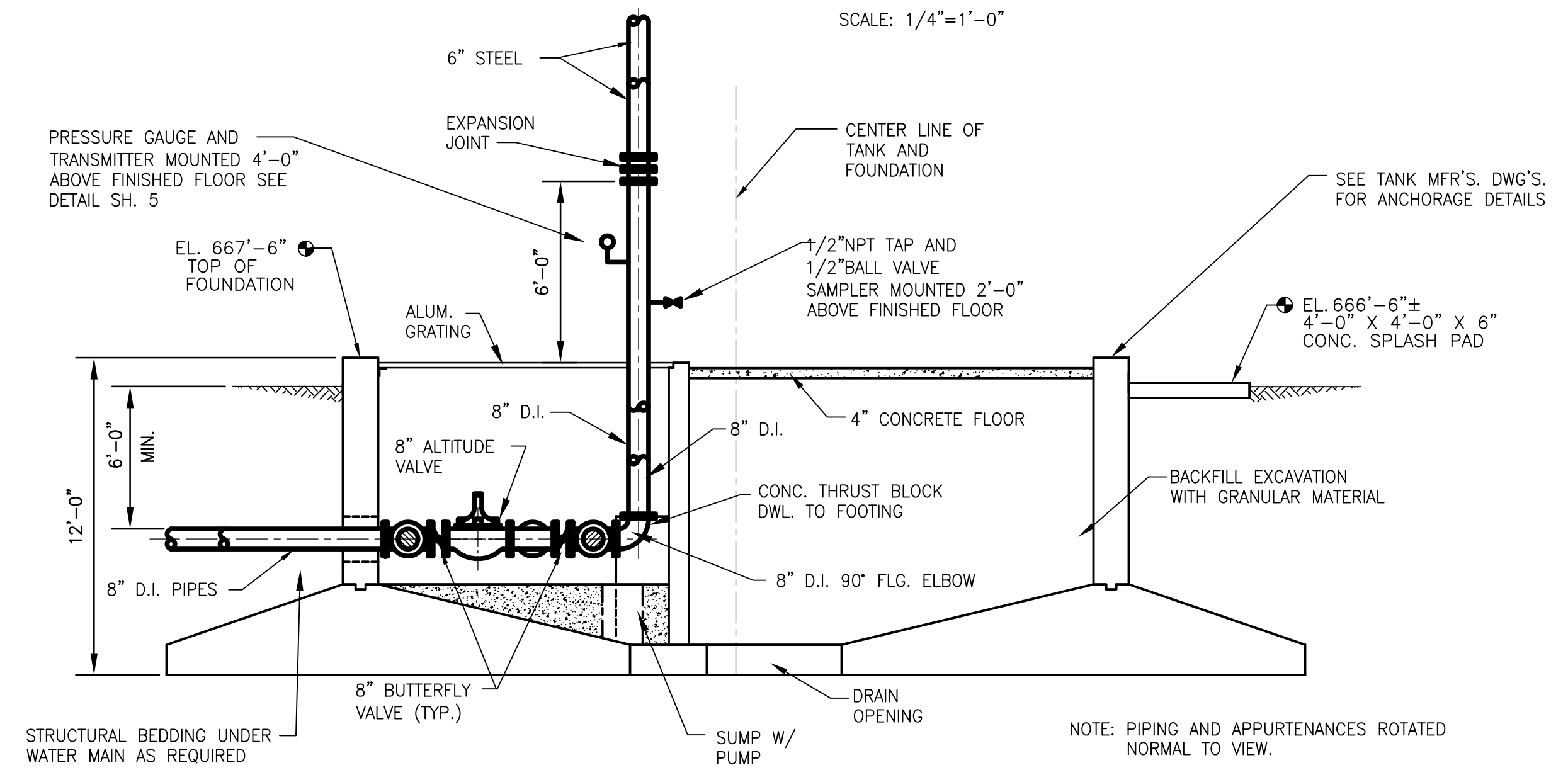
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ELEVATION
NO SCALE



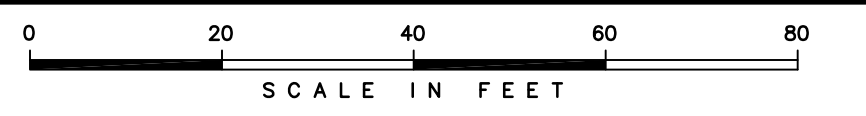
PLAN
SCALE: 1/4"=1'-0"



SECTION
SCALE: 1/4"=1'-0"

GENERAL NOTES

1. DIMENSIONS SHOWN FOR TANK DIA., HEAD RANGE, AND FOUNDATION ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE AS REQUIRED BY THE TANK MANUFACTURER.
2. SEE TANK MANUFACTURER'S SHOP DRAWINGS FOR STEEL AND ERECTION DETAILS, REINFORCING SIZES AND PLACING DETAILS, AND ANCHOR BOLT SIZES, LOCATIONS AND DETAILS.
3. ALLOWABLE NET SOIL BEARING PRESSURE = 3,500 P.S.F. MINIMUM. REVIEW EXISTING SOIL CONDITIONS AND INCLUDE THE COST OF ANY SPECIAL FOUNDATION REQUIRED IN THE BID.
4. PROVIDE HEAT TRACE, CONNECTION BOX WITH THERMOSTAT AND INSULATION (NOT SHOWN) ON PRESSURE GAUGE AND TRANSMITTER, PIPING AND VALVES.
5. SEE ELECTRICAL RISER DIAGRAM ON SHEET 6 FOR ADDITIONAL ELECTRICAL REQUIREMENTS.



