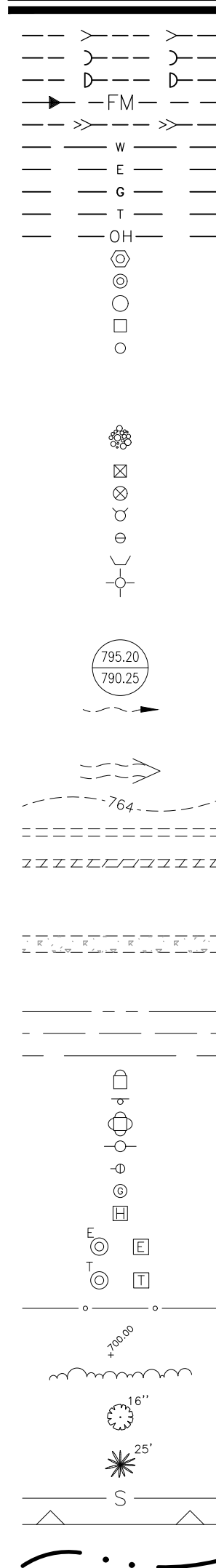


Final Engineering for PROPOSED HEINEN'S GROCERY STORE

1244 E. CHICAGO AVENUE
CITY OF NAPERVILLE, ILLINOIS

STANDARD SYMBOLS

EXISTING



STORM SEWER
SANITARY SEWER
COMBINED SEWER
FORCEMAIN
DRAIN TILE
WATER MAIN
ELECTRIC
GAS
TELEPHONE
OVERHEAD WIRES
SANITARY MANHOLE
STORM MANHOLE
CATCH BASIN
STORM INLET
CLEANOUT

HAY BALES

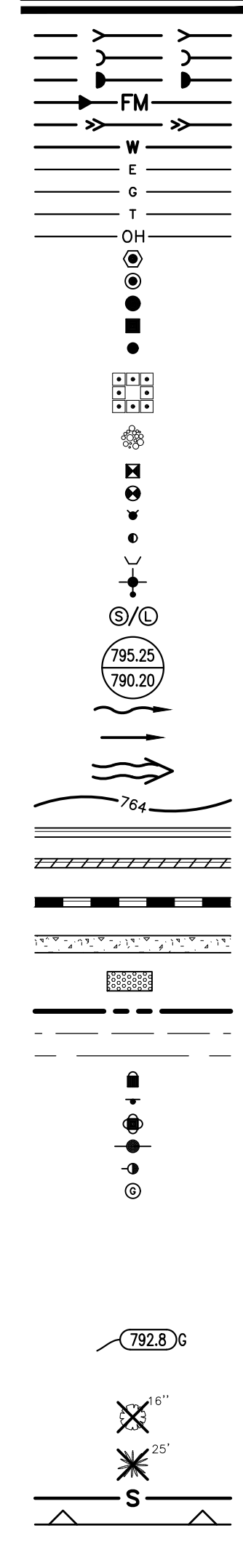
RIP RAP
VALVE IN VAULT
VALVE IN BOX
FIRE HYDRANT
BUFFALO BOX
FLARED END SECTION
STREET LIGHT
SUMMIT / LOW POINT

RIM ELEVATION
INVERT ELEVATION
DITCH OR SWALE
DIRECTION OF FLOW
OVERFLOW RELIEF SWALE
1 FOOT CONTOURS
CURB AND GUTTER
DEPRESSED
CURB AND GUTTER
REVERSE CURB
AND GUTTER

SIDEWALK
DETECTABLE WARNINGS
PROPERTY LINE
EASEMENT LINE
SETBACK LINE
MAIL BOX
SIGN
TRAFFIC SIGNAL
POWER POLE
GUY WIRE
GAS VALVE
HANDHOLE

ELECTRICAL EQUIPMENT
TELEPHONE EQUIPMENT
CHAIN-LINK FENCE
SPOT ELEVATION
BRUSH/TREE LINE
DECIDUOUS TREE WITH
TRUNK DIA. IN INCHES (TBR)
CONIFEROUS TREE WITH
HEIGHT IN FEET (TBR)
SILT FENCE
RETAINING WALL
WETLAND

PROPOSED



STORM SEWER
SANITARY SEWER
COMBINED SEWER
FORCEMAIN
DRAIN TILE
WATER MAIN
ELECTRIC
GAS
TELEPHONE
OVERHEAD WIRES
SANITARY MANHOLE
STORM MANHOLE
CATCH BASIN
STORM INLET
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HAY BALES

RIP RAP
VALVE IN VAULT
VALVE IN BOX
FIRE HYDRANT
BUFFALO BOX
FLARED END SECTION
STREET LIGHT
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RIM ELEVATION
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DITCH OR SWALE
DIRECTION OF FLOW
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1 FOOT CONTOURS
CURB AND GUTTER
DEPRESSED
CURB AND GUTTER
REVERSE CURB
AND GUTTER

SIDEWALK
DETECTABLE WARNINGS
PROPERTY LINE
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SETBACK LINE
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SIGN
TRAFFIC SIGNAL
POWER POLE
GUY WIRE
GAS VALVE
HANDHOLE

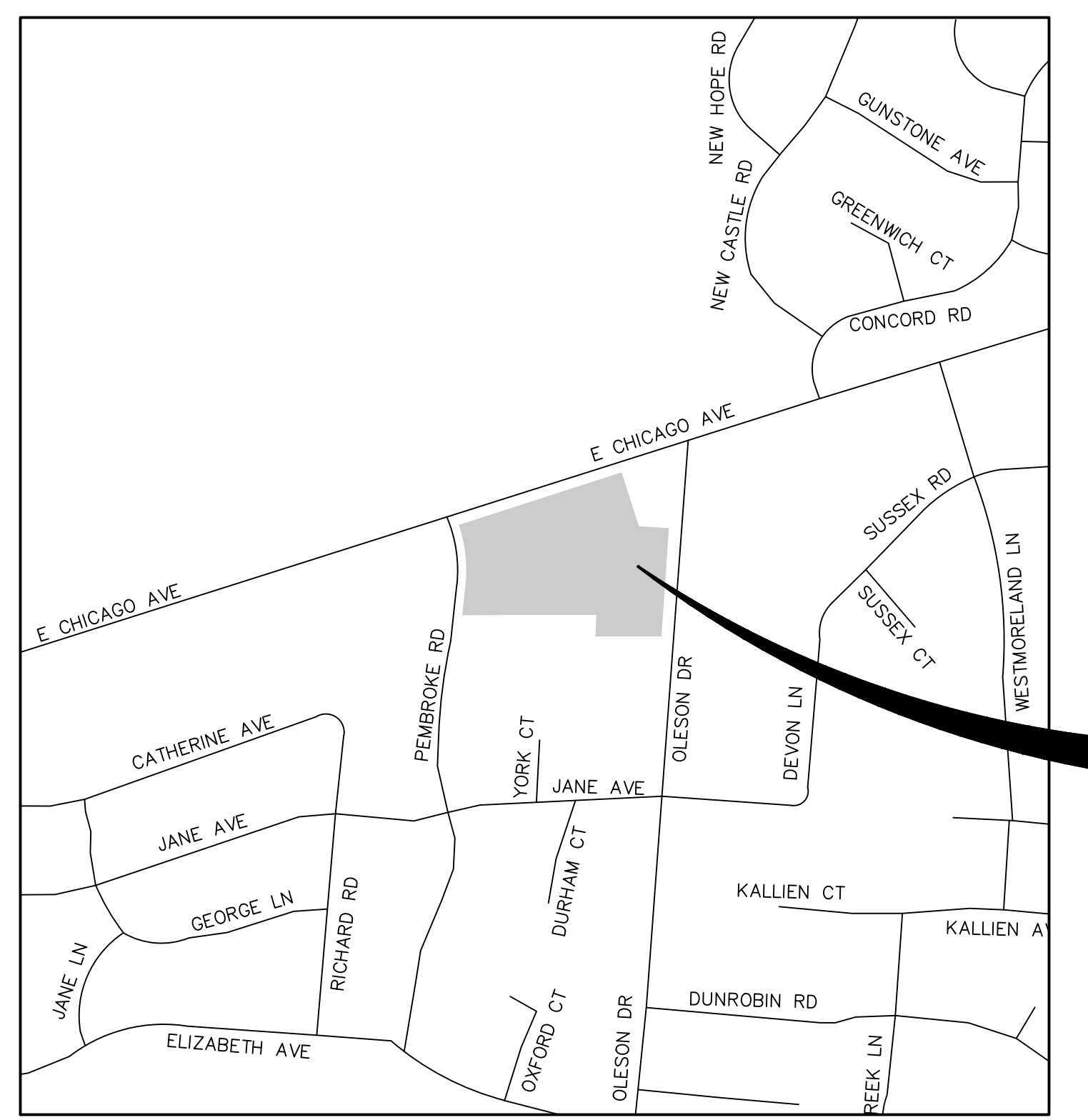
ELECTRICAL EQUIPMENT
TELEPHONE EQUIPMENT
CHAIN-LINK FENCE
SPOT ELEVATION
BRUSH/TREE LINE
DECIDUOUS TREE WITH
TRUNK DIA. IN INCHES (TBR)
CONIFEROUS TREE WITH
HEIGHT IN FEET (TBR)
SILT FENCE
RETAINING WALL
WETLAND

ABBREVIATIONS

ADJ AGG. ARCH B.A.M. B-B B/C B/P B/W B-BOX BIT. BM B.O. C.E. CB C CMP CNTRL CO CONC. CY D DIA. DIP DIMM DS DT E E-EV. E/P EX. F.O. F-F F-F FES	ADJUST AGGREGATE ARCHITECT BITUMINOUS AGGREGATE MIXTURE BACK TO BACK BACK OF CURB BOTTOM OF PIPE BACK OF WALK BUFFALO BOX BITUMINOUS BENCHMARK BY OTHERS COMMERCIAL ENTRANCE CATCH BASIN CENTERLINE CORRUGATED METAL PIPE CONTROL CLEANOUT CONCRETE CUBIC YARD DITCH DIAMETER DUCTILE IRON PIPE DUCTILE IRON WATER MAIN DOWNSPOUT DRAIN TILE ELECTRIC EDGE TO EDGE ELEVATION EDGE OF PAVEMENT EXISTING FIELD ENTRANCE FACE TO FACE FINISHED FLOOR FLARED END SECTION	F/L FM G G/F GW HDWL HH HWL HYD INL INV IP LEFT MAX. MB M/E MH MIN. NWL P.E. PC PCC PGL PI R PP PROP. PT PVC PVC PVI PVT P P.U.D.E. R	FLOW LINE FORCE MAIN GROUND GRADE AT FOUNDATION GUY WIRE HEADWALL HANDHOLE HIGH WATER LEVEL HYDRANT INLET INVERT IRON PIPE LEFT MAXIMUM MAILBOX MEET EXISTING MANHOLE MINIMUM NORMAL WATER LEVEL PRIVATE ENTRANCE POINT OF CURVATURE POINT OF COMPOUND CURVE PROFILE GRADE LINE POINT OF INTERSECTION PROPERTY LINE MAXIMUM MAILBOX MEET EXISTING MANHOLE MINIMUM NORMAL WATER LEVEL PRIVATE ENTRANCE POINT OF CURVATURE POINT OF INTERSECTION PROPERTY LINE POWER POLE PROPOSED POINT OF TANGENCY POLYVINYL CHLORIDE PIPE POINT OF VERTICAL CURVATURE POINT OF VERTICAL INTERSECTION PAVEMENT PUBLIC UTILITY & DRAINAGE EASEMENT RADIUS	R.O.W. RCP REM REV RR RT SAN SF SHLD. SIL. SMH STA STD STW SY TBR T T-A T/C T/F T/F T/P T/W T/WALL TEMP TRANS V.B. VCP V.V. WL WM	RIGHT-OF-WAY REINFORCED CONCRETE PIPE REMOVAL REVERSE RAILROAD RIGHT SANITARY SQUARE FOOT SHOULDER STREET LIGHT SANITARY MANHOLE STATION LEFT STANDARD SIDEWALK SQUARE YARDS TO BE REMOVED TELEPHONE TYPE A TOP OF CURB TOP OF FOUNDATION TOP OF PIPE TOP OF WALK TOP OF WALL TEMPORARY TRANSFORMER VALVE BOX VITRIFIED CLAY PIPE VALVE VAULT WATER LEVEL WATER MAIN
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INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS AND DEMOLITION PLAN - NORTH
3	EXISTING CONDITIONS AND DEMOLITION PLAN - SOUTH
4	SITE DIMENSIONAL AND PAVING PLAN - NORTH
5	SITE DIMENSIONAL AND PAVING PLAN - SOUTH
6	GRADING PLAN - NORTH
7	GRADING PLAN - SOUTH
8	GRADING DETAIL PLAN
9	SOIL EROSION AND SEDIMENT CONTROL PLAN
10	SOIL EROSION AND SEDIMENT CONTROL - DETAILS
11	UTILITY PLAN - NORTH
12	UTILITY PLAN - SOUTH
13	PLAN AND PROFILE - SANITARY SEWER
14	CONSTRUCTION DETAILS
15	CONSTRUCTION DETAILS
16	CONSTRUCTION DETAILS
17	CONSTRUCTION DETAILS
18	CONSTRUCTION SPECIFICATIONS
19	CONSTRUCTION SPECIFICATIONS



LOCATION MAP
N.T.S.

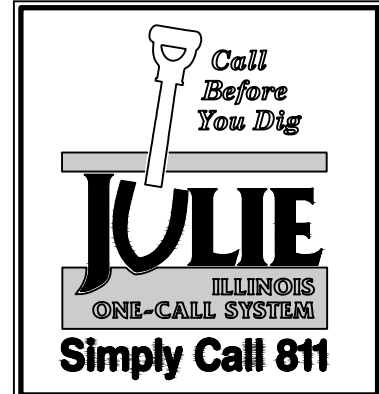
CLIENT:
AODK ARCHITECTURE
14394 DETROIT AVENUE
LAKEWOOD, OHIO 44107

OWNER:
HEINEN'S GROCERY STORE
4540 RICHMOND ROAD
WARRENSVILLE HEIGHTS, OHIO 44128



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CONSULTING

1 East Wacker Drive, Suite 2700, Chicago, IL 60601 ph:312.824.3801 fx:847.634.0095 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners



NOTE:
THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY MANHARD CONSULTING, LTD. ON JANUARY 19, 2023. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS.

BENCHMARKS:
REFERENCE BENCHMARK:
ELEVATIONS AND SITE BENCHMARKS SHOWN HEREON WERE ESTABLISHED UTILIZING A TRIMBLE REAL-TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) AND THE TRIMBLE VRS NOW NETWORK. THE OBSERVED ELEVATIONS ARE THE BASIS FOR ALL ELEVATIONS SHOWN HEREON AND THIS INFORMATION HAS NOT BEEN DIRECTLY COMPARED TO ANY OTHER KNOWN OR FIXED BENCHMARK. ALL ELEVATIONS ARE BASED ON NAVD 88 DATUM GEOID18).

SITE BENCHMARK#1:
SOUTHWEST "ARROW" BOLT ON TOP FLANGE OF FIRE HYDRANT LOCATED APPROXIMATELY 35 FEET WEST OF THE CENTERLINE OF OLESEN DRIVE AND 75 FEET SOUTHWEST OF THE INTERSECTION OF EAST CHICAGO AVENUE AND OLESEN DRIVE ALONG THE CENTERLINE OF OLESEN DRIVE.
ELEVATION=754.12' DATUM=NAVD88 (GEOID 18)

SITE BENCHMARK#2:
SOUTHWEST "ARROW" BOLT ON TOP FLANGE OF FIRE HYDRANT LOCATED APPROXIMATELY 155 FEET EAST OF THE CENTERLINE OF PEMBROKE ROAD AND 310 FEET SOUTHWEST OF THE INTERSECTION OF EAST CHICAGO AVENUE AND PEMBROKE ROAD ALONG THE CENTERLINE OF PEMBROKE ROAD.
ELEVATION=755.64' DATUM=NAVD88 (GEOID 18)

SITE BENCHMARK#3:
SOUTHWEST "ARROW" BOLT ON TOP FLANGE OF FIRE HYDRANT LOCATED APPROXIMATELY 40 FEET WEST OF THE CENTERLINE OF OLESEN DRIVE AND 675 FEET SOUTHWEST OF THE INTERSECTION OF EAST CHICAGO AVENUE AND OLESEN DRIVE ALONG THE CENTERLINE OF OLESEN DRIVE.
ELEVATION=757.09' DATUM=NAVD88 (GEOID 18)

CITY OF NAPERVILLE BENCHMARK:
BERNSTEIN 3D TOP SECURITY MONUMENT, CONSISTING OF A 3/8" DIA. STAINLESS STEEL DATUM POINT ON THREADED 3/8" BY 4' LONG ROD TOTALING (12") IN LENGTH WITH GREASED TOP SECURITY SLEEVE ENCLOSED IN SAND AND 6" PVC PIPE WITH BMAC 6 ALUMINUM ACCESS COVER.
ELEVATION=733.69 DATUM=NAVD88

UTILITY CONTACTS	
ELECTRIC CITY OF NAPERVILLE 1392 AURORA AVENUE NAPERVILLE, IL 60540 (630) 420-4183 CONTACT: RON RITTER	WATER (REGIONAL) DUPAGE WATER COMMISSION 600E. BUTTERFIELD ROAD ELMHURST, IL 60126 (630) 834-0100 CONTACT:KEN NILES
GAS NICOR 1844 FERRY RD. NAPERVILLE, IL 60563 (630) 388-2362 CONTACT:	WATER (LOCAL) CITY OF NAPERVILLE 180 FORT HILL DR NAPERVILLE, IL 60540 (630) 420-6095 CONTACT:
SEWER (LOCAL) CITY OF NAPERVILLE 400 S. EAGLE ST. NAPERVILLE, IL 60540 (630) 420-6137 CONTACT:	ELECTRICAL (REGIONAL) COMED 2 LINCOLN CENTER OAKBROOK TERRACE, IL 60181 (800) 334-7661 CONTACT:

MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

DATE	REVISIONS
08-02-24	REVISED PER CITY OF NAPERVILLE REVIEW #6
07-03-24	REVISED PER DUDOT REVIEW #7
03-03-24	REVISED PER DUDOT REVIEW #3/4
03-03-24	REVISED PER DUDOT REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW #1

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

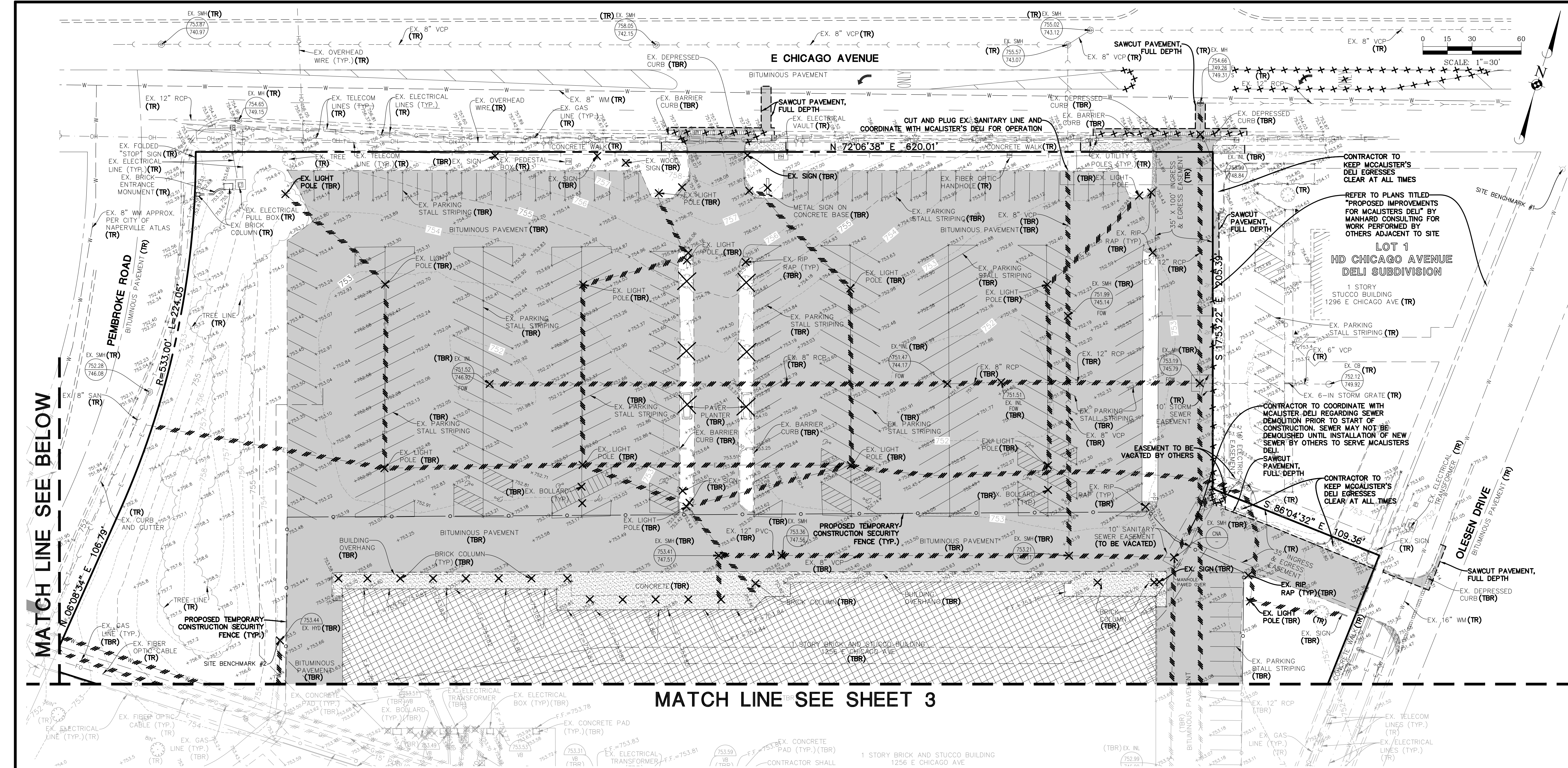
PROPOSED HEINEN'S GROCERY STORE
CITY OF NAPERVILLE, ILLINOIS
TITLE SHEET

PROJ. MGR.: MDE
PROJ. ASSOC.: JRM
DRAWN BY: MJH
DATE: 08-30-23
SCALE: N.T.S.