DESIGNED BY: JL	DATE: 01-19-16
CHECKED BY: DRF	DATE: 01-19-16
APPROVED BY: DRF	DATE: 01-19-16

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SCALE: AS NOTED
DRAWING NO. 61086
SHEET C8

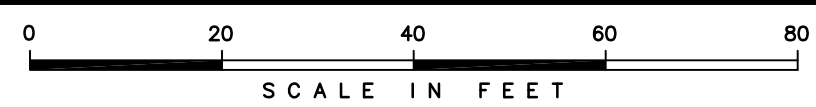
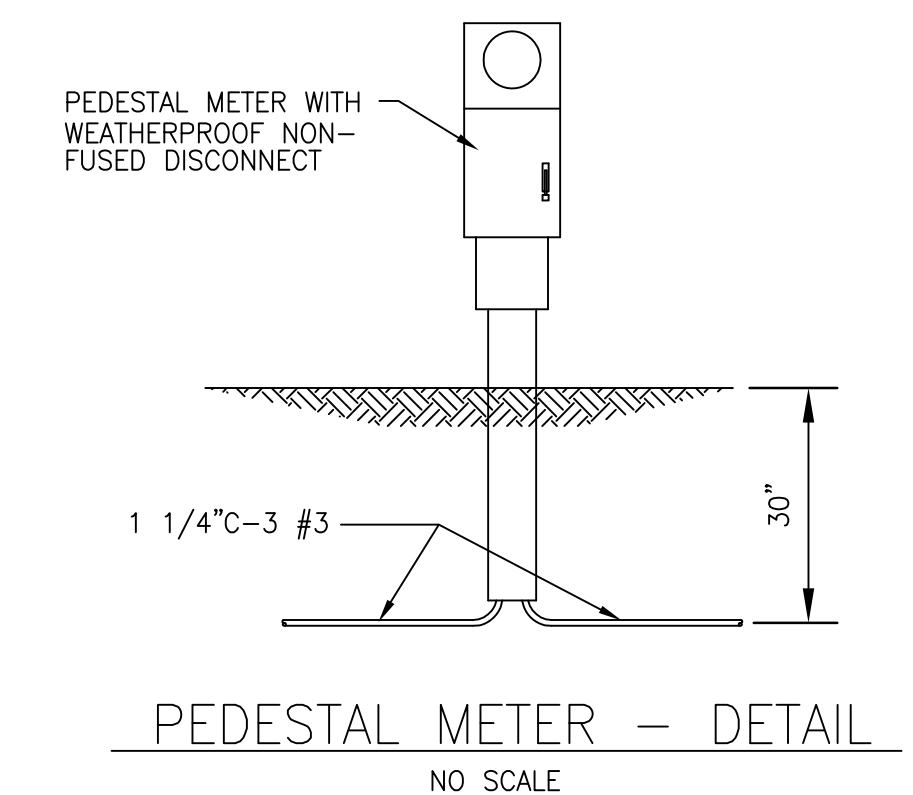
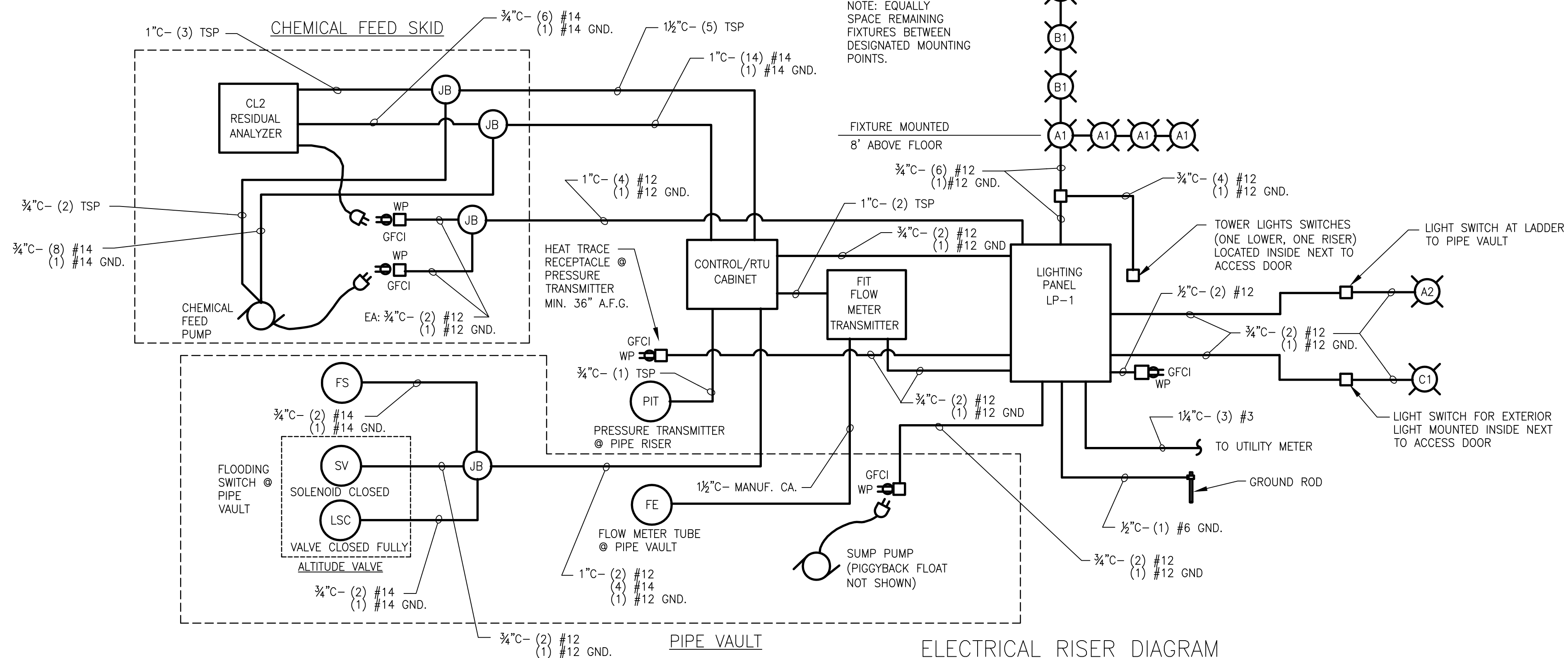
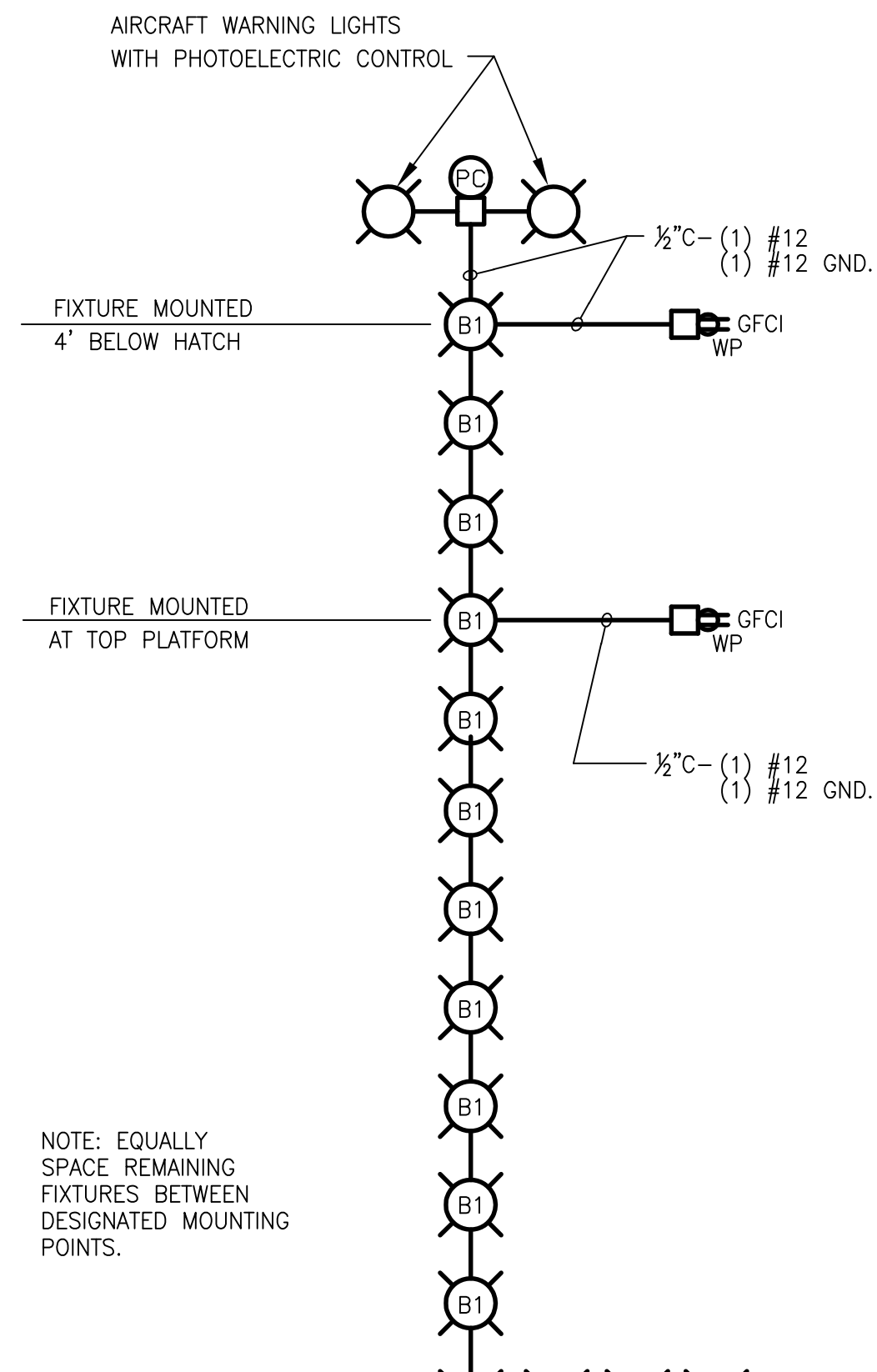
COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, ILL.
150,000 GAL. ELEVATED TANK - DETAILS

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LIGHTING FIXTURE SCHEDULE										
NO.	MANUF.	CATALOG NUMBER	VOLTS	INPUT WATTS	VA	LAMPS	MOUNT	REMARKS		
A1	RAB	WP3LED55NW	120	57	59	LED	WALL MOUNT 8'-0" A.F.F. FROM BOTTOM OF FIXTURE. PROVIDE STAINLESS STEEL BRACKETS AS REQUIRED TO ATTACH FIXTURE TO TANK WALL AND PROVIDE MINIMUM 3" CLEARANCE FROM INSULATION	LED WALLPACK FIXTURE, SUITABLE FOR WET LOCATIONS, 4000K COLOR TEMPERATURE, DIE-CAST ALUMINUM HOUSING, WHITE FINISH, MOTION SENSOR		
A2	RAB	WP3LED55NW	120	57	59	LED	WALL MOUNT 1'-0" BELOW GRATING FROM TOP OF FIXTURE	LED WALLPACK FIXTURE, SUITABLE FOR WET LOCATIONS, 4000K COLOR TEMPERATURE, DIE-CAST ALUMINUM HOUSING, WHITE FINISH, MOTION SENSOR		
B1	RAB	VXBRLED26NDG-3/4	120	27	28	LED	WALL MOUNT AS INDICATED ON DRAWINGS	LED VAPORPROOF FIXTURE, SUITABLE FOR WET LOCATIONS, 4000K COLOR TEMPERATURE, DIE-CAST ALUMINUM HOUSING, NATURAL SHOT BLASTED ALUMINUM FINISH, 3/4" NPS CONDUIT ENTRY.		
C1	RAB	WPLED20NW/PC	120	22	24	LED	WALL MOUNT 6" ABOVE TANK DOOR	LED EXTERIOR DARK SKY APPROVED FIXTURE, SUITABLE FOR WET LOCATIONS, 4000K COLOR TEMPERATURE, AMBIENT TEMPERATURE RANGE -22 TO 122 DEGREE FAHRENHEIT, DIE-CAST ALUMINUM HOUSING, WHITE FINISH, JUNCTION BOX MOUNT, INTEGRAL BUTTON PHOTOCELL.		

LIGHTING PANELBOARD SCHEDULE											
NAME: LP-1											
VOLTAGE RATING: 120/240 VOLTS, 1 PHASE, 3 WIRE											
BUS RATING: 100 AMPS											
MAIN BREAKER: 100 AMPS											
FEED: BOTTOM											
MOUNTING: SURFACE											
SPECIAL FEATURES: NEMA 4X ENCLOSURE											
LOCATION: WATER TOWER BASE											
FED FROM: UTILITY METER											
NOTES: MOUNT AT 4'0" AFF FROM BOTTOM											
LOAD TYPE	CIRCUIT DESCRIPTION	VA	CKT	BRKR	L1	L2	BRKR	CKT	VA	CIRCUIT DESCRIPTION	LOAD TYPE
M	SUMP PUMP	600	1	20 / 1	-A-	20 / 1	2	140		INTERIOR LIGHTS - TOWER	L
X	CATHODIC PROTECTION SYSTEM	1,200	3	20 / 1	-B-	20 / 1	4	295		INTERIOR LIGHTS - LOWER LEVEL	L
X	CONTROL/RTU CABINET	1,200	5	20 / 1	-A-	20 / 1	6	24		EXTERIOR LIGHTS	L
X	ITRON AMR TCU CABINET	1,200	7	20 / 1	-B-	20 / 1	8	540		CONVENIENCE RECEPTACLES	R
R	CHEMICAL FEED PUMP	300	9	20 / 1	-A-	15 / 1	10	300		AIRCRAFT WARNING LIGHTS	L
X	CHLORINE RESIDUAL ANALYZER	300	11	20 / 1	-B-	/ / 1	12			SPACE	
X	FLOW METER	1,200	13	/ / 1	-A-	/ / 1	14	5,000		10KW SPACE HEATER	H
SPACE					-B-	/ / 1	16	5,000		SPACE	H
SPACE					-A-	/ / 1	18			SPACE	
SPACE					-B-	/ / 1	20			SPACE	
LINE LOADS:		8,764 VA(L1)				8,535 VA(L2)					
TOTAL LOAD =		17.30 KVA				=				72.1 Amps Average	