SHEET
1 OF 19
ADK.NVL01

August 2, 2024, 12:03 Draw Name: P:\naperville\1244 E Chicago Final Drawing\Plan Set\TITLE.dwg Updated By: JMiller

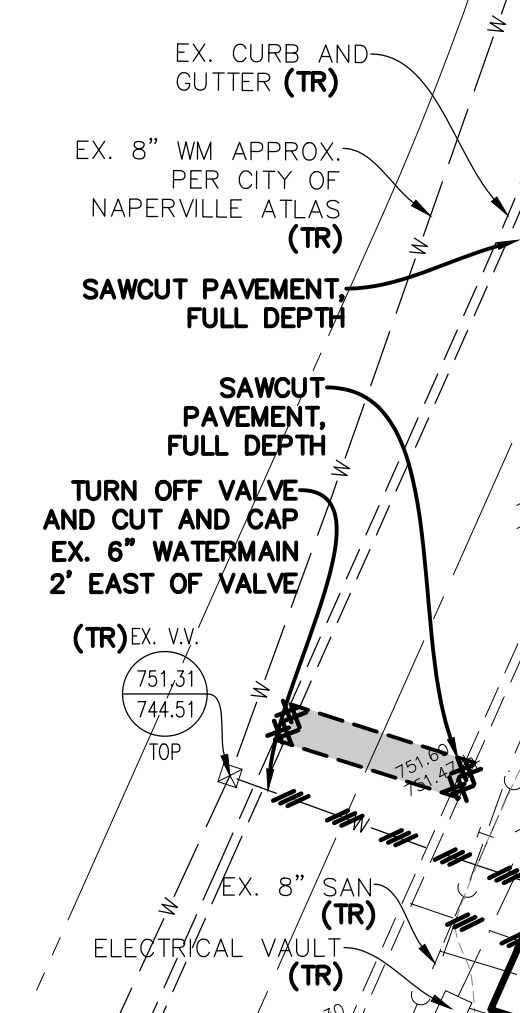
FINAL ENGINEERING - NOT FOR CONSTRUCTION



MATCH LINE SEE BELOW

MATCH LINE SEE SHEET 3

MATCH LINE SEE ABOVE



DEMOLITION LEGEND	
	BITUMINOUS PAVEMENT AND BASE TO BE REMOVED
	CONCRETE PAVEMENT AND BASE TO BE REMOVED
	BUILDING TO BE REMOVED
	SAWCUT LINE
	FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
	UTILITY STRUCTURE TO BE REMOVED
	UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
	TREE TO BE REMOVED
(TBR)	TO BE REMOVED
(TR)	TO REMAIN

EXISTING CONDITIONS AND DEMOLITION NOTES:

- EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF JANUARY 19, 2023. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
- THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL (IN A LOCATION APPROVED BY ALL JURISDICTIONAL GOVERNING ENTITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, ROAD, PARKING LOTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THESE PLANS CAN BE CONSTRUCTED. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
- REFER TO SPECIFICATIONS SHEET FOR DEMOLITION NOTES.

DATE	REVISIONS
08-09-24	REVISED PER CITY OF NAPERVILLE REVIEW #6
03-09-24	REVISED PER DIUOT REVIEW
03-09-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW

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NAPERVILLE, IL 60563
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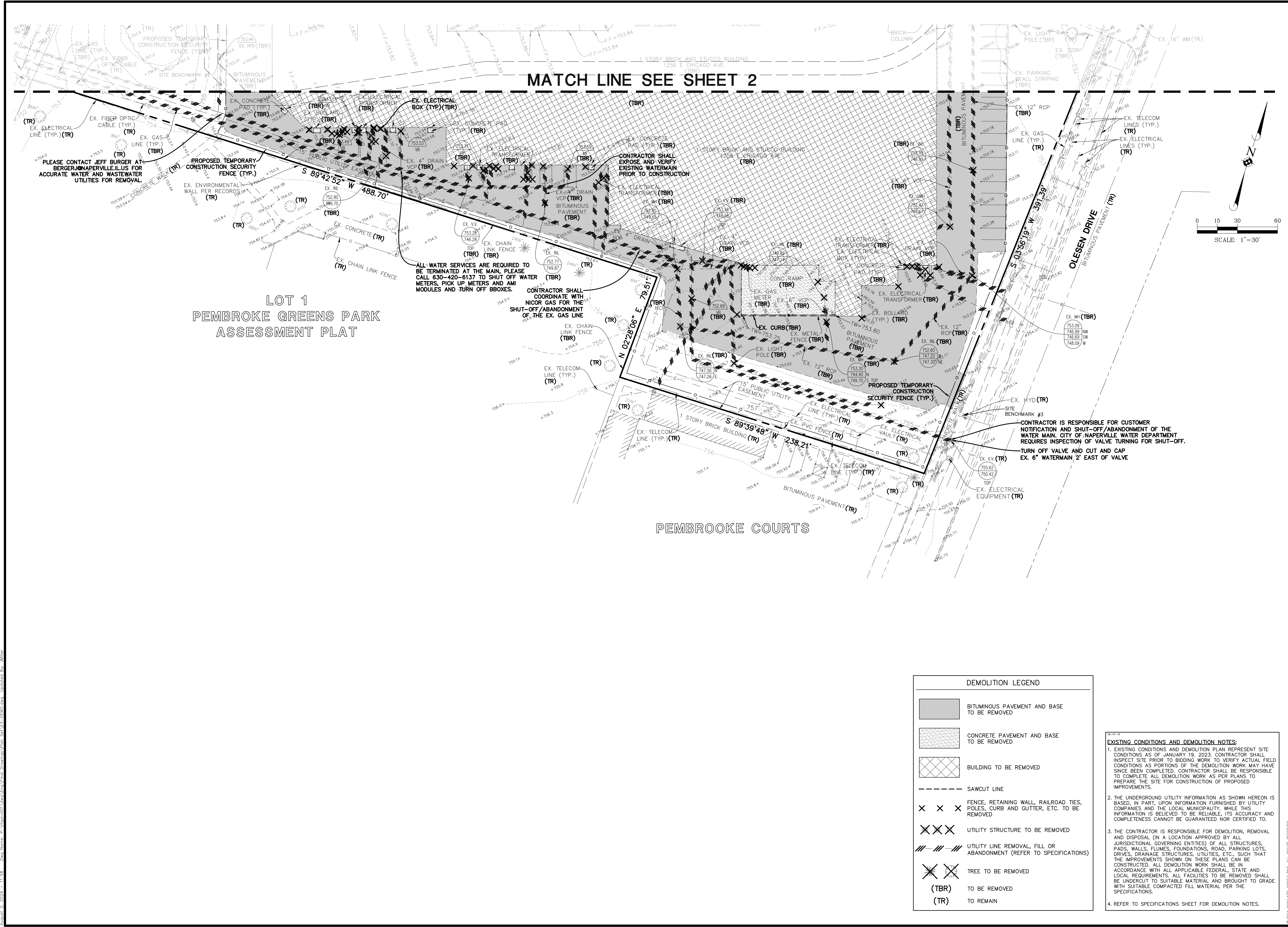
Professional Engineer
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PROPOSED HEINEN'S GROCERY STORE
CITY OF NAPERVILLE, ILLINOIS
EXISTING CONDITIONS AND DEMOLITION PLAN - NORTH

PROJ. MGR.: MDE
PROJ. ASSOC.: JRM
DRAWN BY: MDE
DATE: 08-30-23
SCALE: 1"=30'

SHEET
2 OF 19
ADK.NVL01

FINAL ENGINEERING - NOT FOR CONSTRUCTION



DATE	REVISIONS
08-16-24	REVISED PER CITY OF NAPERVILLE REVIEW #1/4
03-09-24	REVISED PER DUOT REVIEW
03-12-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW

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PROPOSED HEINEN'S GROCERY STORE

CITY OF NAPERVILLE, ILLINOIS

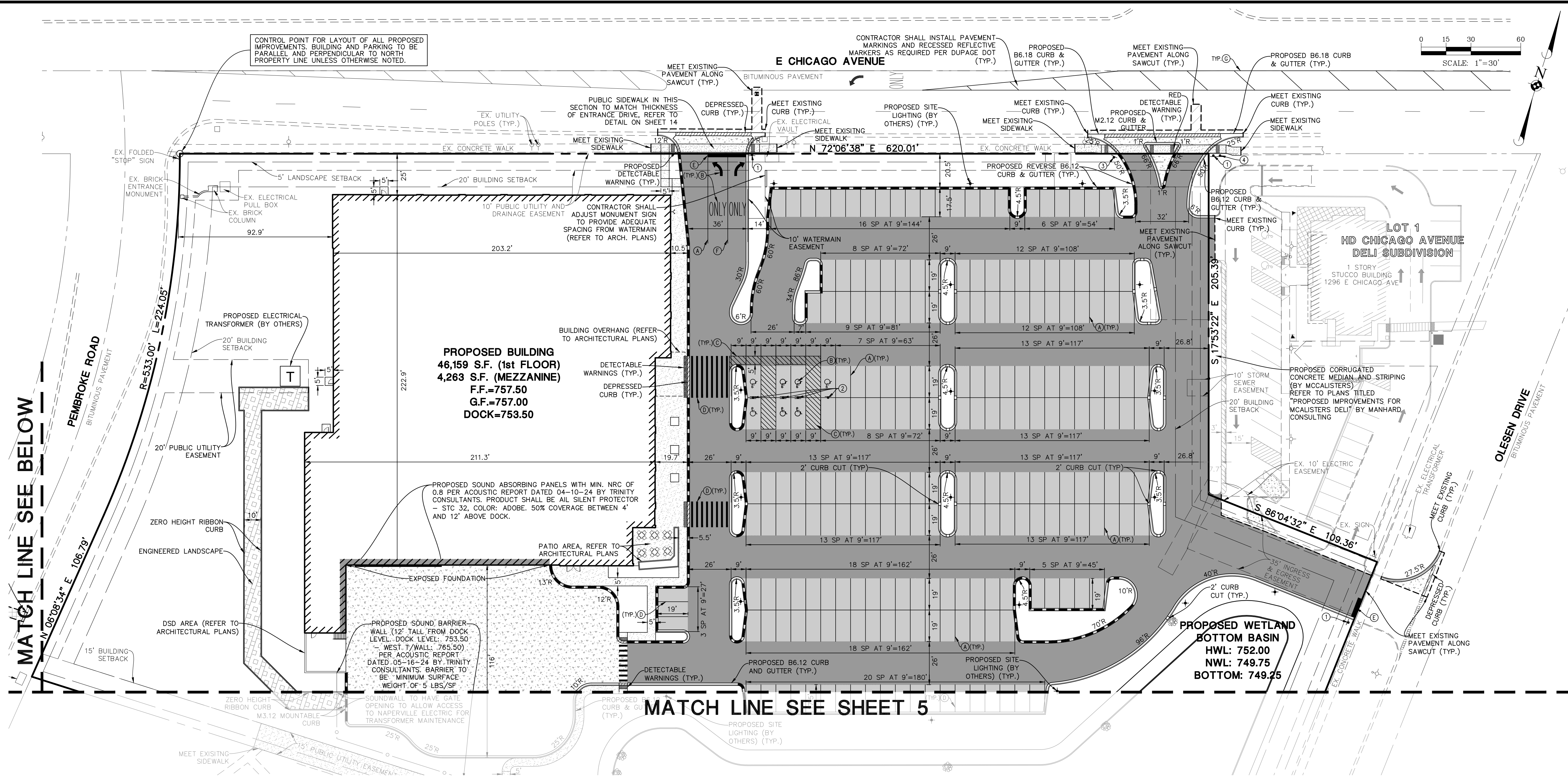
EXISTING CONDITIONS AND DEMOLITION PLAN - SOUTH

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: JDM
 DATE: 08-30-23
 SCALE: 1" = 30'

SHEET
3 OF 19
 ADK.NVIL01

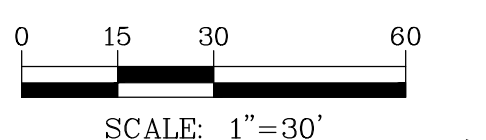
FINAL ENGINEERING - NOT FOR CONSTRUCTION

Date Name: P:\naperville\1800 West Lake Street\Final Drawings\Plan Set\EX-Demo.dwg Updated By: JDM
 August 2, 2024 - 11:58



CONTROL POINT FOR LAYOUT OF ALL PROPOSED IMPROVEMENTS. BUILDING AND PARKING TO BE PARALLEL AND PERPENDICULAR TO NORTH PROPERTY LINE UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL INSTALL PAVEMENT MARKINGS AND RECESSED REFLECTIVE MARKERS AS REQUIRED PER DUPAGE DOT (TYP.)

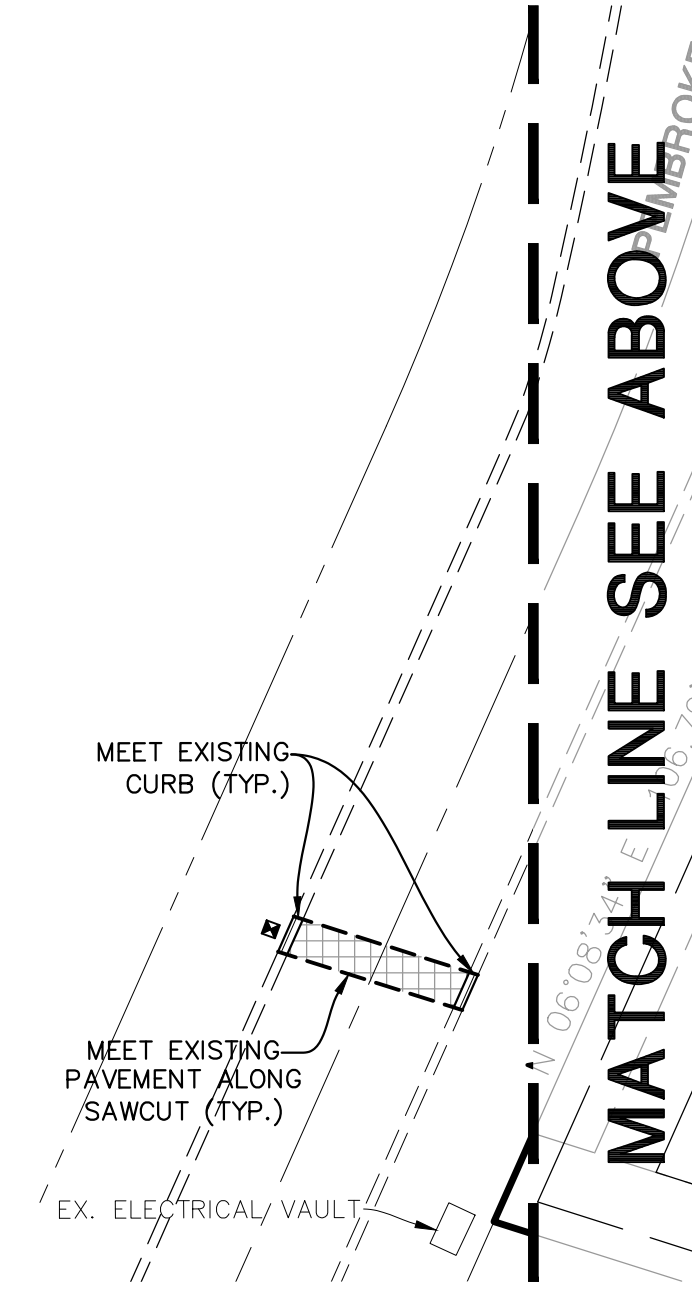


PROPOSED BUILDING
 46,159 S.F. (1st FLOOR)
 4,263 S.F. (MEZZANINE)
 F.F.=757.50
 G.F.=757.00
 DOCK=753.50

PROPOSED WETLAND
 HWL: 752.00
 NWL: 749.75
 BOTTOM: 749.25

MATCH LINE SEE BELOW

MATCH LINE SEE SHEET 5



SITE DATA	
EXISTING ZONING	B1
PROPOSED ZONING	OCI
SITE AREA	7.30 ACRES
FAR	0.15
STANDARD PARKING PROVIDED	220 SPACES
HANDICAP PROVIDED	7 SPACES
TOTAL PARKING PROVIDED	227 SPACES
TOTAL PARKING REQUIRED	227 SPACES (4.5/1000 S.F.)

PAVEMENT MARKING LEGEND	
(A)	4" YELLOW LINE
(B)	LETTERS AND SYMBOLS PAVEMENT MARKINGS
(C)	4" YELLOW DIAGONAL AT 45° SPACED 2' O.C.
(D)	12" WHITE BAR CROSSWALK
(E)	24" WHITE STOP BAR
(F)	6" WHITE LINE
(G)	12" YELLOW DIAGONAL AT 45° SPACED 30' O.C. W/ 4" DOUBLE YELLOW BORDER AT 11" C-C

SIGN LEGEND	
(1)	R1-1 STOP SIGN
(2)	R7-8 HANDICAP PARKING SIGN (ON BOLLARD)
(3)	R3-2 NO LEFT TURN
(4)	R3-5 RIGHT TURN ONLY

PAVEMENT LEGEND	
	STANDARD DUTY PAVEMENT 1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50 2 1/2" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50 8" AGGREGATE BASE COURSE, TYPE B
	HEAVY DUTY PAVEMENT 1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50 3" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50 12" AGGREGATE BASE COURSE, TYPE B
	CONCRETE PAVEMENT 8" PORTLAND CEMENT CONCRETE PAVEMENT W/ 6 X 6 W1.4 WWF 4" COMPACTED AGGREGATE BASE, TYPE B
	CONCRETE SIDEWALK 5" PORTLAND CEMENT CONCRETE 4" COMPACTED AGGREGATE BASE COURSE, TYPE B
	CITY OF NAPERVILLE PAVEMENT REPLACEMENT MATCH EXISTING PAVEMENT SECTION
	DUPAGE COUNTY DOT - EAST CHICAGO AVENUE MATCH EXISTING PAVEMENT SECTION
	ENGINEERED LANDSCAPE GRASS/PAVE2 REFER TO DETAIL ON SHEET 15