LOAD CALCULATION:					
		CONNECTED VA	METHOD	NEC DEMAND	CALC. VA
TOTAL LIGHTING (L) LOAD:	L	759	ALL @	100%	759
TOTAL RECEPTACLE (R) LOAD:	R	840	FIRST 10KVA @	100%	840
			REMAINDER OVER 10KVA	50%	0
TOTAL MOTOR (M) LOAD:	M	600	ALL @	100%	600
			125% OF LARGEST	125%	0
TOTAL HVAC (H) LOAD:	H	10000	ALL @	100%	10000
TOTAL MISCELLANEOUS (X) LOAD:	X	5100	ALL @	100%	5100
TOTAL VA:		17299 VA			17299 VA
AVERAGE AMPS @		72 AMPS			72 AMPS
VOLTAGE PHASE TO PHASE=		240			



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MRT 6-6-16 PER LCPW
DRAWN BY: DATE: REVISIONS

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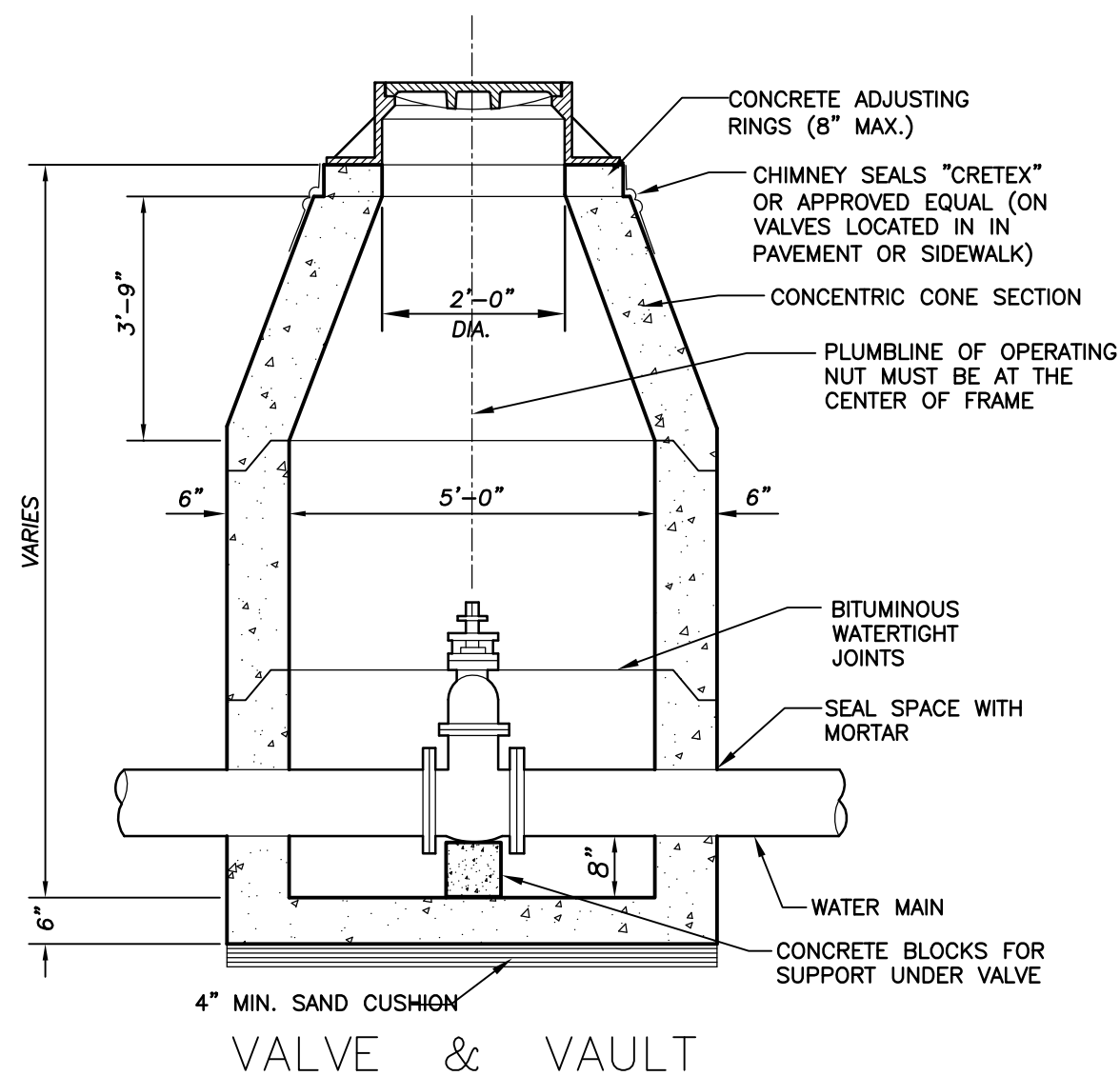
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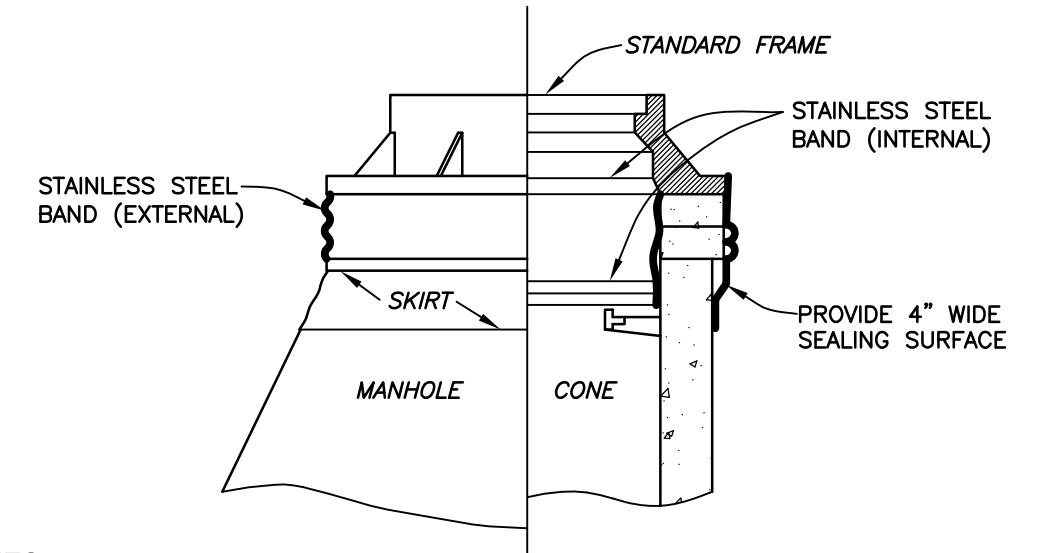
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ILL. REGISTRATION NO. 184-000995