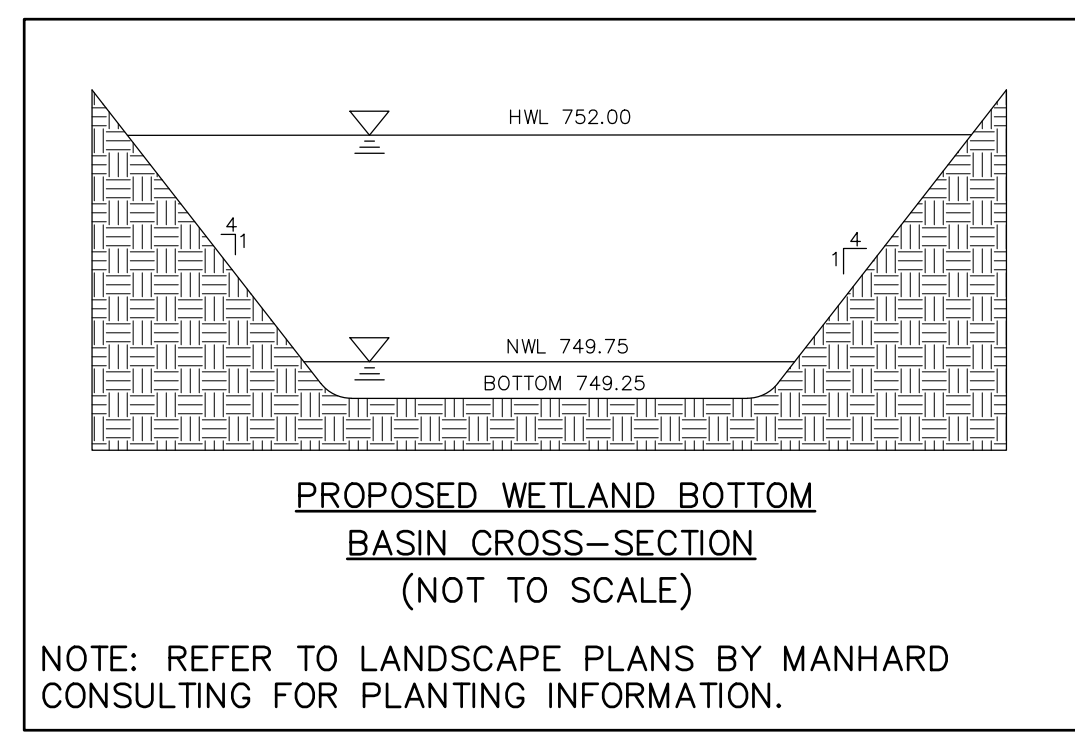
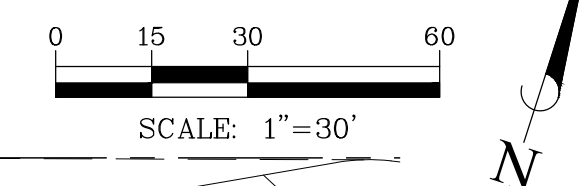
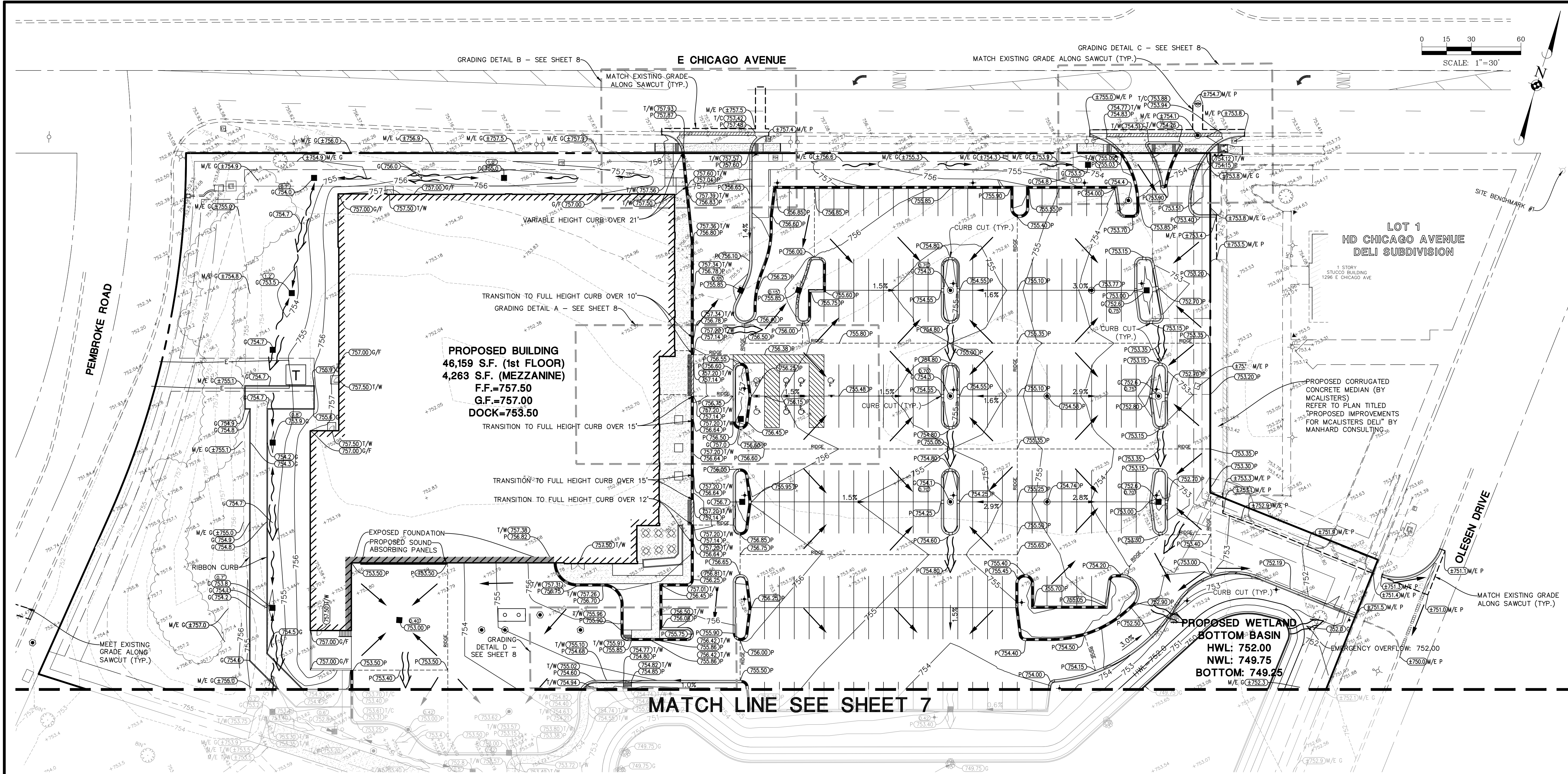
CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF SIDEWALKS, SIDEWALK SCORING, BENCHES, BIKE RACKS, FLAG POLES, ETC., DIMENSIONS OF VESTIBULE, RAMPS AND TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS

- SITE DIMENSIONAL AND PAVING NOTES:**
- ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE.
 - ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED.
 - ALL CURB RADI SHALL BE 3' MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
 - TIE ALL PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH 2-#6 BARS X 18" LONG DOWELED INTO EXISTING CURB.
 - BUILDING DIMENSIONS AND ADJACENT PARKING HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. BUILDING DIMENSIONS SHOWN SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT OF BUILDING.
 - IMPROVEMENTS ADJACENT TO BUILDING, IF SHOWN, SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, AND TRANSFORMERS ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
 - LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAY. CONTRACTOR TO VERIFY ACTUAL BUILDING PLAN LOCATIONS WITH ARCHITECT/DEVELOPER PRIOR TO CONSTRUCTING THE SIDEWALKS.
 - ALL ROADWAY AND PARKING LOT SIGNAGE, STRIPING, SYMBOLS, ETC. SHALL BE IN ACCORDANCE WITH LATEST JURISDICTIONAL GOVERNMENTAL ENTITY DETAILS.
 - SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
 - PROVIDE DEPRESSED CURB AND RAMP AT ALL HANDICAP ACCESSIBLE SIDEWALK AND PATH LOCATIONS PER FEDERAL AND STATE STANDARDS.
 - THE CONTRACTOR SHALL CONTACT J.U.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.

PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 SITE DIMENSIONAL AND PAVING PLAN - NORTH
 FINAL ENGINEERING - NOT FOR CONSTRUCTION

MANHARD CONSULTING
 1296 E. CHICAGO AVE.
 NAPERVILLE, IL 60563
 TEL: 630.241.1100
 WWW.MANHARDCONSULTING.COM

DATE: 08-30-23
 SCALE: 1"=30'
 SHEET: 4 OF 19
 ADK.NVL01



GRADING PLAN LEGEND

	PROPOSED 1 FOOT CONTOURS
	PROPOSED SPOT ELEVATION
	PROPOSED FINISHED FLOOR ELEVATION
	PROPOSED GRADE AT FOUNDATION
	PROPOSED PAVEMENT ELEVATION
	PROPOSED TOP OF CURB
	PROPOSED TOP OF WALK
	PROPOSED TOP OF WALL
	MEET EXISTING
	PROPOSED GROUND GRADE OR GROUND AT BASE OF RETAINING WALL
	PROPOSED DITCH OR SWALE
	PROPOSED DIRECTION OF FLOW
	PROPOSED RELIEF SWALE
	OVERFLOW RIDGE SWALE
	PROPOSED RIDGE LINE
	PROPOSED DEPTH OF PONDING
	RETAINING WALL
	PROPOSED SWALE LOW POINT
	PROPOSED SWALE SUMMIT

Manhard CONSULTING
 1 STORY STUDIO BUILDING
 1296 E CHICAGO AVE
 NAPERVILLE, IL 60563
 (630) 251-1000
 www.manhardconsulting.com

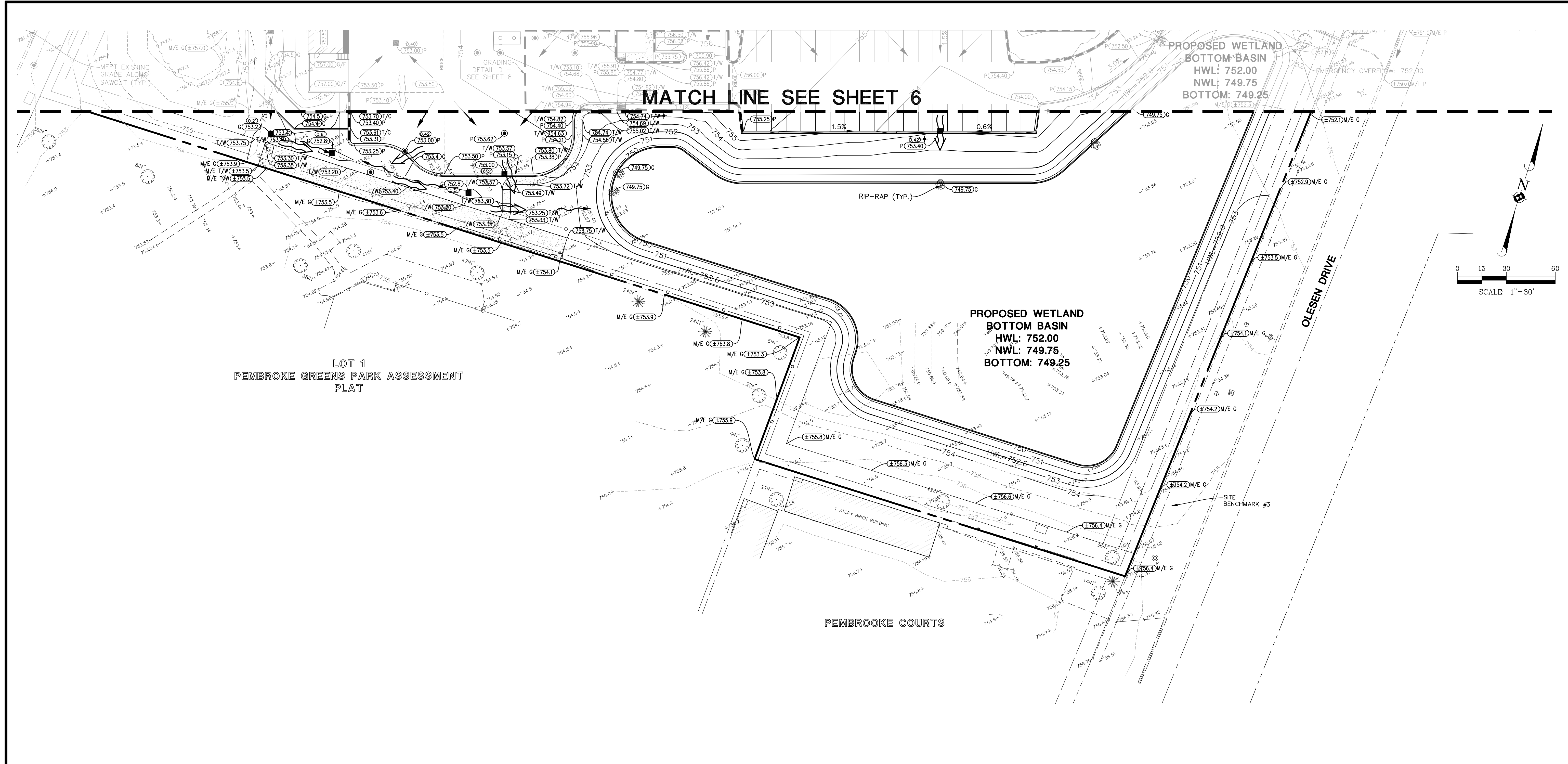
PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 GRADING PLAN - NORTH
 FINAL ENGINEERING - NOT FOR CONSTRUCTION

DATE: 08-30-23
 SCALE: 1"=30'
 SHEET 6 OF 19
 ADK.NVL01

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: EJB
 DATE: 08-30-23
 SCALE: 1"=30'

REVISIONS:

NO.	DATE	DESCRIPTION
01	08-02-24	REVISED PER CITY OF NAPERVILLE REVIEW #6
02	08-03-24	REVISED PER DUDOT REVIEW #2
03	08-03-24	REVISED PER DUDOT REVIEW #3
04	08-03-24	REVISED PER DUDOT REVIEW #4
05	08-03-24	REVISED PER DUDOT REVIEW #5
06	08-03-24	REVISED PER CITY OF NAPERVILLE REVIEW #1
07	08-03-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
08	08-03-24	REVISED PER CITY OF NAPERVILLE REVIEW #3
09	08-03-24	REVISED PER CITY OF NAPERVILLE REVIEW #4
10	08-03-24	REVISED PER CITY OF NAPERVILLE REVIEW #5



MATCH LINE SEE SHEET 6

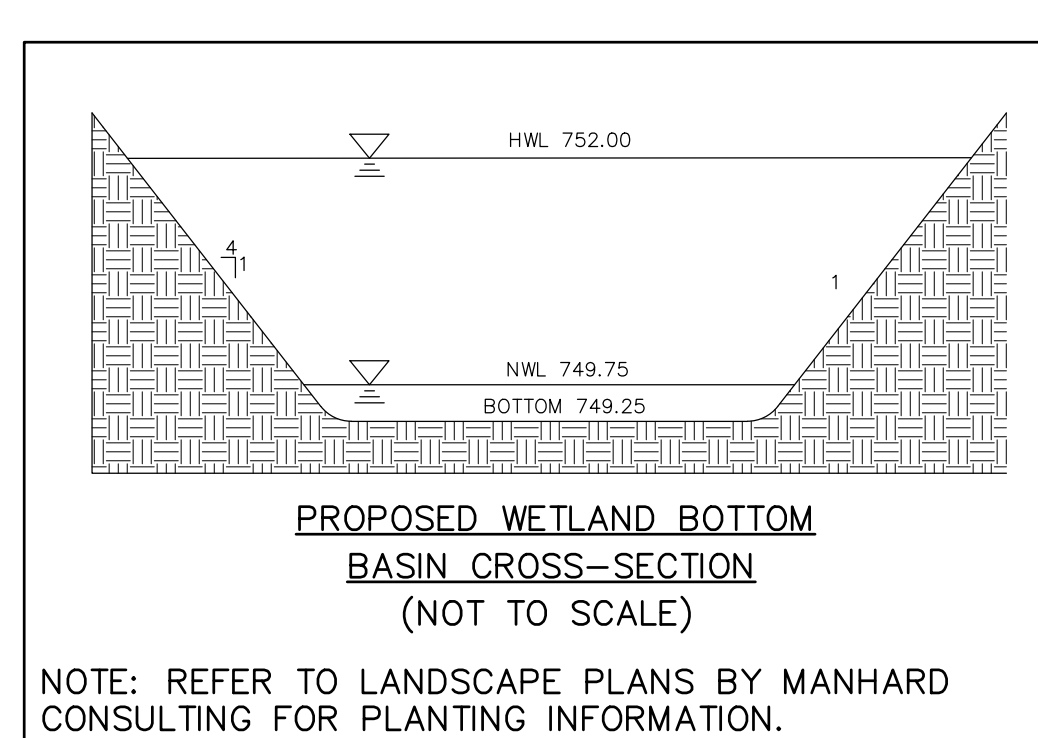
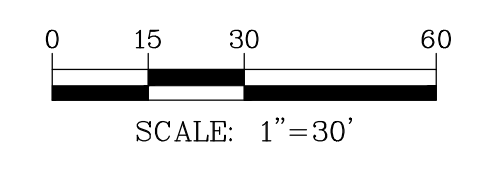
PROPOSED WETLAND
BOTTOM BASIN
HWL: 752.00
NWL: 749.75
BOTTOM: 749.25

PROPOSED WETLAND
BOTTOM BASIN
HWL: 752.00
NWL: 749.75
BOTTOM: 749.25

LOT 1
PEMBROKE GREENS PARK ASSESSMENT
PLAT

PEMBROKE COURTS

OLESEN DRIVE



NOTE: REFER TO LANDSCAPE PLANS BY MANHARD CONSULTING FOR PLANTING INFORMATION.

GRADING PLAN LEGEND	
	PROPOSED 1 FOOT CONTOURS
	PROPOSED SPOT ELEVATION
	PROPOSED FINISHED FLOOR ELEVATION
	PROPOSED GRADE AT FOUNDATION
	PROPOSED PAVEMENT ELEVATION
	PROPOSED TOP OF CURB
	PROPOSED TOP OF WALK
	PROPOSED TOP OF WALL
	MEET EXISTING
	PROPOSED GROUND GRADE OR GROUND AT BASE OF RETAINING WALL
	PROPOSED DITCH OR SWALE
	PROPOSED DIRECTION OF FLOW
	OVERFLOW RELIEF SWALE
	PROPOSED RIDGE LINE
	PROPOSED DEPTH OF PONDING
	RETAINING WALL
	PROPOSED SWALE LOW POINT
	PROPOSED SWALE SUMMIT

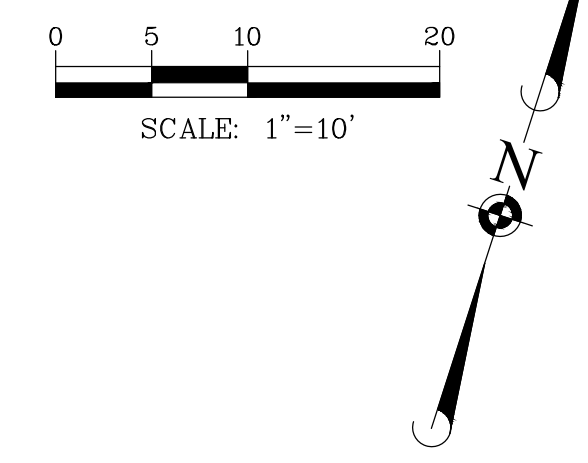
- GRADING NOTES:**
- PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
 - ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
 - MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
 - CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
 - THE CONTRACTOR SHALL CONTACT JULLIE, (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
 - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
 - ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
 - EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY MANHARD CONSULTING LTD. ON JANUARY 19, 2023. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
 - TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V AT CURBS AND 3H:1V AT SIDEWALKS PER CITY OF NAPERVILLE DETAIL UNLESS OTHERWISE NOTED.

DATE	REVISIONS
08-16-24	REVISED PER CITY OF NAPERVILLE REVIEW #1/4
03-09-24	REVISED PER DUDOT REVIEW
03-12-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW

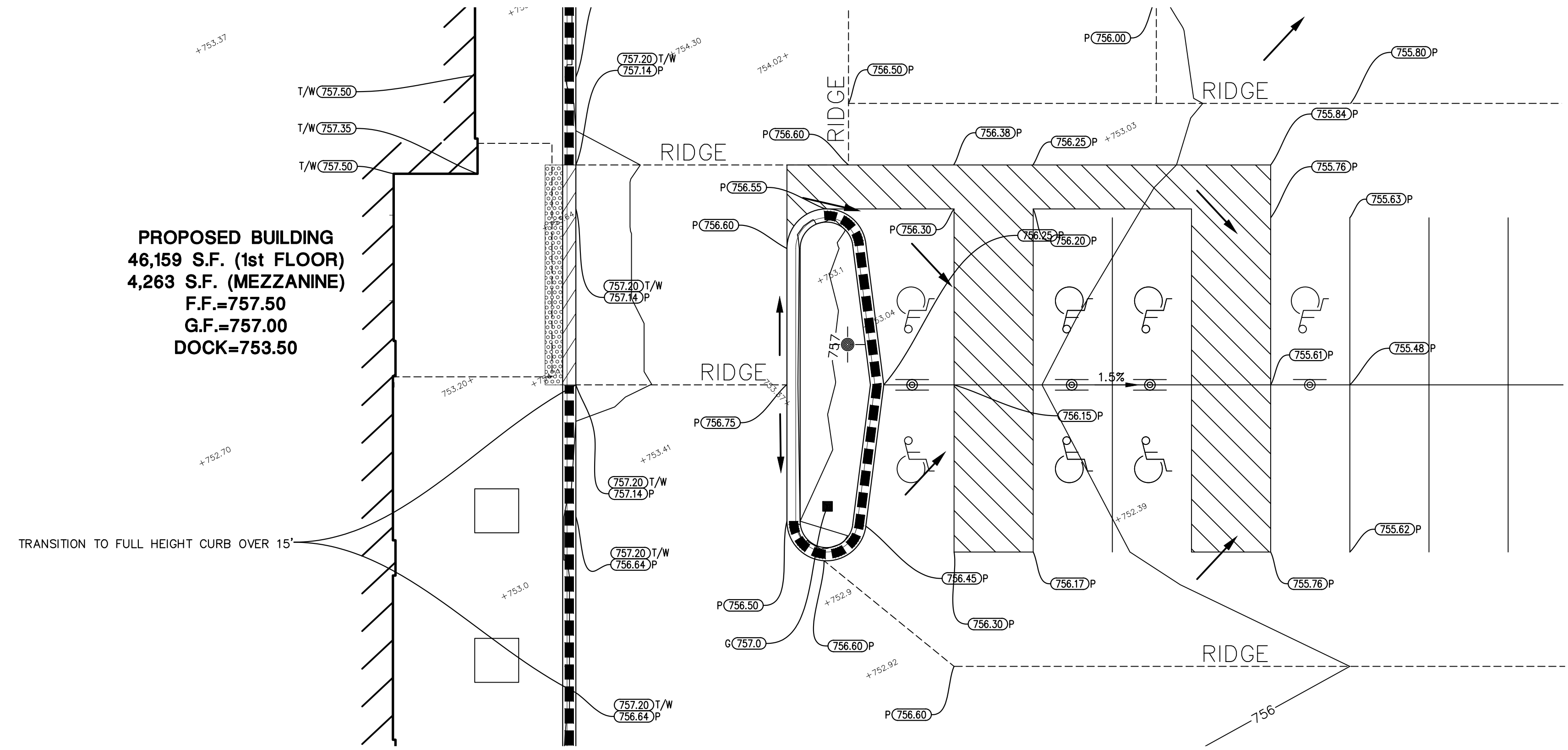
Manhard CONSULTING
 1100 West Park Drive, Suite 200, Naperville, IL 60563
 (630) 355-1100
 Civil Engineers • Surveyors • Water Resource Engineers • Wetland & Wetland-Related Engineers • Planners
 Construction Managers • Environmental Scientists • Landscape Architects

PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 GRADING PLAN - SOUTH

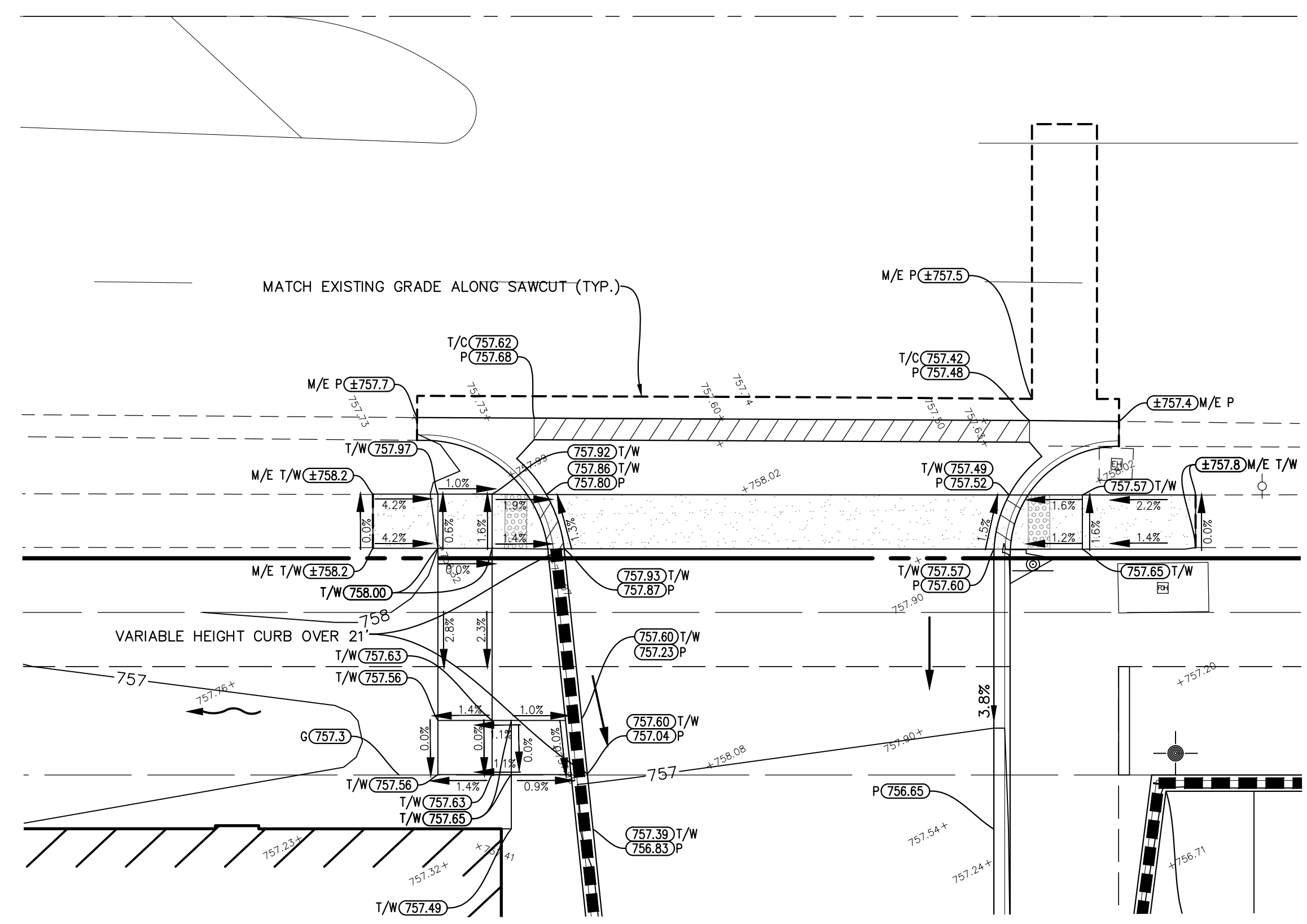
PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: JAW
 DATE: 08-30-23
 SCALE: 1"=30'
 SHEET
7 OF 19
 ADK.NVIL01



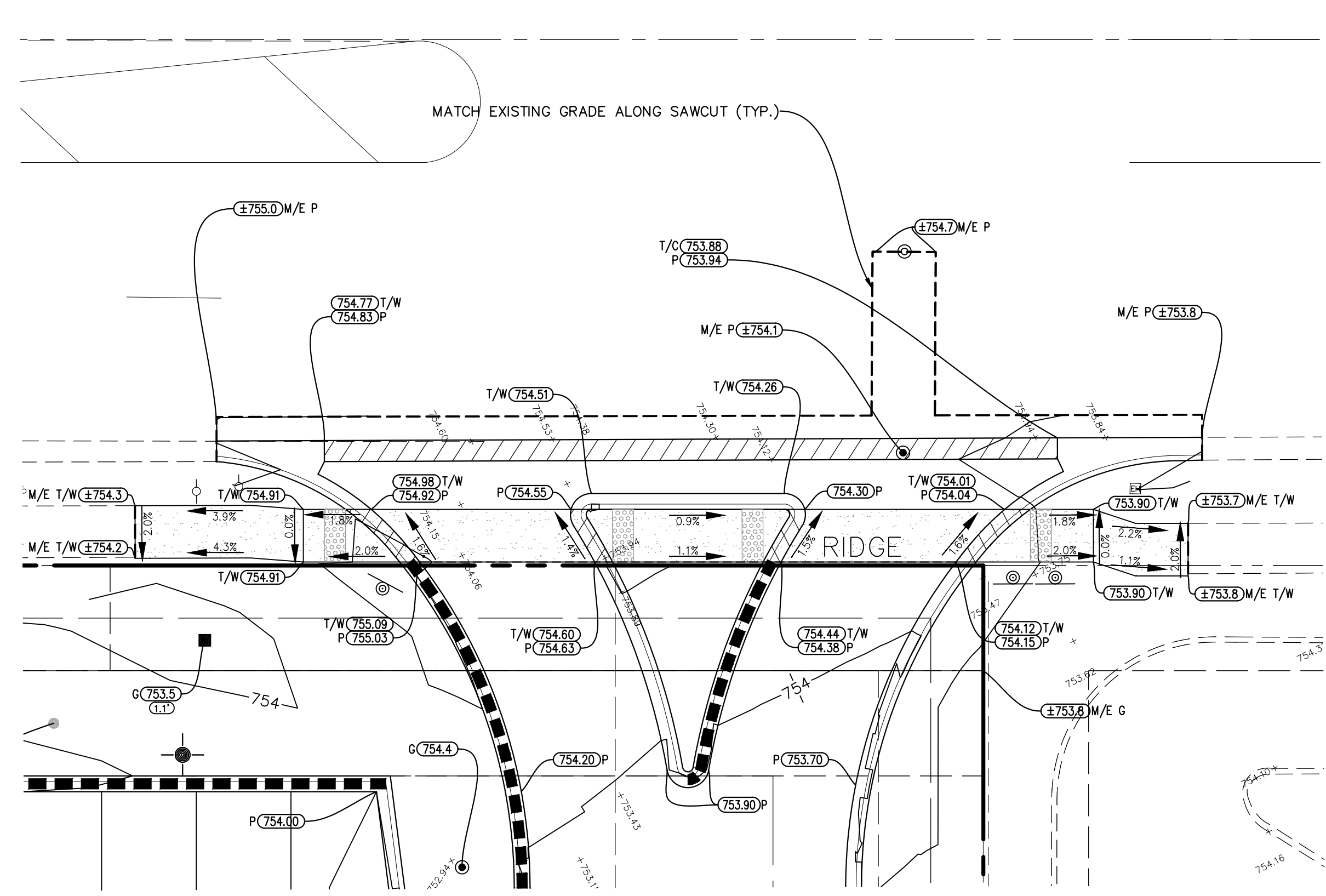
GRADING DETAIL A



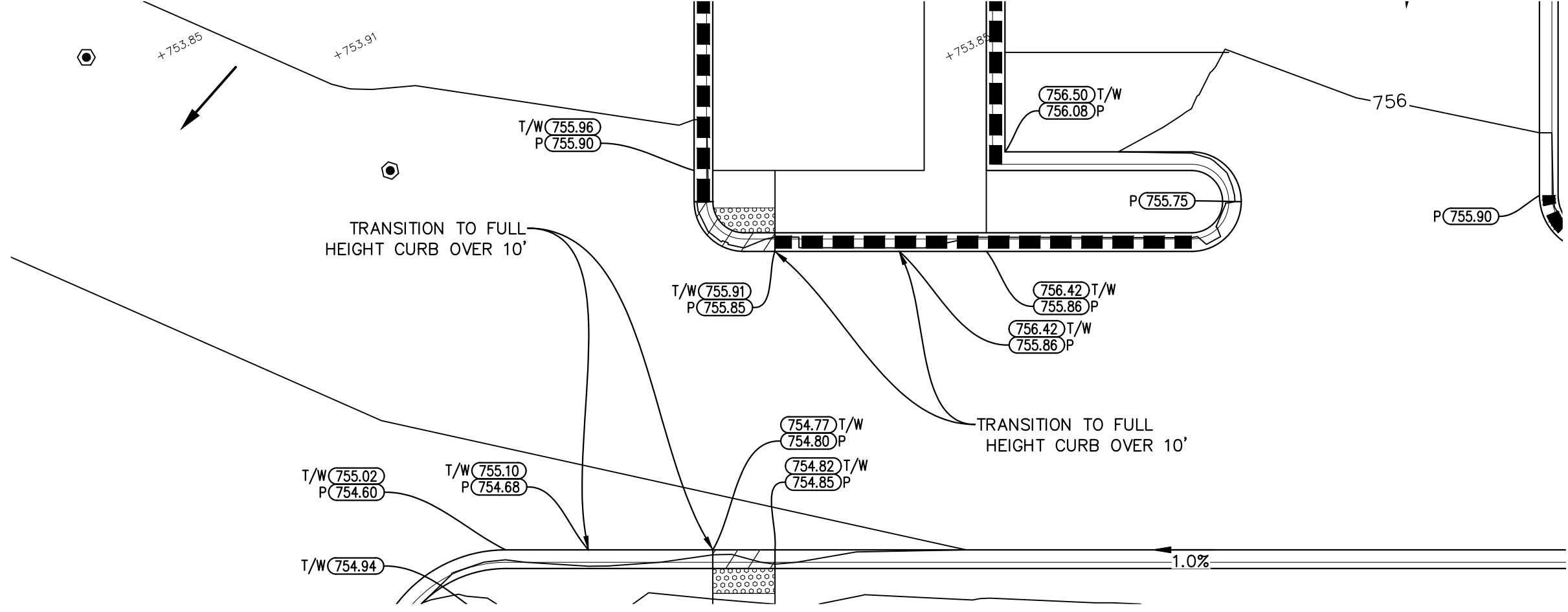
GRADING DETAIL B



GRADING DETAIL C



GRADING DETAIL D



DATE	REVISIONS
08-02-24	REVISED PER CITY OF NAPERVILLE REVIEW #6
07-03-24	REVISED PER DUDOT REVIEW #7
03-09-24	REVISED PER DUDOT REVIEW #7/4
03-09-24	REVISED PER DUDOT REVIEW #7
03-12-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW #2

Manhard CONSULTING

1100 West Lake Street, Suite 200, Naperville, IL 60563
 Phone: 630.335.1100
 Fax: 630.335.1101
 Email: info@manhardconsulting.com

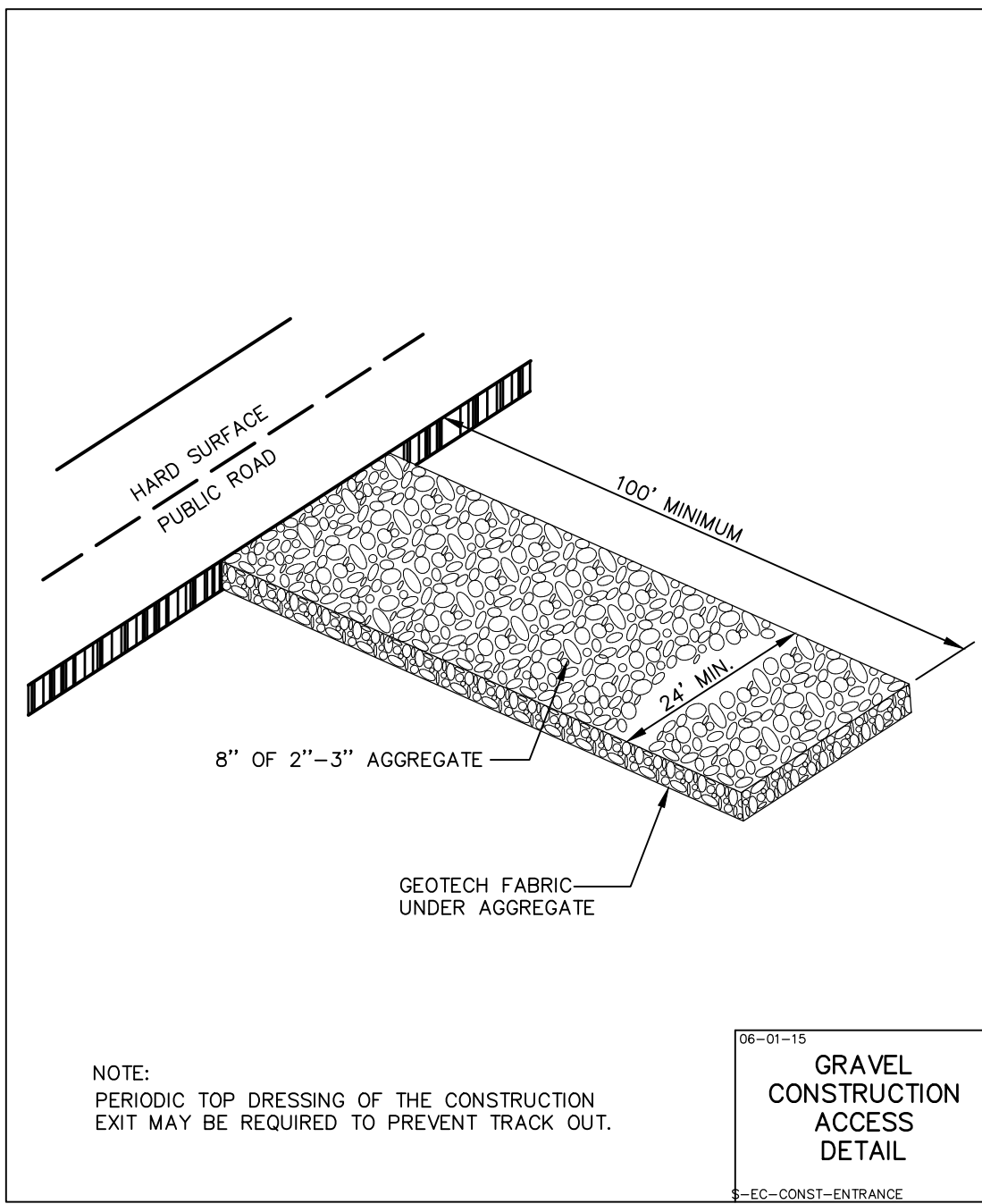
Professional Engineers • Surveyors • Wetland Planners • Environmental Scientists • Landscape Architects • Planners
 Construction Managers • Environmental Scientists • Landscape Architects • Planners

PROPOSED HEINEN'S GROCERY STORE
CITY OF NAPERVILLE, ILLINOIS
GRADING DETAIL PLAN

PROJ. MGR.	MDE
PROJ. ASSOC.	JRM
DRAWN BY	EJB
DATE	08-30-23
SCALE	1"=10'
SHEET	8 OF 19
ADK.N.VI.01	

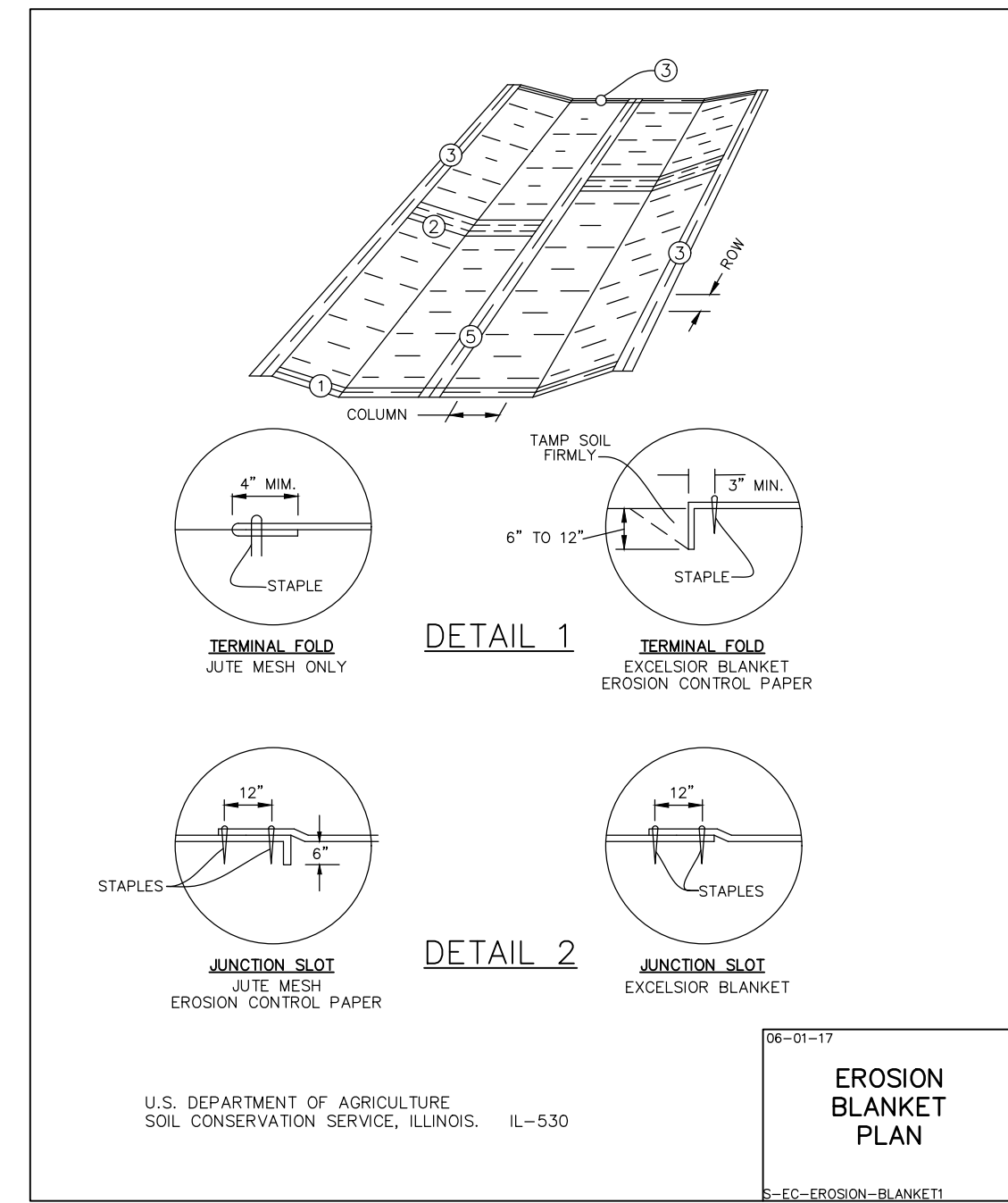
August 2, 2024 - 11:37 Des Name: E:\naperville\Manhard\Drawings\Plan Set\GRADING.dwg Updated By: JMiller

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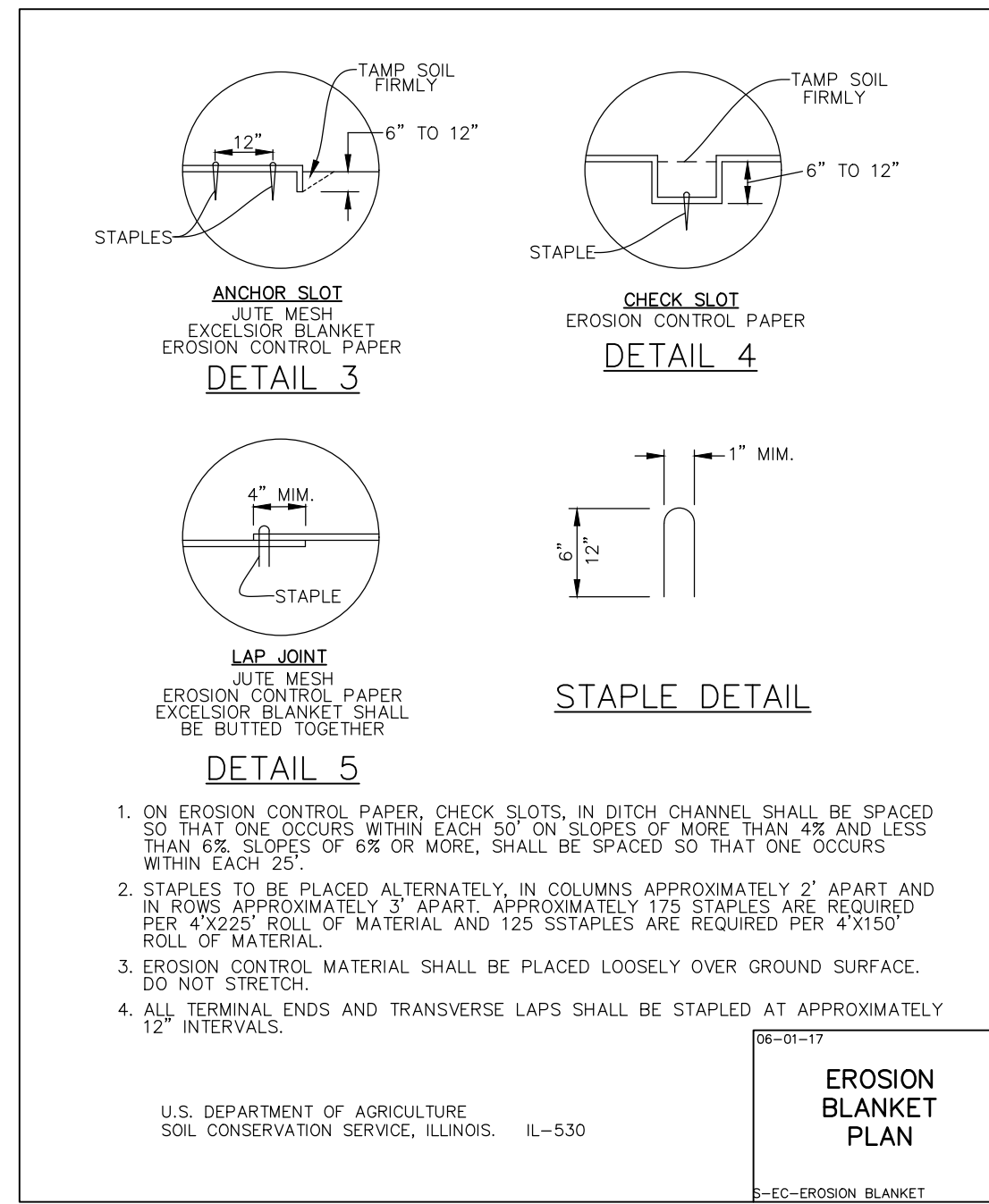
NOTE:
PERIODIC TOP DRESSING OF THE CONSTRUCTION
EXIT MAY BE REQUIRED TO PREVENT TRACK OUT.