SCALE: AS NOTED
DRAWING No. 61086
SHEET C9

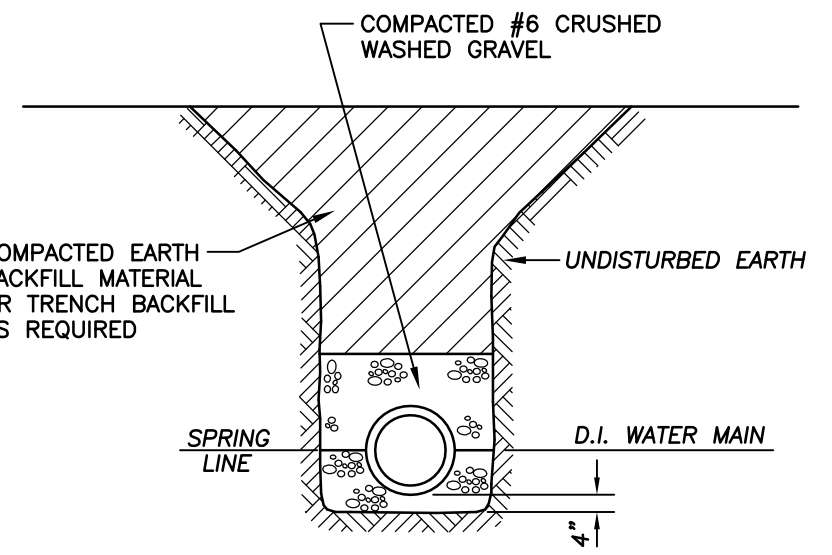
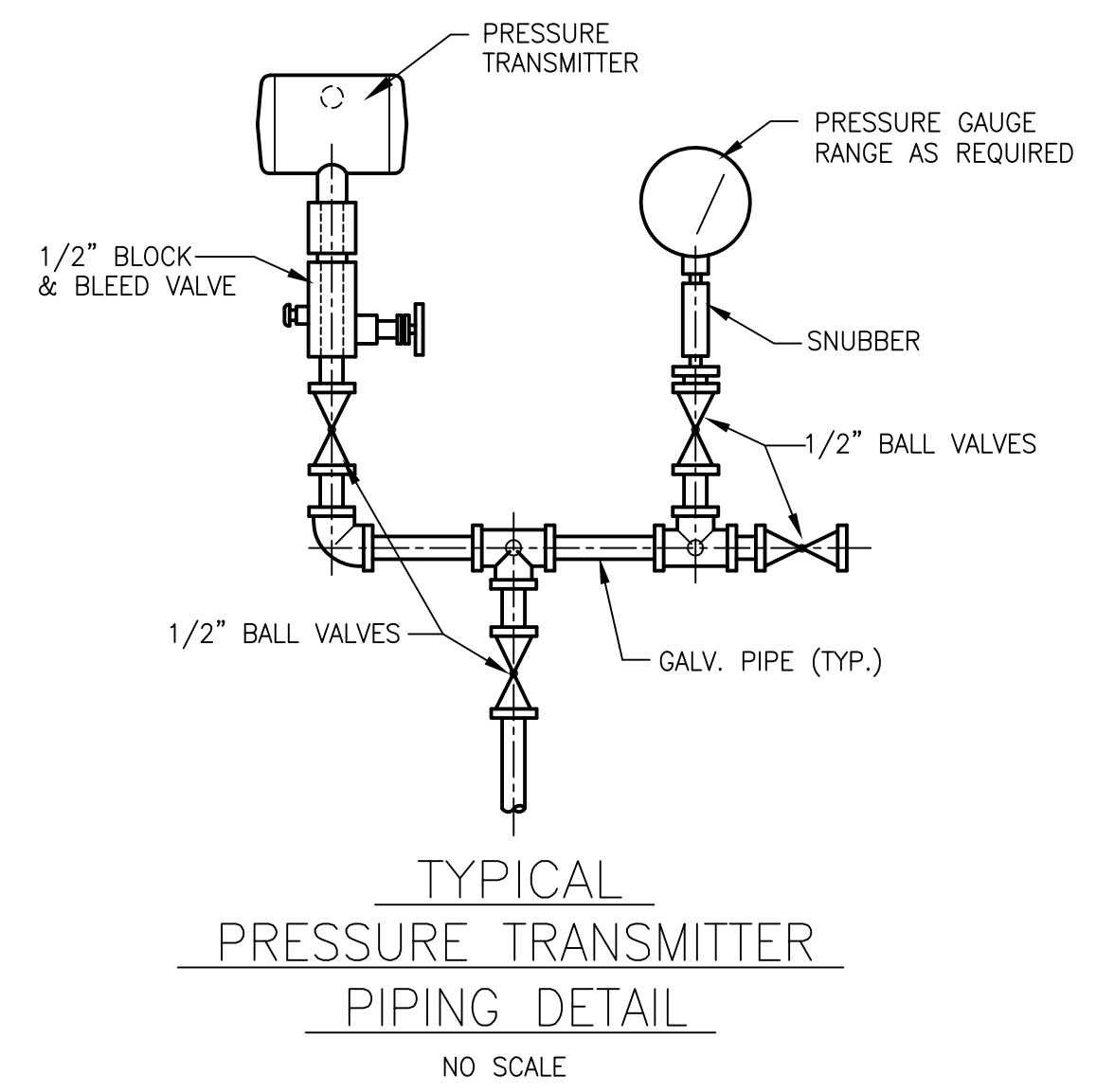
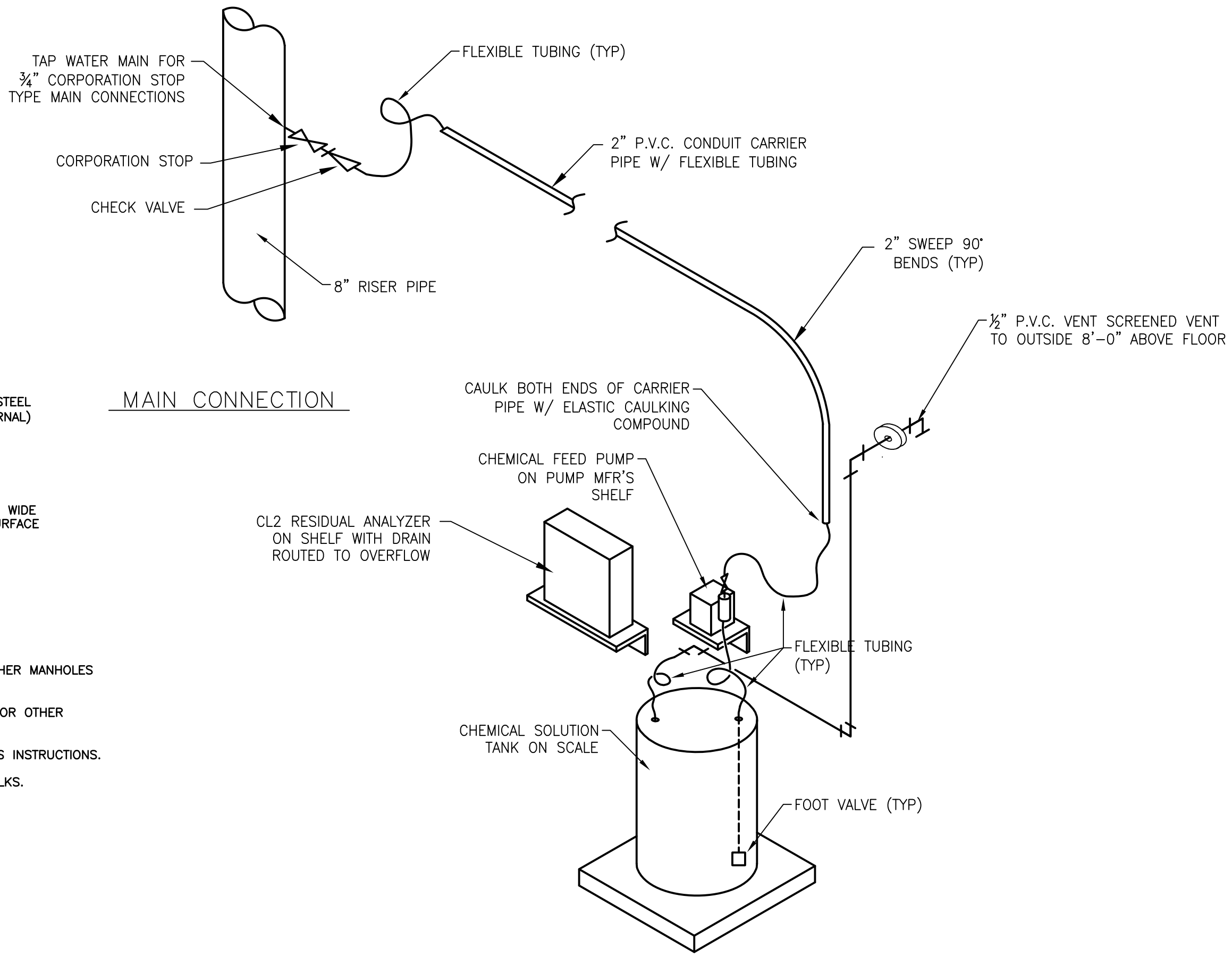
COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.
150,000 GAL. ELEVATED TANK - ELECTRICAL