06-01-15
GRAVEL
CONSTRUCTION
ACCESS
DETAIL
11-EC-CONST-ENTRANCE



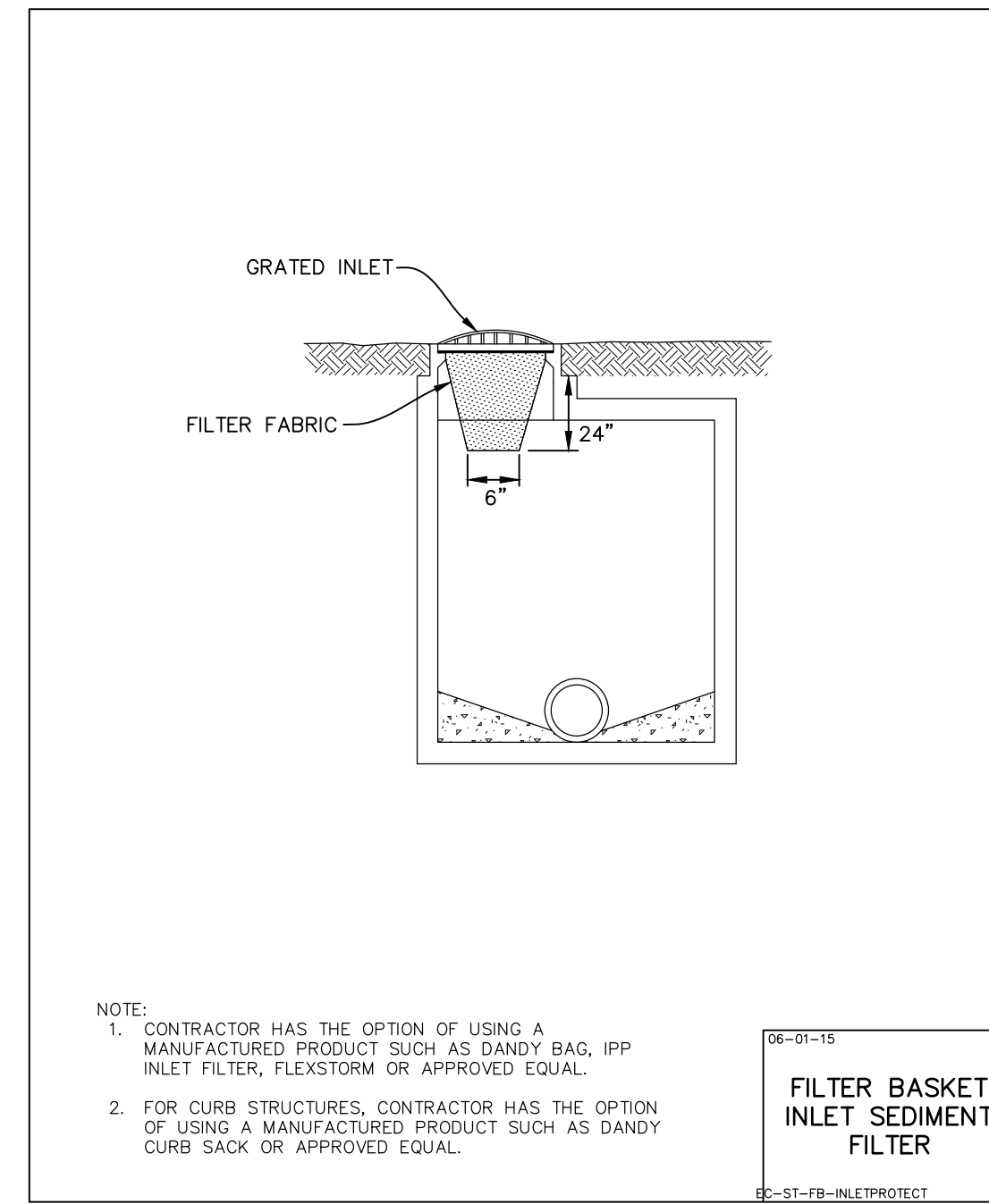
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE, ILLINOIS IL-530

06-01-17
EROSION
BLANKET
PLAN
11-EC-EROSION-BLANKET1



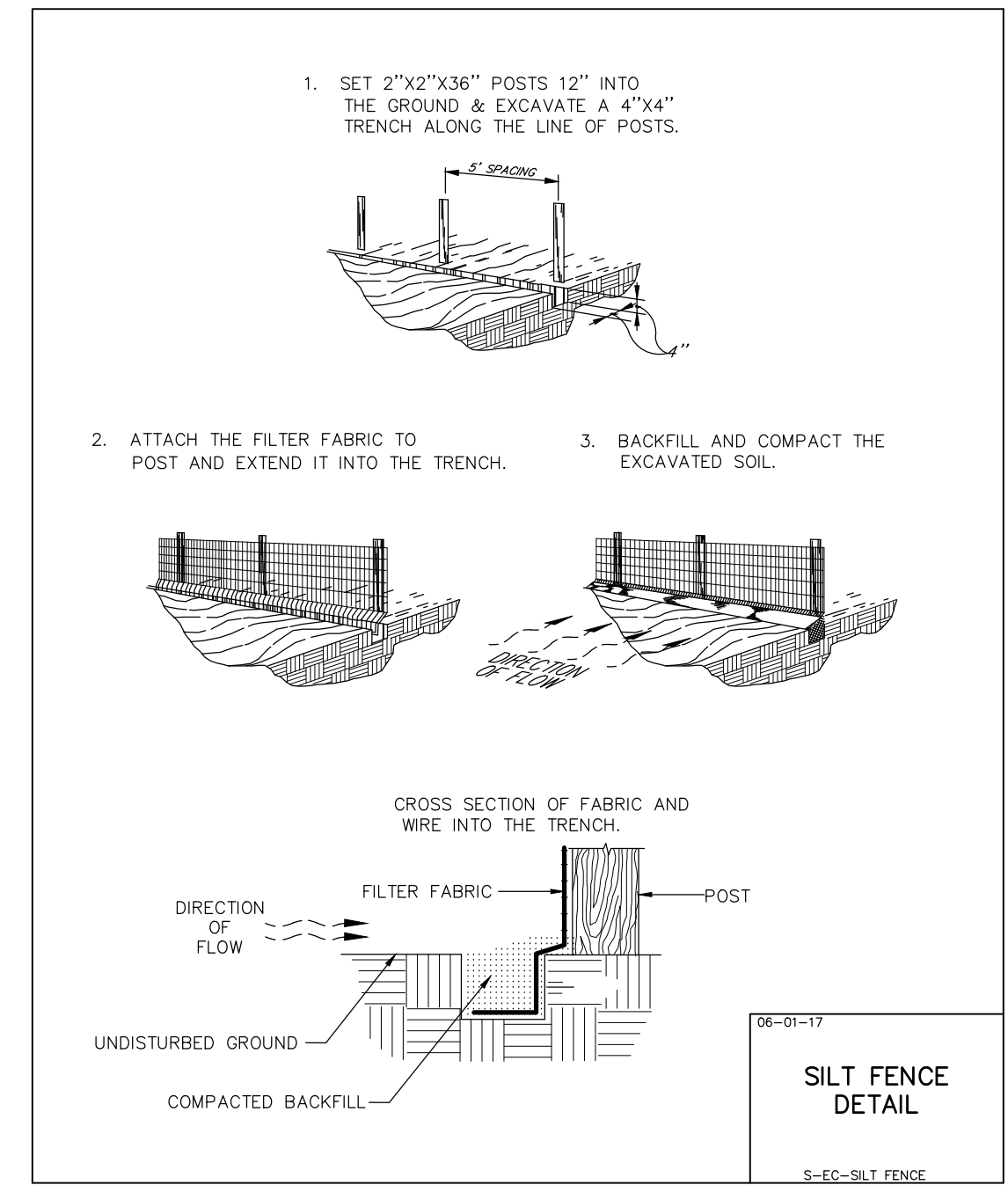
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE, ILLINOIS IL-530

06-01-17
EROSION
BLANKET
PLAN
11-EC-EROSION-BLANKET



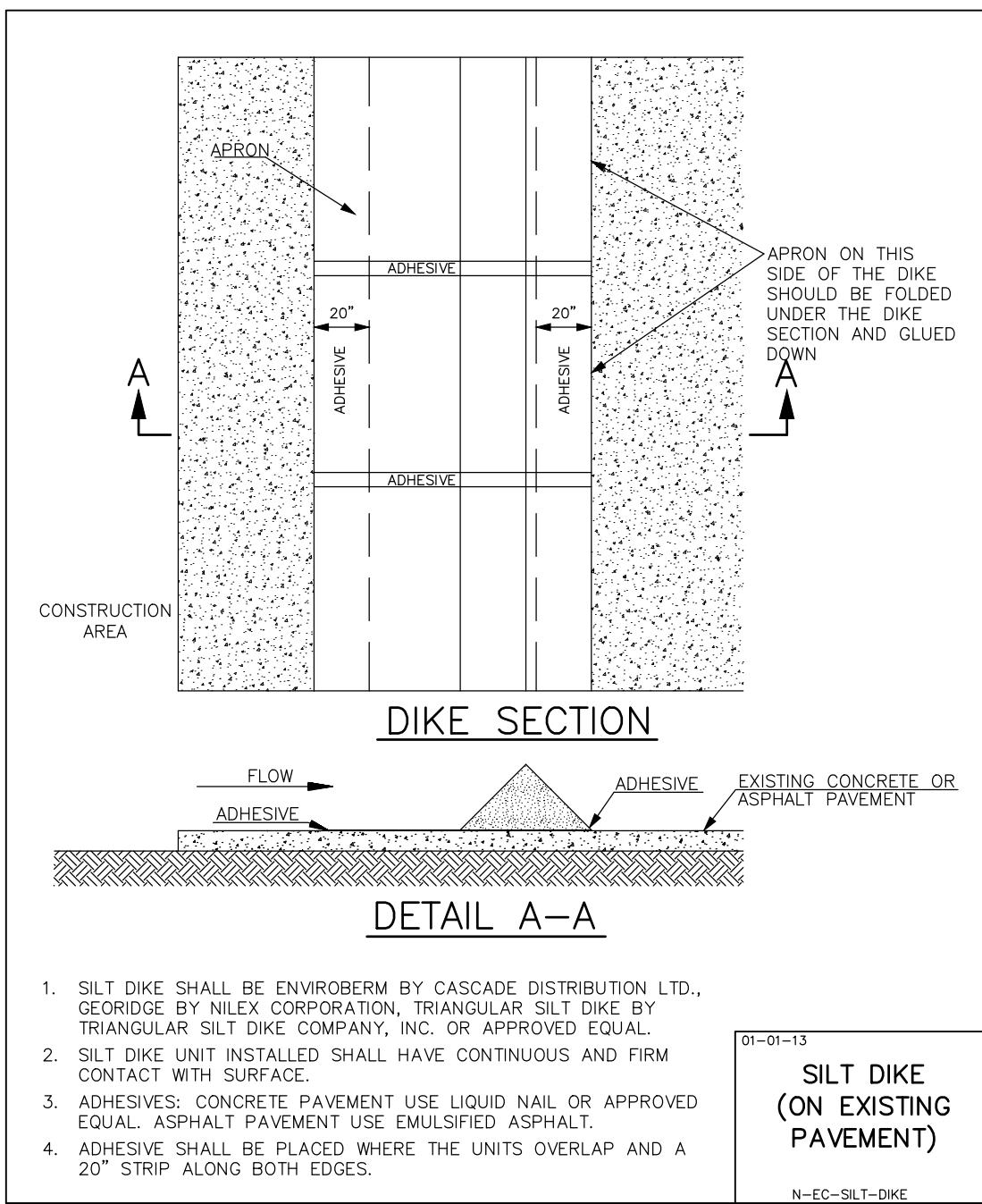
NOTE:
1. CONTRACTOR HAS THE OPTION OF USING A
MANUFACTURED PRODUCT SUCH AS DANDY BAG, IPP
INLET FILTER, FLEXSTORM OR APPROVED EQUAL.
2. FOR CURB STRUCTURES, CONTRACTOR HAS THE OPTION
OF USING A MANUFACTURED PRODUCT SUCH AS DANDY
CURB SACK OR APPROVED EQUAL.

06-01-15
FILTER BASKET
INLET SEDIMENT
FILTER
11-EC-ST-FB-INLETPROTECT



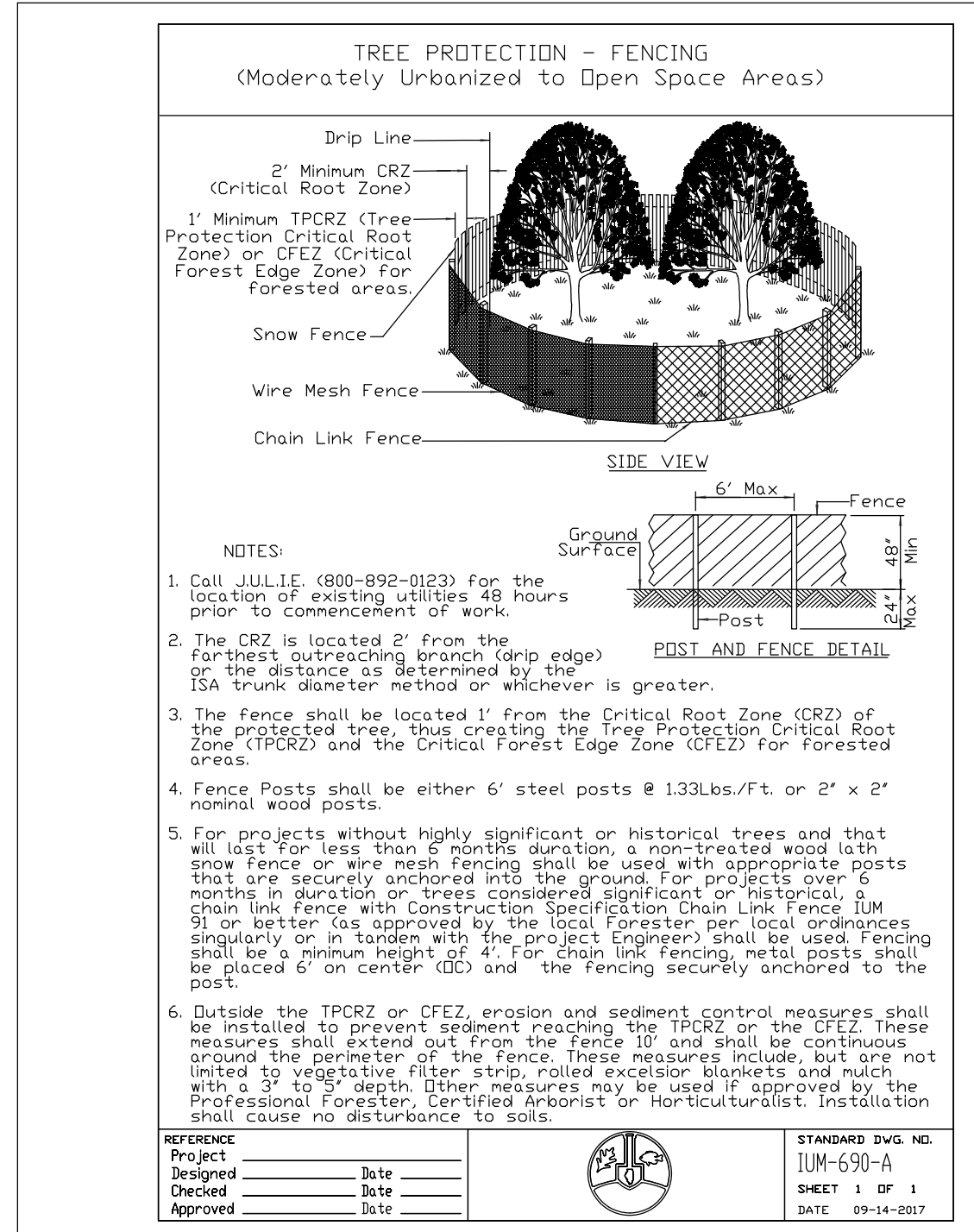
CROSS SECTION OF FABRIC AND
WIRE INTO THE TRENCH.