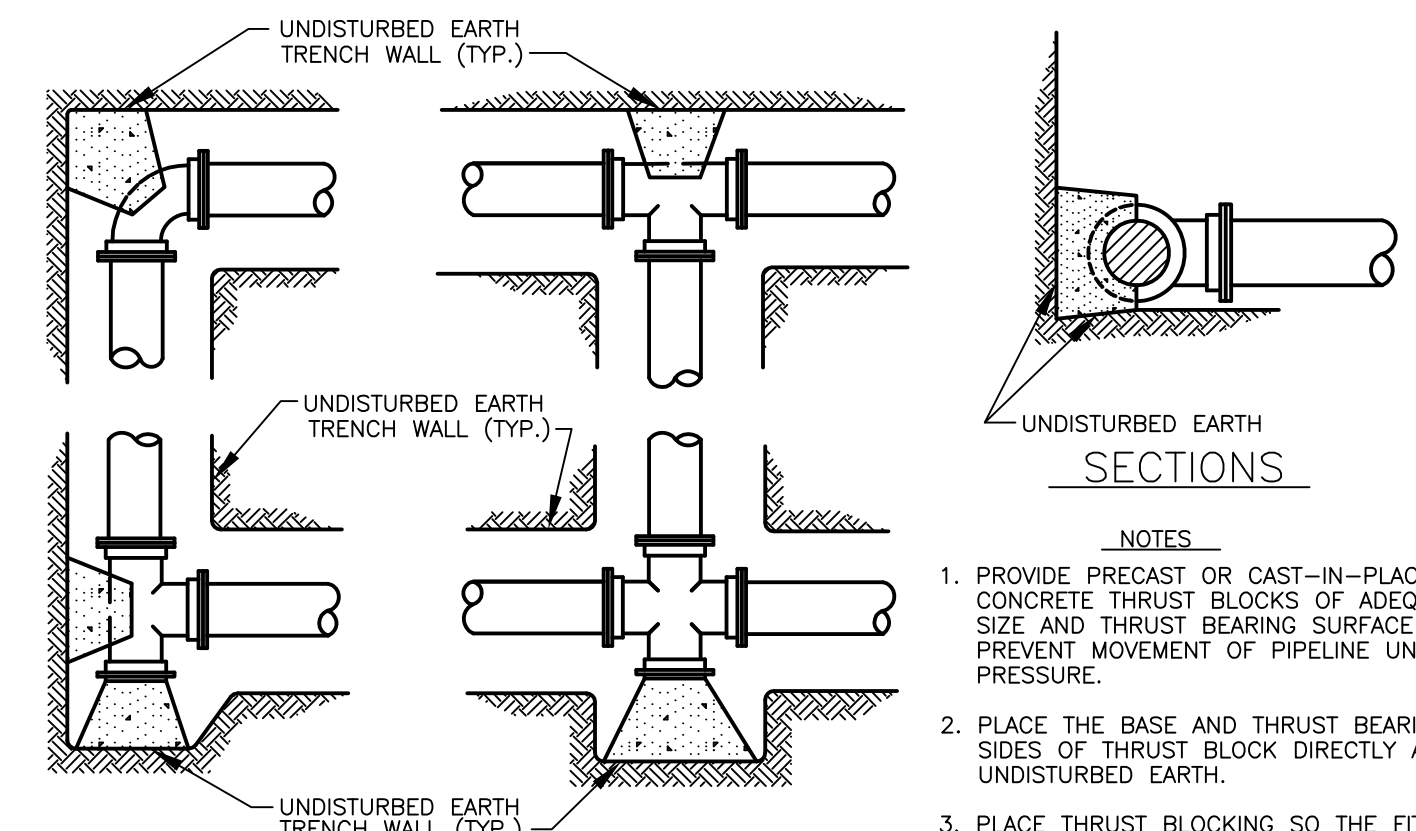
- NOTES:**
- SEE PLANS FOR LOCATION & DIAMETER OF WATERMAIN.
 - PRECAST SECTIONS SHALL CONFORM TO SPECIFICATIONS FOR MANHOLES-ASTM DESIGNATION C-478.
 - PRECAST MANHOLE JOINTS SHALL BE CONSTRUCTED WITH BITUMINOUS MASTIC.
 - FRAMES, COVERS & MANHOLE STEPS TO BE CAST IRON BY NEENAH FOUNDRY COMPANY, OR APPROVED EQUAL. (PRICE TO BE INCLUDED IN UNIT COST OF STRUCTURE).
 - ALL VALVE VAULTS ARE TO HAVE VERTICAL OFFSET CONES INSTALLED SO THAT CENTER OF FRAME IS DIRECTLY ABOVE VALVE OPERATOR.
 - PIPE OPENING TO BE CAST INTO WALL.
 - FRAME AND GRATE SHALL BE NEENAH # R-1772-C W/ "WATER" CAST INTO LID (OR APPROVED EQUAL).



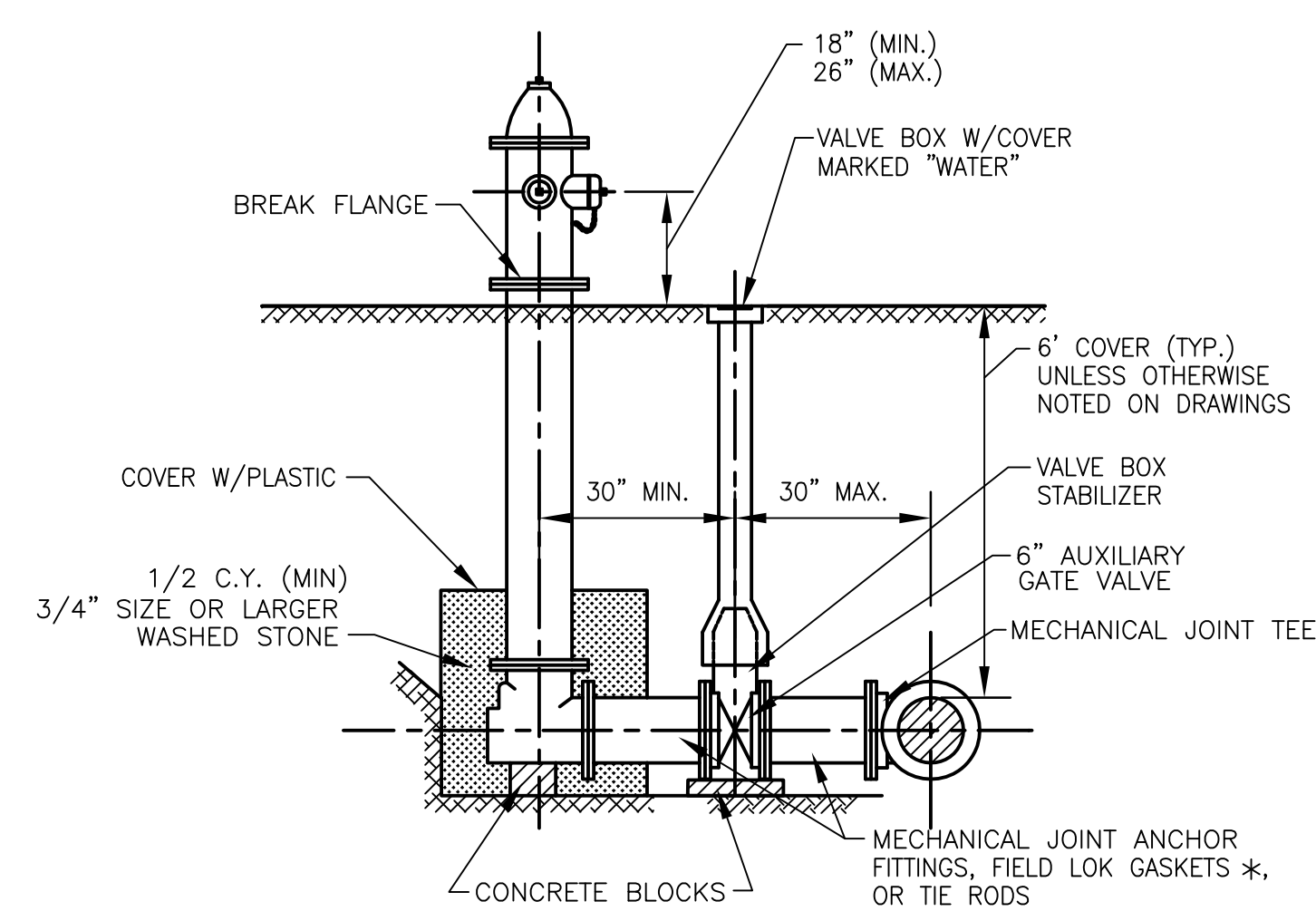
- NOTES:**
- CHIMNEY SEALS SHALL BE INSTALLED ON ALL SANITARY MANHOLES AND ALL OTHER MANHOLES IN PAVEMENT.
 - "CRETEX" EXTERNAL OR INTERNAL SEAL ARE RECOMMENDED; OTHER PRODUCTS OR OTHER DESIGN SOLUTIONS SHALL REQUIRE THE APPROVAL OF THE VILLAGE ENGINEER.
 - CHIMNEY SEAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
 - CHIMNEY SEAL ARE REQUIRED FOR ALL VALVE VAULTS IN PAVEMENT OR SIDEWALKS.



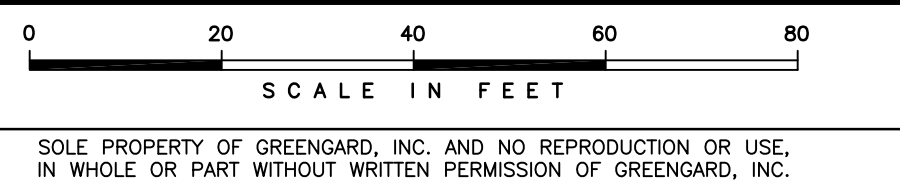
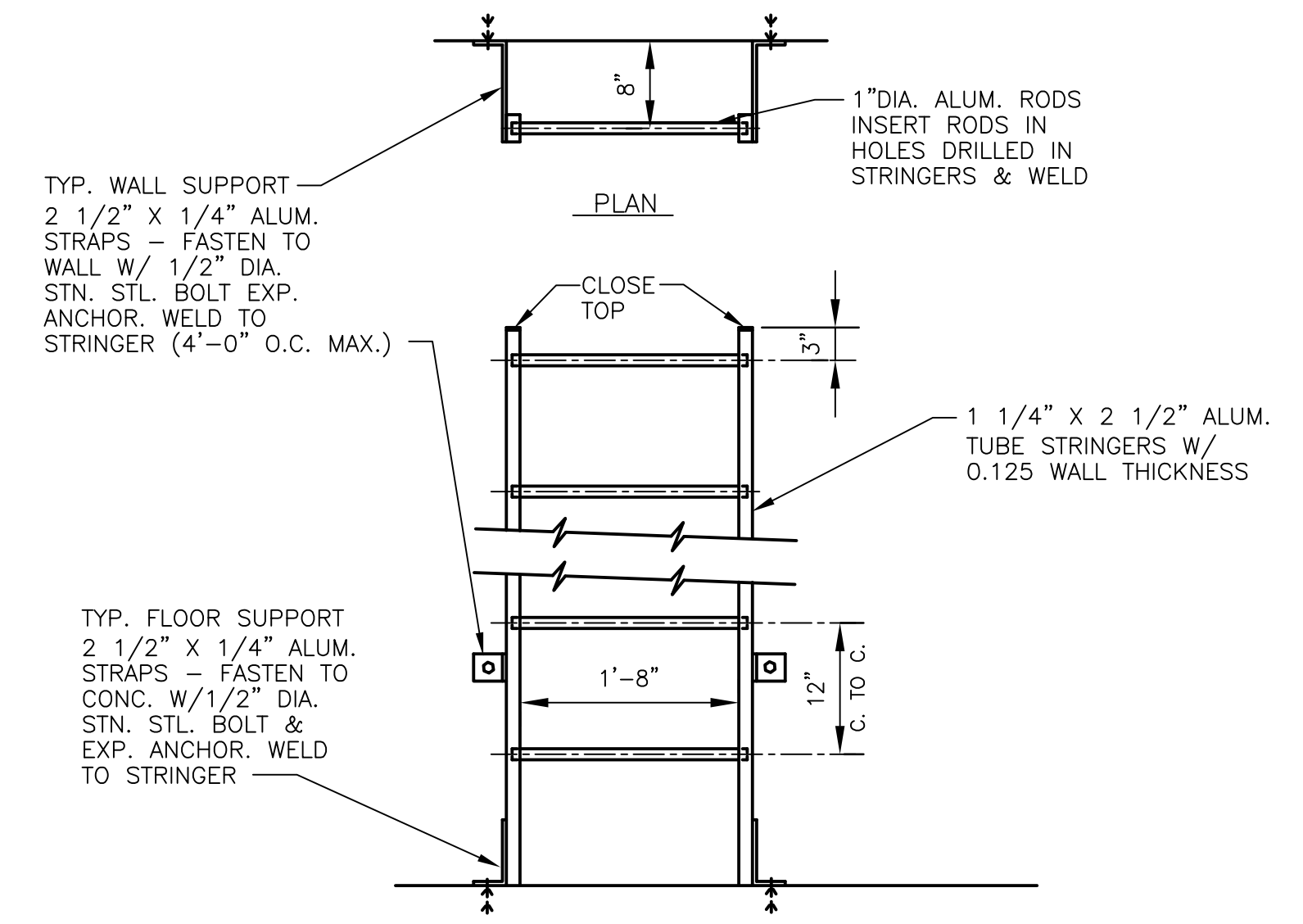
- NOTE:**
- MAKE EXCAVATION FOR PIPE BELL SO THAT ALL LOADS ARE CARRIED BY PIPE BARREL ONLY.
 - WHERE BOTTOM OF TRENCH IS NOT STABLE LARGE SIZE CRUSHED STONE OR GRAVEL, AS APPROVED BY THE ENGINEER SHALL BE PROVIDED.



- NOTES:**
- PROVIDE PRECAST OR CAST-IN-PLACE CONCRETE THRUST BLOCKS OF ADEQUATE SIZE AND THRUST BEARING SURFACE TO PREVENT MOVEMENT OF PIPELINE UNDER PRESSURE.
 - PLACE THE BASE AND THRUST BEARING SIDES OF THRUST BLOCK DIRECTLY AGAINST UNDISTURBED EARTH.
 - PLACE THRUST BLOCKING SO THE FITTING JOINTS WILL BE ACCESSIBLE FOR REPAIR.



* NOTE: MECHANICAL JOINT FITTINGS ARE NOT REQUIRED WHERE FIELD LOK GASKETS ARE UTILIZED.



DESIGNED BY:	DATE:	DRF	01-19-16
CHECKED BY:	DATE:	DRF	01-19-16
APPROVED BY:	DATE:	DRF	01-19-16

DESIGNED BY:	DATE:	MRT	01-19-16
CHECKED BY:	DATE:	DRF	01-19-16
APPROVED BY:	DATE:	DRF	01-19-16

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SCALE:	AS NOTED
DRAWING NO.:	61086
SHEET:	C10

COUNTRYSIDE MANOR ELEVATED TANK - LIBERTYVILLE, IL.
STANDARD DETAILS

Drawing File: J:\01051\Manor\Plan Design\01086.DWG Date: 03/20/16 10:12am