06-01-17
SILT FENCE
DETAIL
11-EC-SILT-FENCE



1. SILT DIKE SHALL BE ENVIROBERM BY CASCADE DISTRIBUTION LTD.,
GEORGE BY NILEX CORPORATION, TRIANGULAR SILT DIKE BY
TRIANGULAR SILT DIKE COMPANY, INC. OR APPROVED EQUAL.
2. SILT DIKE UNIT INSTALLED SHALL HAVE CONTINUOUS AND FIRM
CONTACT WITH SURFACE.
3. ADHESIVES: CONCRETE PAVEMENT USE LIQUID NAIL OR APPROVED
EQUAL; ASPHALT PAVEMENT USE EMULSIFIED ASPHALT.
4. ADHESIVE SHALL BE PLACED WHERE THE UNITS OVERLAP AND A
20\"/>

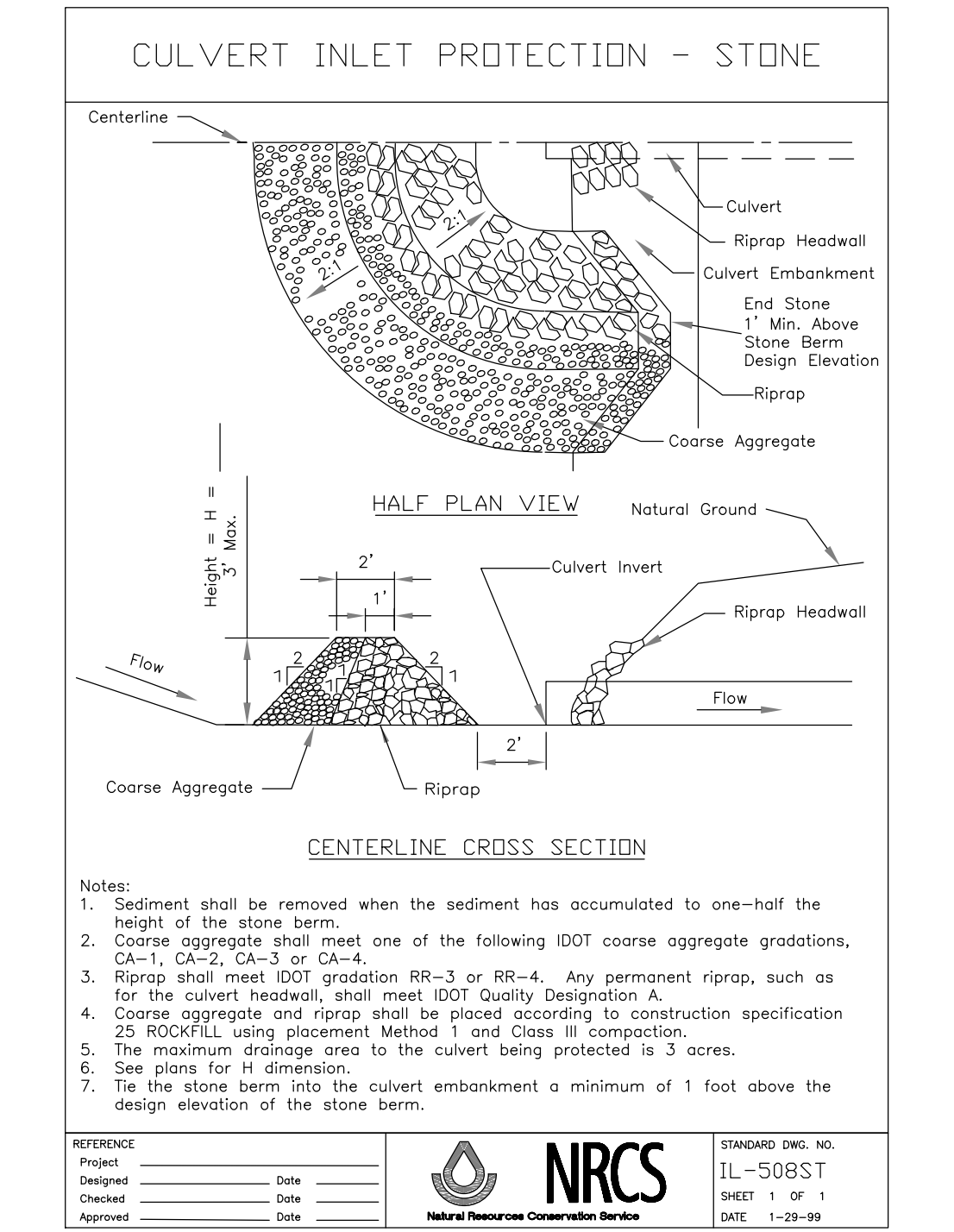
08-01-13
SILT DIKE
(ON EXISTING
PAVEMENT)
11-EC-SILT-DIKE



NOTES:
1. Call JULIE (800-892-0123) for the
location of existing utilities 48 hours
prior to commencement of work.
2. The CRZ is located 2' from the
farthest overhanging branch (drip edge)
or the distance as determined by the
ISA trunk diameter method or whichever is greater.
3. The fence shall be located 1' from the Critical Root Zone (CRZ) of the
protected tree, thus creating the Tree Protection Critical Root
Zone (TPCRZ) and the Critical Forest Edge Zone (CFEZ) for forested
areas.
4. Fence Posts shall be either 6' steel posts @ 133Lbs./ft. or 2' x 2'
nominal wood posts.
5. For projects without highly significant or historical trees and that
will last for less than 6 months duration, a non-treated wood lathe
snow fence or wire mesh fencing shall be used with appropriate posts
that are securely anchored into the ground. For projects over 6
months in duration or trees considered significant or historical, a
chain link fence with Construction Specification Chain Link fence
31.01 or better (as approved by the local forester per local ordinances
singularity or in tandem with the project engineer) shall be used. Fencing
shall be a minimum height of 4'. For chain link fencing, metal posts shall
be placed 6' on center (OC) and the fencing securely anchored to the
post.
6. Outside the TPCRZ or CFZE, erosion and sediment control measures shall
be installed to prevent sediment reaching the TPCRZ or the CFZE. These
measures shall extend out from the fence 10' and shall be continuous
around the perimeter of the fence. These measures include, but are not
limited to vegetative filter strips, rolled excelsior blankets and mulch
with a 6' to 12' depth. Other measures may be used if approved by the
Professional Forester, Certified Arborist or Horticulturalist. Installation
shall cause no disturbance to soil.

REFERENCE
Project: _____ Date: _____
Designed: _____ Date: _____
Checked: _____ Date: _____
Approved: _____ Date: _____

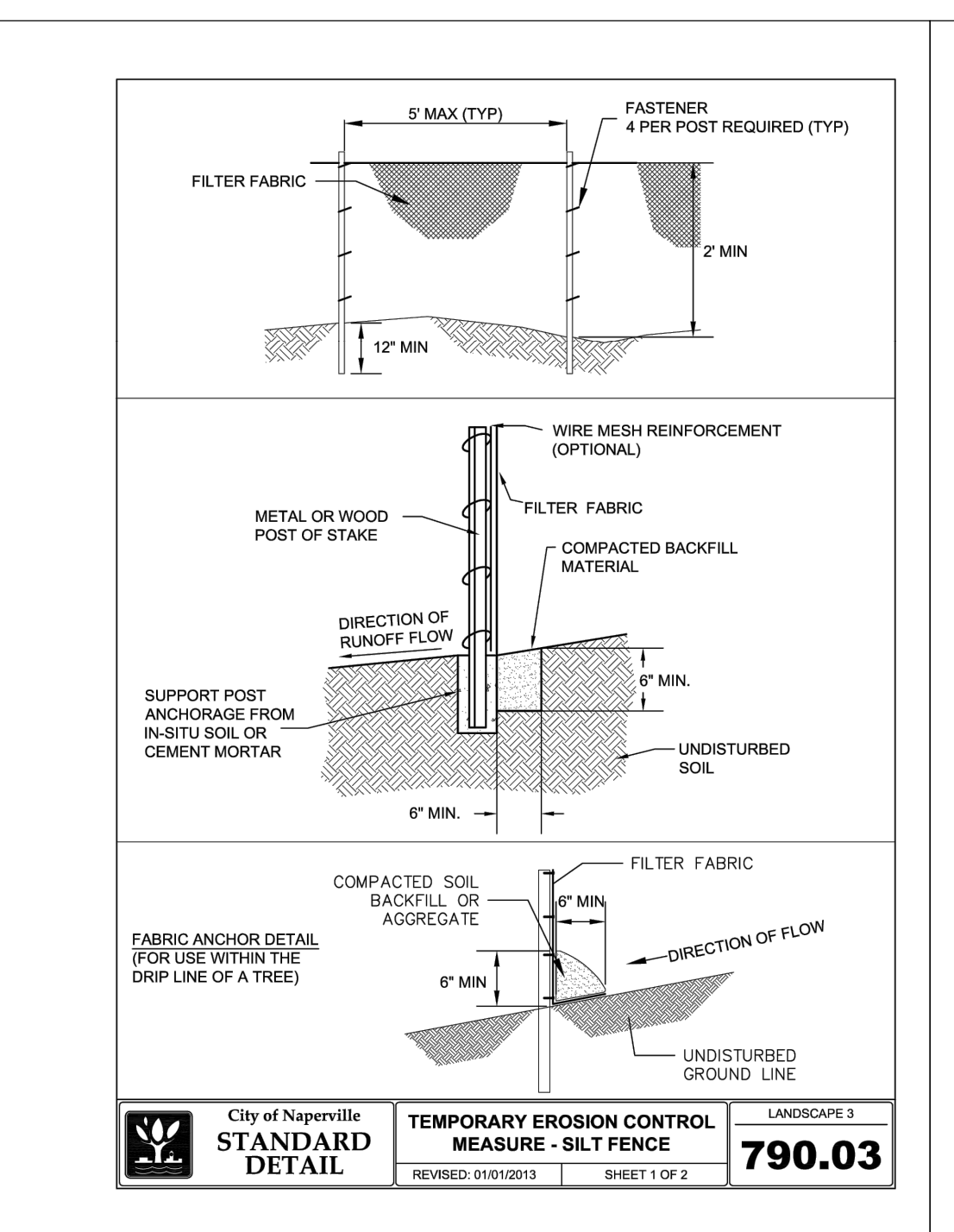
STANDARD DWG. NO.
ILUM-690-A
SHEET 1 OF 1
DATE: 09-14-02



Notes:
1. Sediment shall be removed when the sediment has accumulated to one-half the
height of the stone berm.
2. Coarse aggregate shall meet one of the following IDOT coarse aggregate gradations,
CA-1, CA-2, CA-3 or CA-4.
3. Riprap shall meet IDOT gradation RR-3 or RR-4. Any permanent riprap, such as
for the culvert headwall, shall meet IDOT Quality Designation A.
4. Coarse aggregate and riprap shall be placed according to construction specification
25 ROCKFILL using placement Method 1 and Class III compaction.
5. The maximum drainage area to the culvert being protected is 3 acres.
6. See plans for H dimension.
7. Tie the stone berm into the culvert embankment a minimum of 1 foot above the
design elevation of the stone berm.

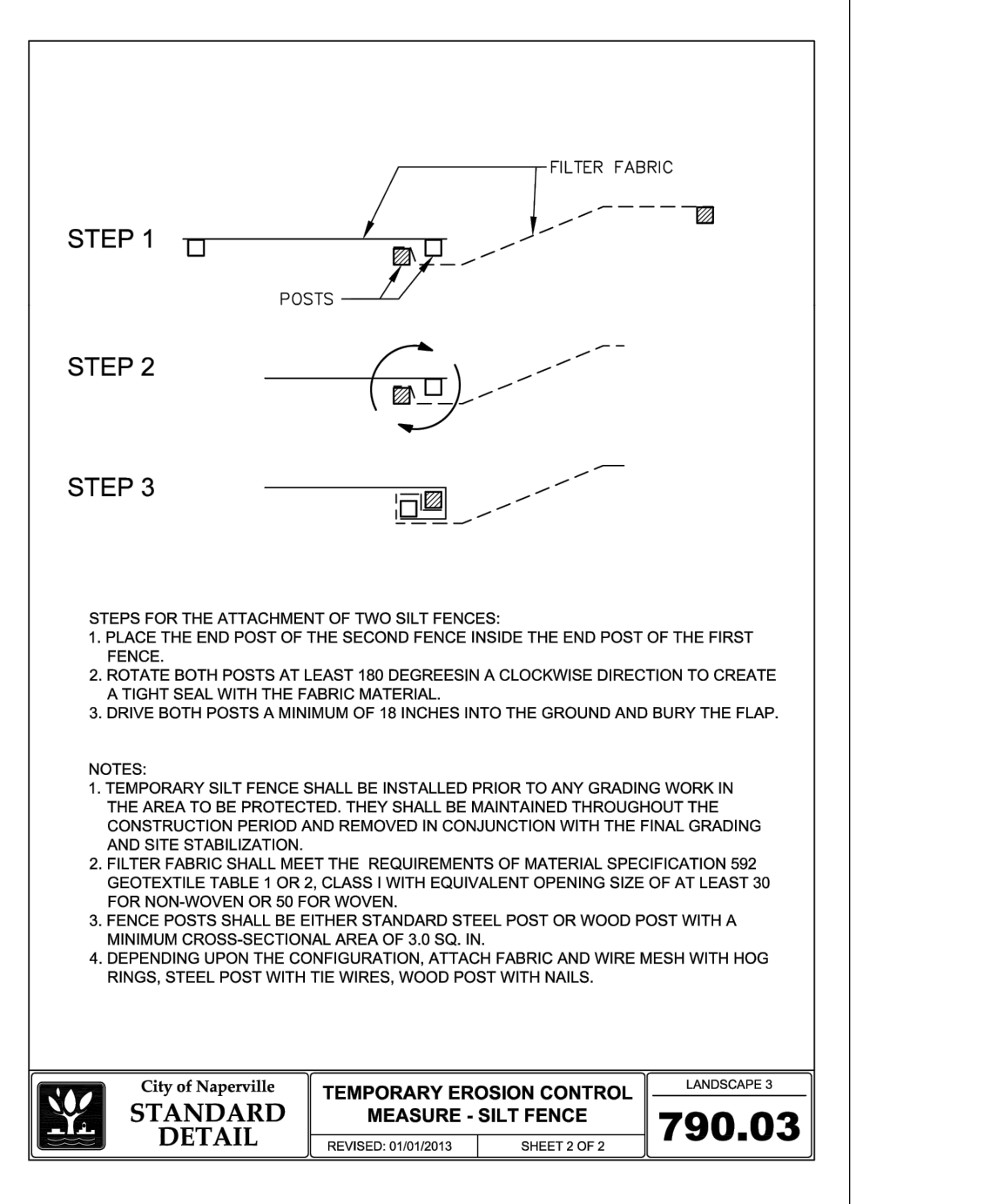
REFERENCE
Project: _____ Date: _____
Designed: _____ Date: _____
Checked: _____ Date: _____
Approved: _____ Date: _____

STANDARD DWG. NO.
IL-508ST
SHEET 1 OF 1
DATE: 11-29-99



City of Naperville
STANDARD
DETAIL
TEMPORARY EROSION CONTROL
MEASURE - SILT FENCE
REVISED: 01/01/2013 SHEET 1 OF 2

LANDSCAPE 3
790.03



NOTES:
1. TEMPORARY SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN
THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE
CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING
AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592
GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30
FOR NONWOVEN OR 50 FOR WOVEN.
3. FENCE POSTS SHALL BE EITHER STANDARD STEEL POST OR WOOD POST WITH A
MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.
4. DEPENDING UPON THE CONFIGURATION, ATTACH FABRIC AND WIRE MESH WITH HOG
RINGS, STEEL POST WITH THE WIRES, WOOD POST WITH NAILS.

City of Naperville
STANDARD
DETAIL
TEMPORARY EROSION CONTROL
MEASURE - SILT FENCE
REVISED: 01/01/2013 SHEET 2 OF 2

LANDSCAPE 3
790.03

SHOULD A CONFLICT ARISE BETWEEN MANHARD
DETAILS AND THE CITY DETAILS, THE CITY
DETAILS SHALL TAKE PRECEDENCE.

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PROPOSED HEINEN'S GROCERY STORE
CITY OF NAPERVILLE, ILLINOIS
SOIL EROSION AND SEDIMENT CONTROL - DETAILS
FINAL ENGINEERING - NOT FOR CONSTRUCTION

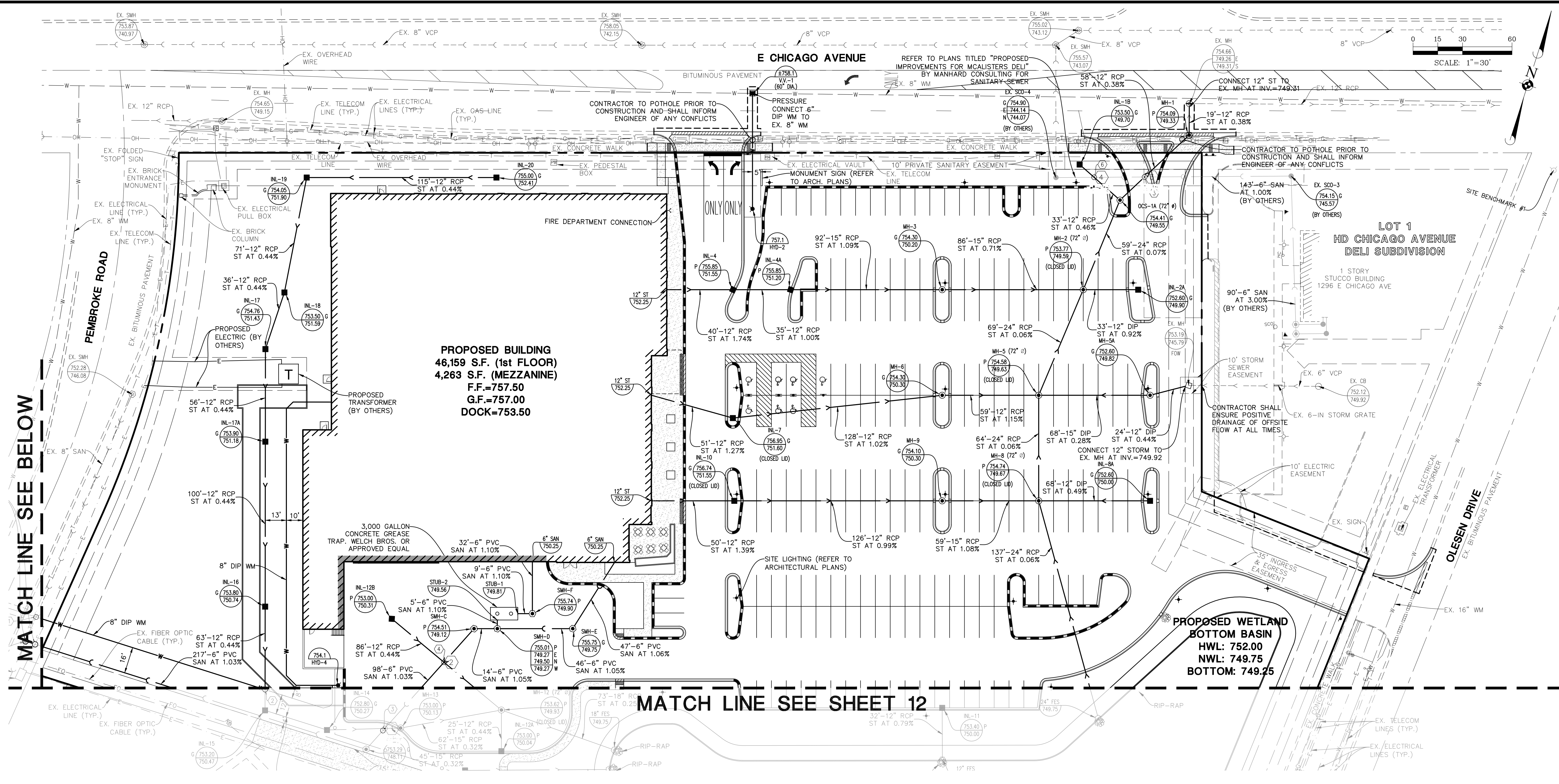
PROJ. MGR.: MDE
PROJ. ASSOC.: JRM
DRAWN BY: JAW
DATE: 08-30-23
SCALE: N.T.S.
SHEET
10 OF 19
ADK.NVL01

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630.633.8800
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Construction Managers • Environmental Scientists • Landscape Architects • Planners

REVISIONS
DATE
DESCRIPTION

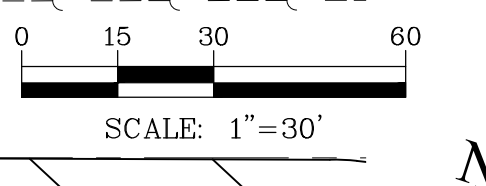
03-09-24 REVISED PER DUOT REVIEW M.J.H.
03-12-24 REVISED PER CITY OF NAPERVILLE REVIEW #2 M.J.H.
02-09-24 REVISED PER CITY OF NAPERVILLE REVIEW M.J.H.

August 1, 2024 - 14:29 Desi Name: E:\naperville\1100 W. WASHINGTON ST. Final Drawings\Plan Set\SS&SC.dwg Uploaded By: JMiller



PROPOSED BUILDING
 46,159 S.F. (1st FLOOR)
 4,263 S.F. (MEZZANINE)
 F.F.=757.50
 G.F.=757.00
 DOCK=753.50

PROPOSED WETLAND
 HWL: 752.00
 NWL: 749.75
 BOTTOM: 749.25



DATE	REVISIONS
08-02-24	REVISED PER CITY OF NAPERVILLE REVIEW #6
07-03-24	REVISED PER DUDOT REVIEW #7
03-09-24	REVISED PER DUDOT REVIEW #3/14
03-09-24	REVISED PER DUDOT REVIEW #4
03-12-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW #1

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 TEL: 630.633.1100 FAX: 630.633.1101
 WWW.MANHARDCONSULTING.COM
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PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 UTILITY PLAN - NORTH

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: JAW
 DATE: 08-30-23
 SCALE: 1"=30'
 SHEET
11 OF 19
 ADK.NVL01

DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC GENERAL NOTES:

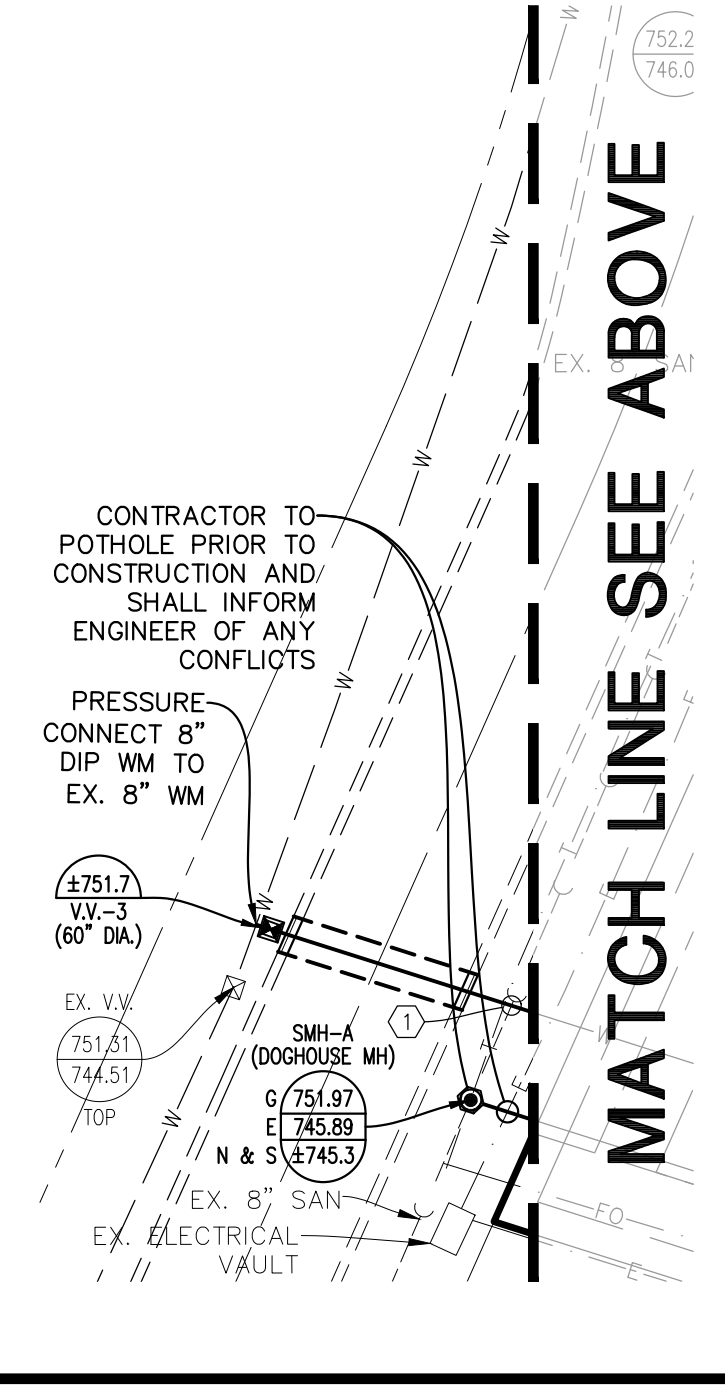
- THE DEVELOPER SHALL SUPPLY THE DPU-E ENGINEER WITH CATALOG CUTS FOR ALL CT/METER EQUIPMENT (INCLUDING BUT NOT LIMITED TO METER SOCKETS, PT CABINET, CT CABINET, DISCONNECT CABINET) AND TRANSFORMER PAD/VAULT. THE CATALOG CUTS SHALL BE APPROVED BY DPU-E PRIOR TO PURCHASING.
- THE CT/METER CABINET SHALL BE TOP FED.
- CT/METER EQUIPMENT ARE LONG LEAD TIME ITEMS AND DPU-E SHALL NOT BE HELD RESPONSIBLE FOR DELAYS RESULTING FROM NON-COMPLIANT CT/METER EQUIPMENT.
- PLEASE PROVIDE NAME AND CONTACT INFORMATION FOR ELECTRICAL CONTRACTOR FOR THIS PROJECT.
- DPU-E WILL PROVIDE, INSTALL, AND MAINTAIN THE TRANSFORMERS, ALL PRIMARY (15KV) CABLE AND CONDUIT, AND THE METERS AND INSTRUMENT TRANSFORMERS. DPU-E WILL ALSO MAKE THE FINAL CONNECTIONS IN THE TRANSFORMERS ONCE THE INSPECTION IS COMPLETE AND THE BUILDING IS READY TO BE ENERGIZED.
- THE DEVELOPER IS RESPONSIBLE FOR PROVIDING, INSTALLING, AND MAINTAINING THE TRANSFORMER PAD/VAULT, ALL SERVICE LATERAL (480V) CABLE AND CONDUIT, THE SERVICE ENTRANCE EQUIPMENT INCLUDING THE CT/METER CABINET AND ALL BANKED METER SOCKETS.
- THE DEVELOPER SHALL COORDINATE SITE CONSTRUCTION WITH DPU-E TO ALLOW ELECTRIC FACILITIES TO BE INSTALLED PRIOR TO PAVING AND CURBING. DPU-E REQUIRES 30 WORKING DAYS ADVANCE WRITTEN NOTICE PRIOR TO PAVEMENT INSTALLATION TO ALLOW FOR THE INSTALLATION OF ELECTRIC FACILITIES. GRADE ELEVATION MUST BE WITHIN 4" OF FINAL GRADING BEFORE ELECTRIC FACILITIES CAN BE INSTALLED.
- ELECTRIC FACILITIES SHALL BE INSTALLED PURSUANT TO SECTION 8-10-3 OF THE CITY OF NAPERVILLE MUNICIPAL CODE, WHICH REQUIRES A CONSTRUCTION FEE PAYMENT FOR INSTALLATION OF ELECTRIC FACILITIES.
- AT ALL TIMES, THE CUSTOMER SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING A SUITABLE APPROACH TO THE METER LOCATION, WITH NO OBSTRUCTIONS WITHIN FOUR (4') FEET OF THE FRONT AND TWO (2') FEET OF THE SIDES OF THE METER. PER NAPERVILLE SERVICE RULES AND POLICIES 22.2.F.
- CLEARANCE TO TRANSFORMER PAD SHALL BE 5' FROM ALL SIDES, 10' FROM FRONT, AND THE AREA ABOVE MUST BE COMPLETELY CLEAR OF OBSTRUCTION. NO TREES, SHRUBS, OR OTHER OBSTACLES WILL BE ALLOWED WITHIN THIS AREA. TRANSFORMER PAD SHALL MAINTAIN MINIMUM CLEARANCE OF 20' FROM EGRESS POINTS. PER DPU-E SPECIFICATIONS C10-2130 AND C30-0016.
- DPU-E REQUIRES A MINIMUM 5' OF SEPARATION BETWEEN ITS ELECTRIC FACILITIES AND ANY FIRE HYDRANTS, STORM DRAINS, STORM SEWERS, WATER MAINS, GAS MAINS, ETC. THAT RUN PARALLEL TO ITS FACILITIES.
- TO HAVE AN EXISTING SERVICE DISCONNECTED CALL THE CITY DISPATCH OFFICE AT 630-420-6187. PLEASE ALLOW AT LEAST 24 HOURS NOTICE. METERS AND METER SEALS ARE TO BE REMOVED ONLY BY DPU-E PERSONNEL. THE LOCATION AND TYPE OF NEW OR REPLACEMENT METER RELATED EQUIPMENT MUST BE PRE-APPROVED IN WRITING BY DPU-E. AN ELECTRIC SERVICE MUST BE INSPECTED BY THE DEVELOPMENT SERVICES TEAM ELECTRICAL INSPECTOR PRIOR TO CONNECTION.
- LABEL ALL METER SOCKETS WITH THE COMPLETE ADDRESS IN 1" LETTERS USING PERMANENT STICKERS. IN MULTIPLE METER BANKS, THE COMPLETE ADDRESS MAY BE ON THE DISCONNECT SWITCH AND THE SUITE NUMBERS ON THE METER SOCKETS. THE ELECTRICAL SERVICE EQUIPMENT WILL NOT PASS INSPECTION WITHOUT APPROPRIATE ADDRESS LABELING.
- APPROVAL OF METERING EQUIPMENT BY DPU-E DOES NOT REMOVE YOUR RESPONSIBILITY TO COMPLY WITH THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE AS ADOPTED BY THE CITY OF NAPERVILLE. DETERMINATION OF COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE WILL BE MADE BY THE TRANSPORTATION, ENGINEERING AND DEVELOPMENT DEPARTMENT.
- A CUSTOMER'S GROUNDING CONDUCTOR SHALL NOT BE CONNECTED TO DPU-E DISTRIBUTION EQUIPMENT.
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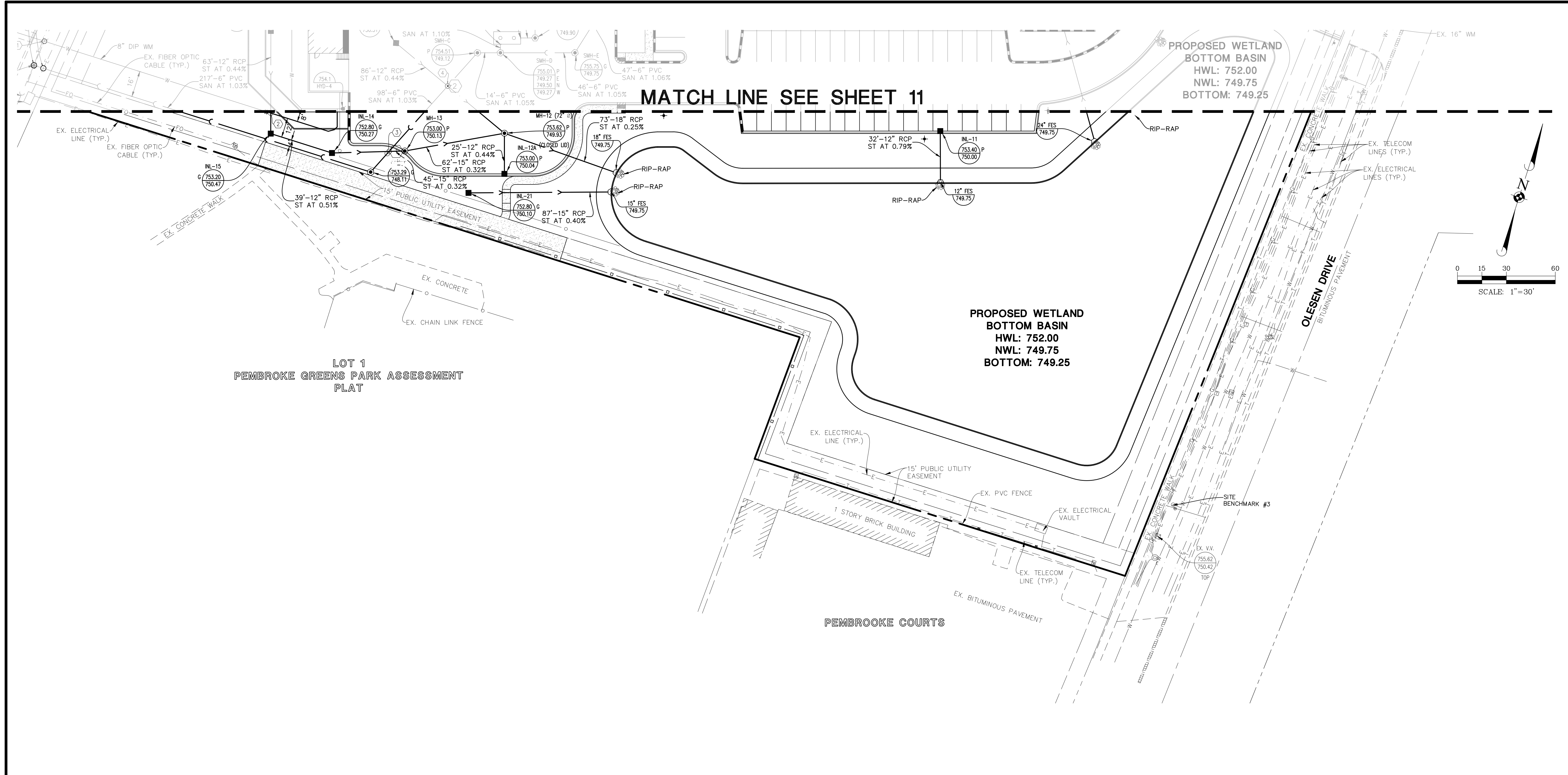
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- CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
- LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
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- CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
- SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
- ALL D.I. WATERMAIN PIPE AND D.I. WATERMAIN FITTINGS SHALL BE WRAPPED.

UTILITY CROSSINGS			
1) EX. SAN OVER WM	4) ST OVER SAN	B/P SAN = 745.37	B/P ST = 749.96
2) ST OVER WM	5) ST OVER EX. SAN	T/P WM = 743.87	T/P SAN = 749.35
3) ST OVER SAN	6) ST OVER EX. SAN	B/P ST = 748.85	B/P ST = 749.31
		T/P WM = 748.85	T/P SAN = 745.19
		B/P ST = 749.97	B/P ST = 749.40
		T/P SAN = 748.80	T/P SAN = 748.89

NOTE: WATER AND SEWER CROSSINGS SHALL MEET STATE EPA SEPARATION AND PIPE MATERIAL REQUIREMENTS. (SEE DETAIL SHEET)





DATE	REVISIONS
08-16-24	REVISED PER CITY OF NAPERVILLE REVIEW #3/4
03-09-24	REVISED PER DUOT REVIEW
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02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW

Manhard CONSULTING

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 Email: info@manhardconsulting.com

Professional Engineers • Surveyors • Water Resource Engineers • Wetland & Wetland-Related Engineers
 Construction Managers • Environmental Scientists • Landscape Architects • Planners

PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 UTILITY PLAN - SOUTH

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: MJH
 DATE: 08-30-23
 SCALE: 1"=30'

SHEET
12 OF 19
 ADK.NVIL01

DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC GENERAL NOTES:

- THE DEVELOPER SHALL SUPPLY THE DPU-E ENGINEER WITH CATALOG CUTS FOR ALL CT/METER EQUIPMENT (INCLUDING BUT NOT LIMITED TO METER SOCKETS, PT CABINET, CT CABINET, DISCONNECT CABINET) AND TRANSFORMER PAD/VAULT. THE CATALOG CUTS SHALL BE APPROVED BY DPU-E PRIOR TO PURCHASING.
- THE CT/METER CABINET SHALL BE TOP FED.
- CT/METER EQUIPMENT ARE LONG LEAD TIME ITEMS AND DPU-E SHALL NOT BE HELD RESPONSIBLE FOR DELAYS RESULTING FROM NON-COMPLIANT CT/METER EQUIPMENT.
- PLEASE PROVIDE NAME AND CONTACT INFORMATION FOR ELECTRICAL CONTRACTOR FOR THIS PROJECT.
- DPU-E WILL PROVIDE, INSTALL, AND MAINTAIN THE TRANSFORMERS, ALL PRIMARY (15KV) CABLE AND CONDUIT, AND THE METERS AND INSTRUMENT TRANSFORMERS. DPU-E WILL ALSO MAKE THE FINAL CONNECTIONS IN THE TRANSFORMERS ONCE THE INSPECTION IS COMPLETE AND THE BUILDING IS READY TO BE ENERGIZED.
- THE DEVELOPER IS RESPONSIBLE FOR PROVIDING, INSTALLING, AND MAINTAINING THE TRANSFORMER PAD/VAULT, ALL SERVICE LATERAL (480V) CABLE AND CONDUIT, THE SERVICE ENTRANCE EQUIPMENT INCLUDING THE CT/METER CABINET AND ALL BANKED METER SOCKETS.
- THE DEVELOPER SHALL COORDINATE SITE CONSTRUCTION WITH DPU-E TO ALLOW ELECTRIC FACILITIES TO BE INSTALLED PRIOR PAVING AND CURBING. DPU-E REQUIRES 30 WORKING DAYS ADVANCE WRITTEN NOTICE PRIOR TO PAVEMENT INSTALLATION TO ALLOW FOR THE INSTALLATION OF ELECTRIC FACILITIES. GRADE ELEVATION MUST BE WITHIN 4" OF FINAL GRADING BEFORE ELECTRIC FACILITIES CAN BE INSTALLED.
- ELECTRIC FACILITIES SHALL BE INSTALLED PURSUANT TO SECTION 8-1C-3 OF THE CITY OF NAPERVILLE MUNICIPAL CODE, WHICH REQUIRES A CONSTRUCTION FEE PAYMENT FOR INSTALLATION OF ELECTRIC FACILITIES.
- AT ALL TIMES, THE CUSTOMER SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING A SUITABLE APPROACH TO THE METER LOCATION, WITH NO OBSTRUCTIONS WITHIN FOUR (4') FEET OF THE FRONT AND TWO (2') FEET OF THE SIDES OF THE METER. PER NAPERVILLE SERVICE RULES AND POLICIES 22.2.F.
- CLEARANCE TO TRANSFORMER PAD SHALL BE 5' FROM ALL SIDES, 10' FROM FRONT, AND THE AREA ABOVE MUST BE COMPLETELY CLEAR OF OBSTRUCTION, NO TREES, SHRUBS, OR OTHER OBSTACLES WILL BE ALLOWED WITHIN THIS AREA. TRANSFORMER PAD SHALL MAINTAIN MINIMUM CLEARANCE OF 20' FROM EGRESS POINTS. PER DPU-E SPECIFICATIONS C10-2130 AND C30-0016.
- DPU-E REQUIRES A MINIMUM 5' OF SEPARATION BETWEEN ITS ELECTRIC FACILITIES AND ANY FIRE HYDRANTS, STORM DRAINS, STORM SEWERS, WATER MAINS, GAS MAINS, ETC. THAT RUN PARALLEL TO ITS FACILITIES.
- TO HAVE AN EXISTING SERVICE DISCONNECTED, CALL THE CITY DISPATCH OFFICE AT 630-420-6187. PLEASE ALLOW AT LEAST 24 HOURS NOTICE. METERS AND METER SEALS ARE TO BE REMOVED ONLY BY DPU-E PERSONNEL. THE LOCATION AND TYPE OF NEW OR REPLACEMENT METER RELATED EQUIPMENT MUST BE PRE-APPROVED IN WRITING BY DPU-E. AN ELECTRIC SERVICE MUST BE INSPECTED BY THE DEVELOPMENT SERVICES TEAM ELECTRICAL INSPECTOR PRIOR TO CONNECTION.
- LABEL ALL METER SOCKETS WITH THE COMPLETE ADDRESS IN 1" LETTERS USING PERMANENT STICKERS. IN MULTIPLE METER BANKS, THE COMPLETE ADDRESS MAY BE ON THE DISCONNECT SWITCH AND THE SUITE NUMBERS ON THE METER SOCKETS. THE ELECTRICAL SERVICE EQUIPMENT WILL NOT PASS INSPECTION WITHOUT APPROPRIATE ADDRESS LABELING.
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UTILITY NOTES:

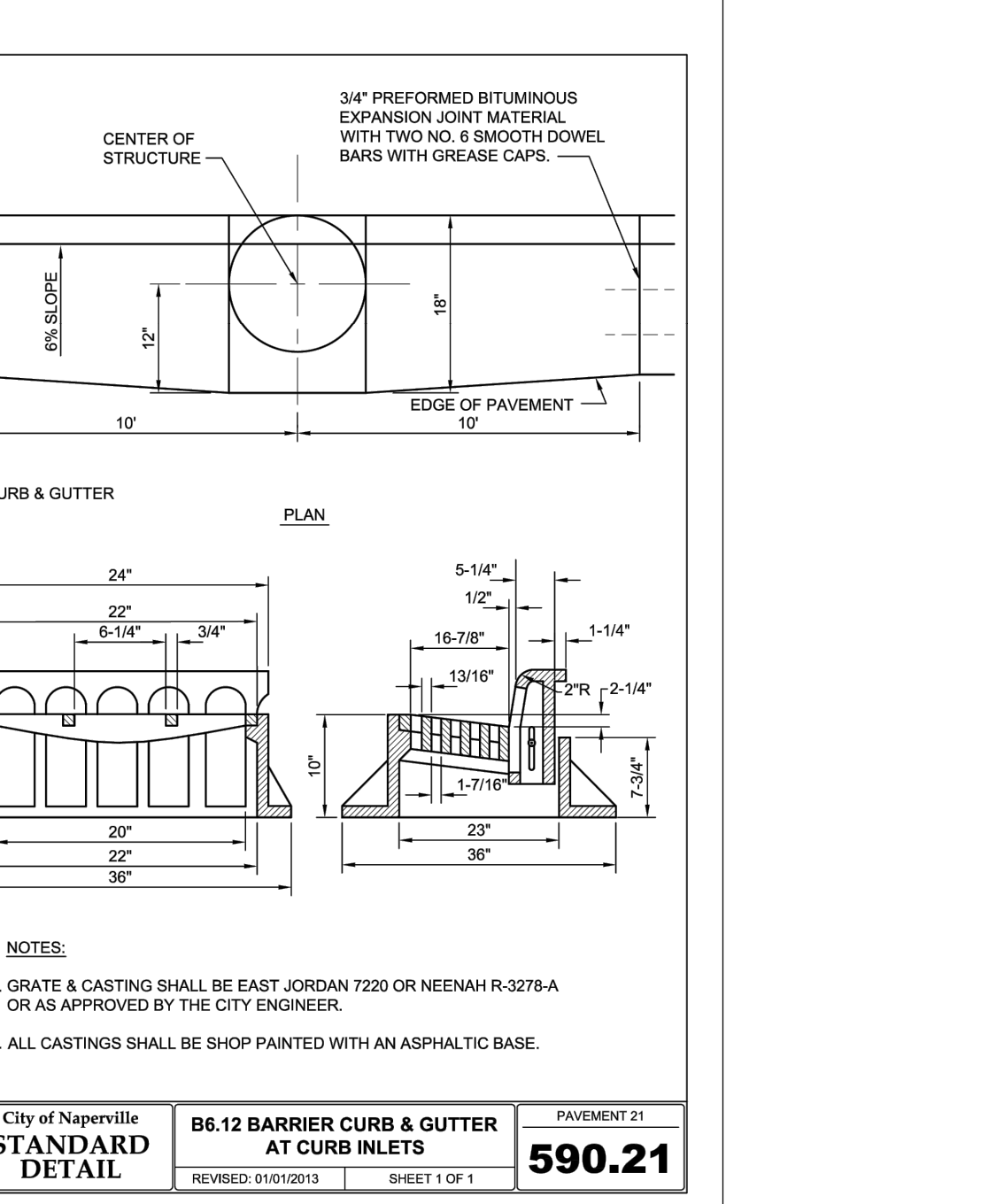
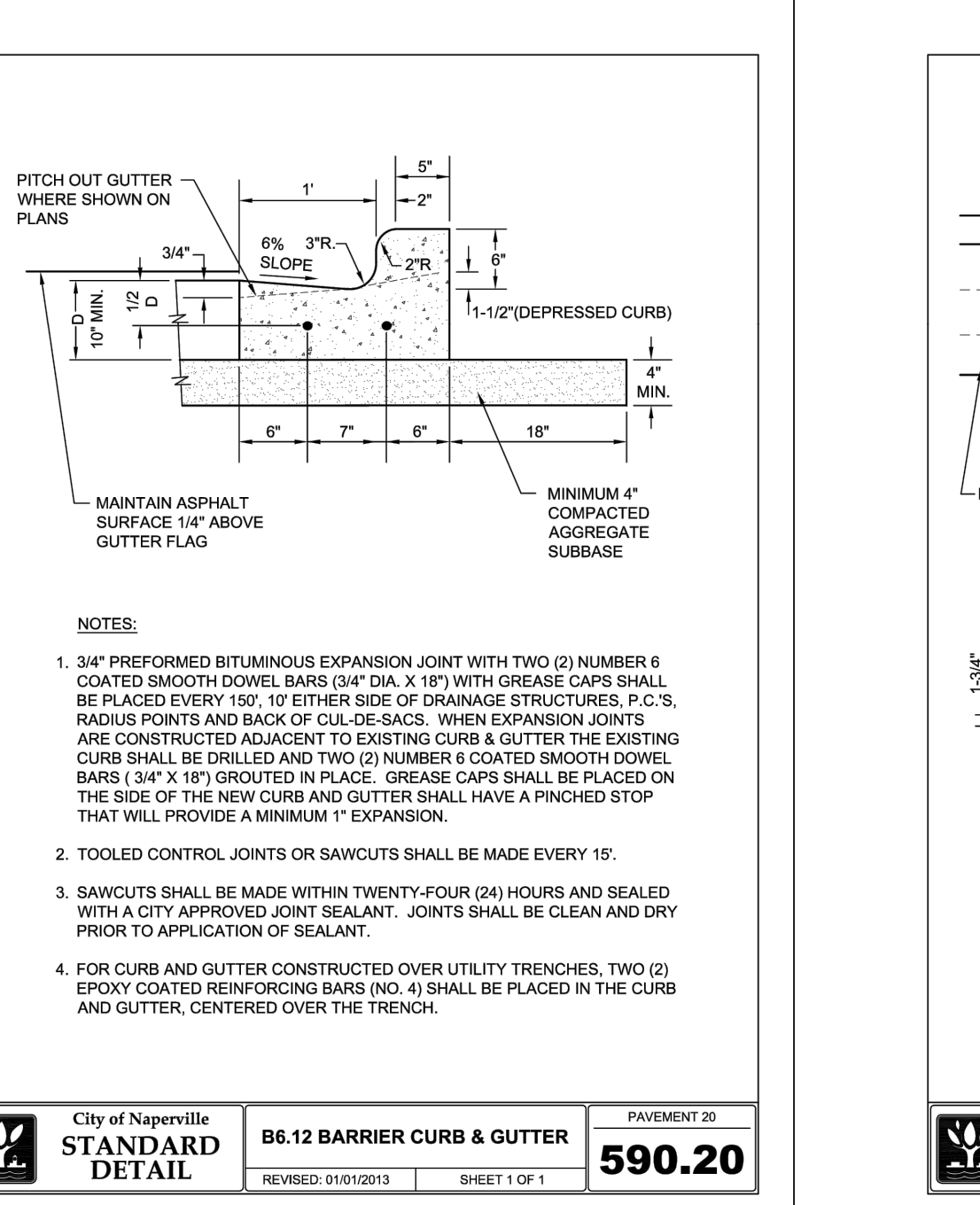
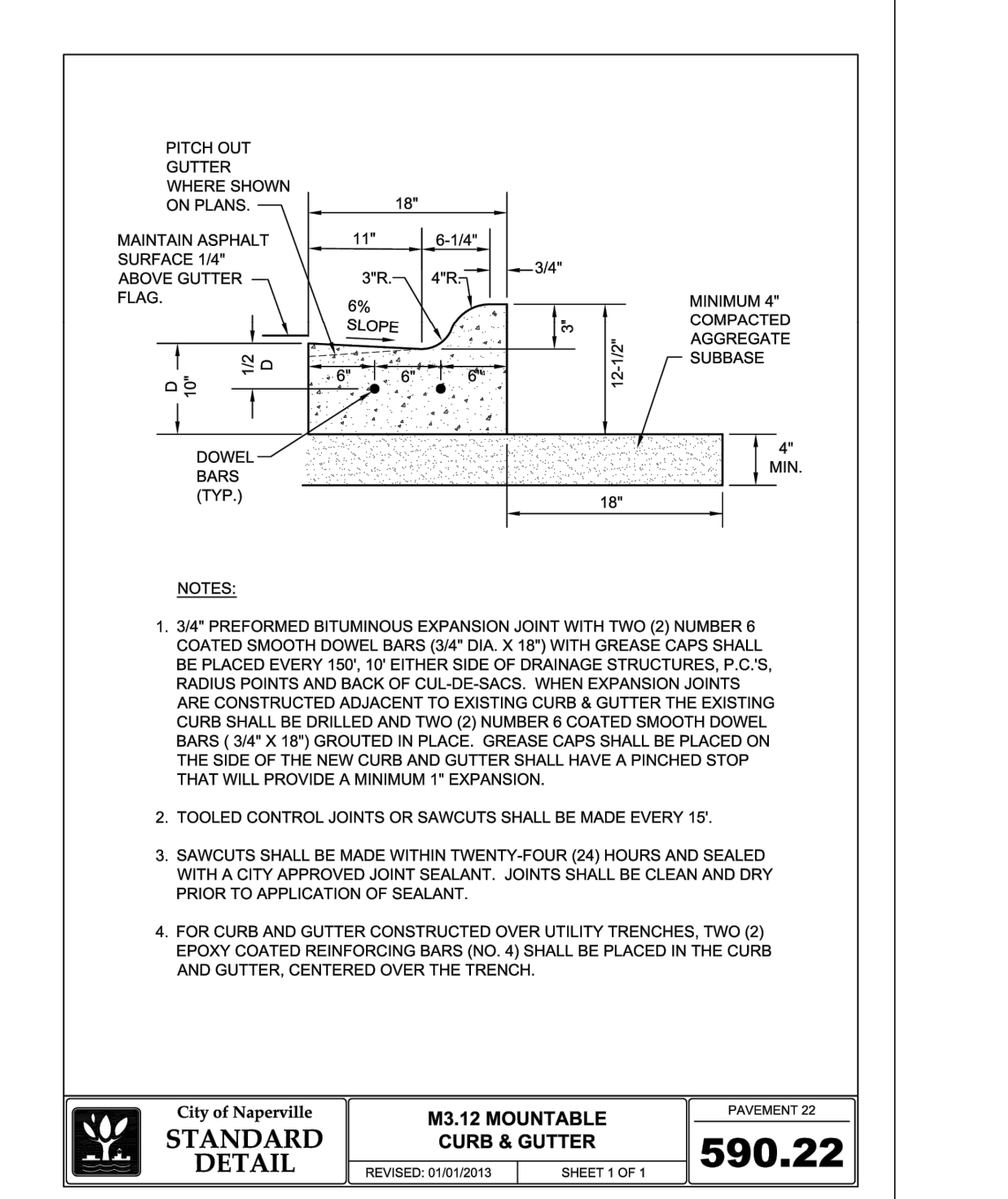
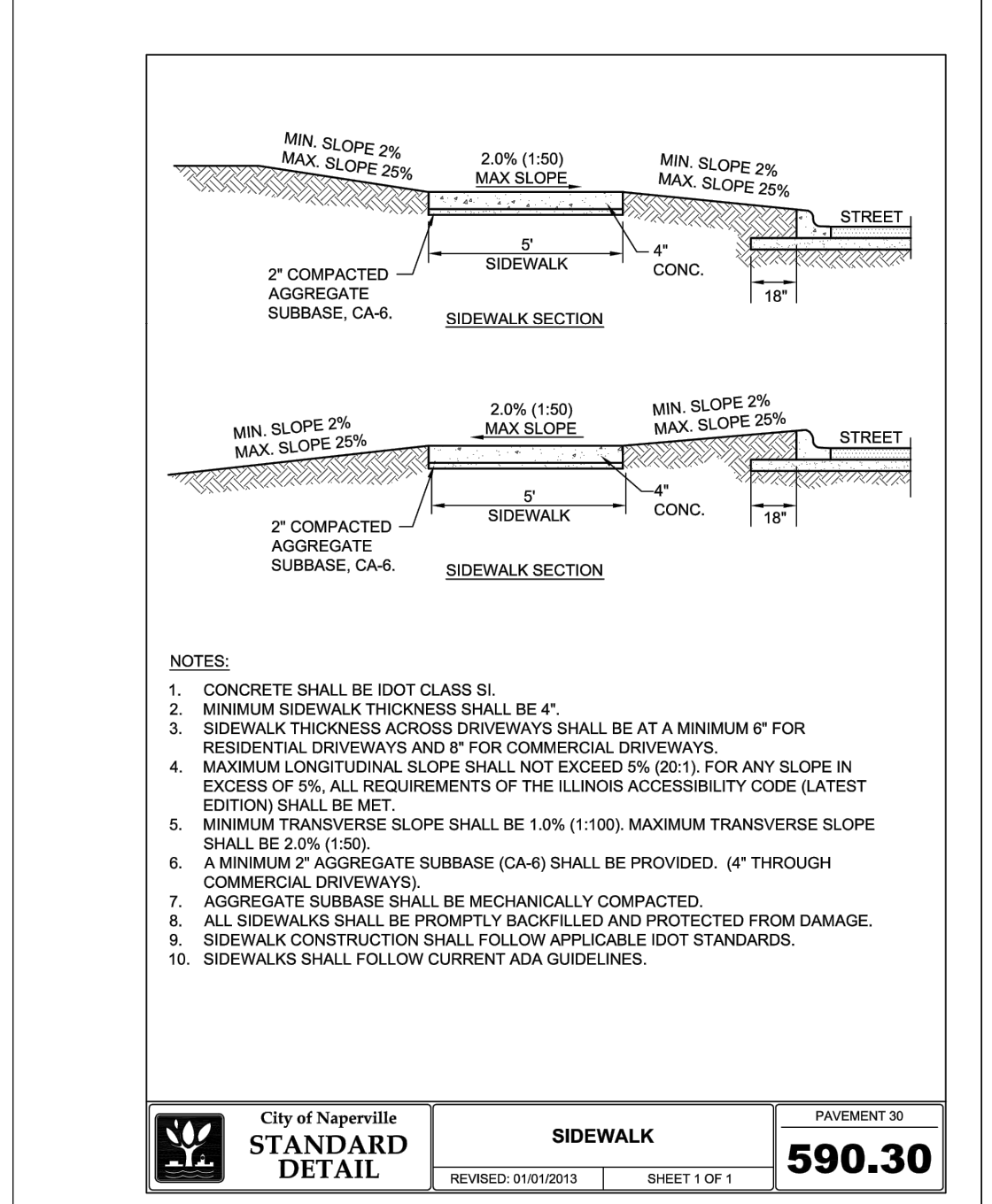
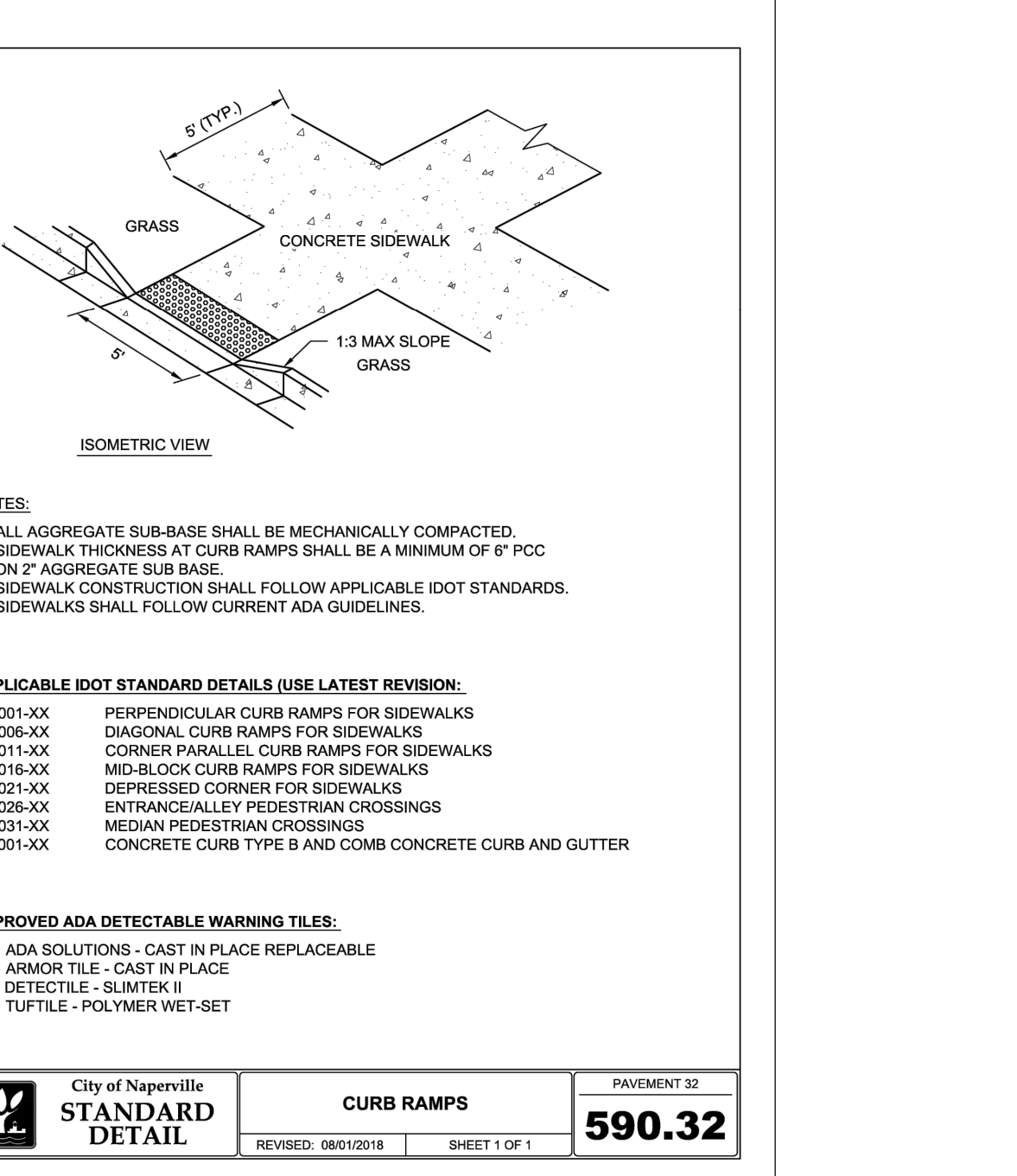
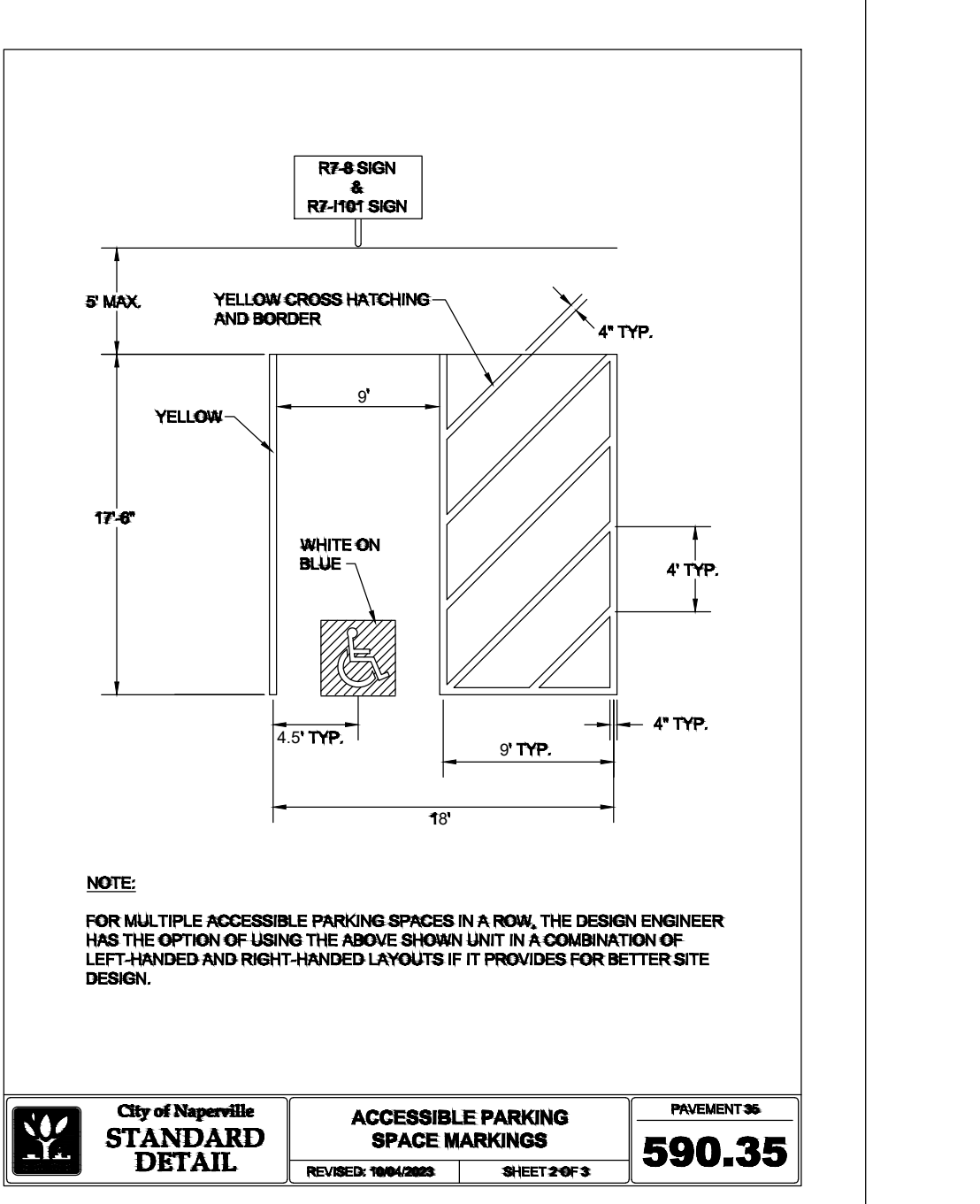
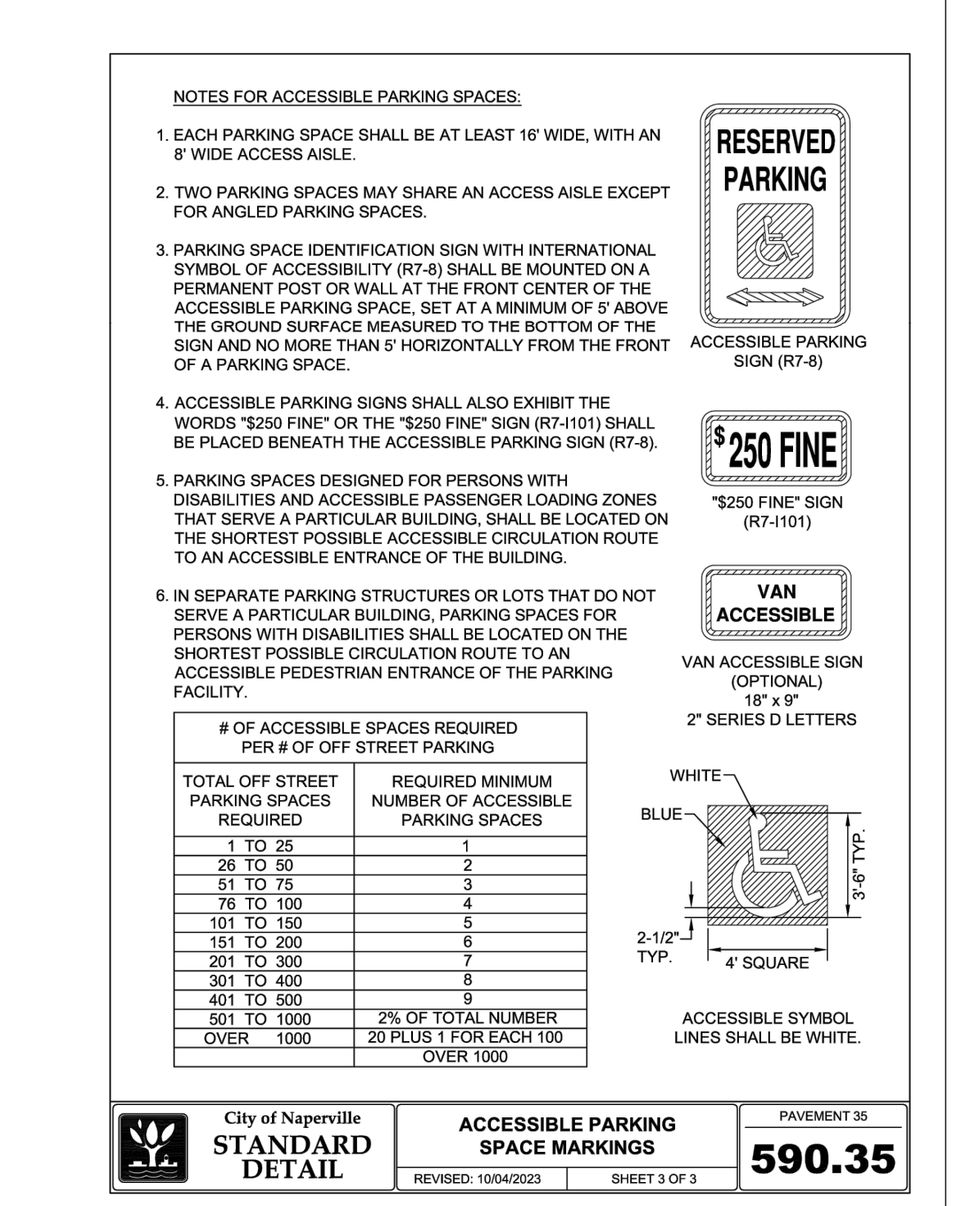
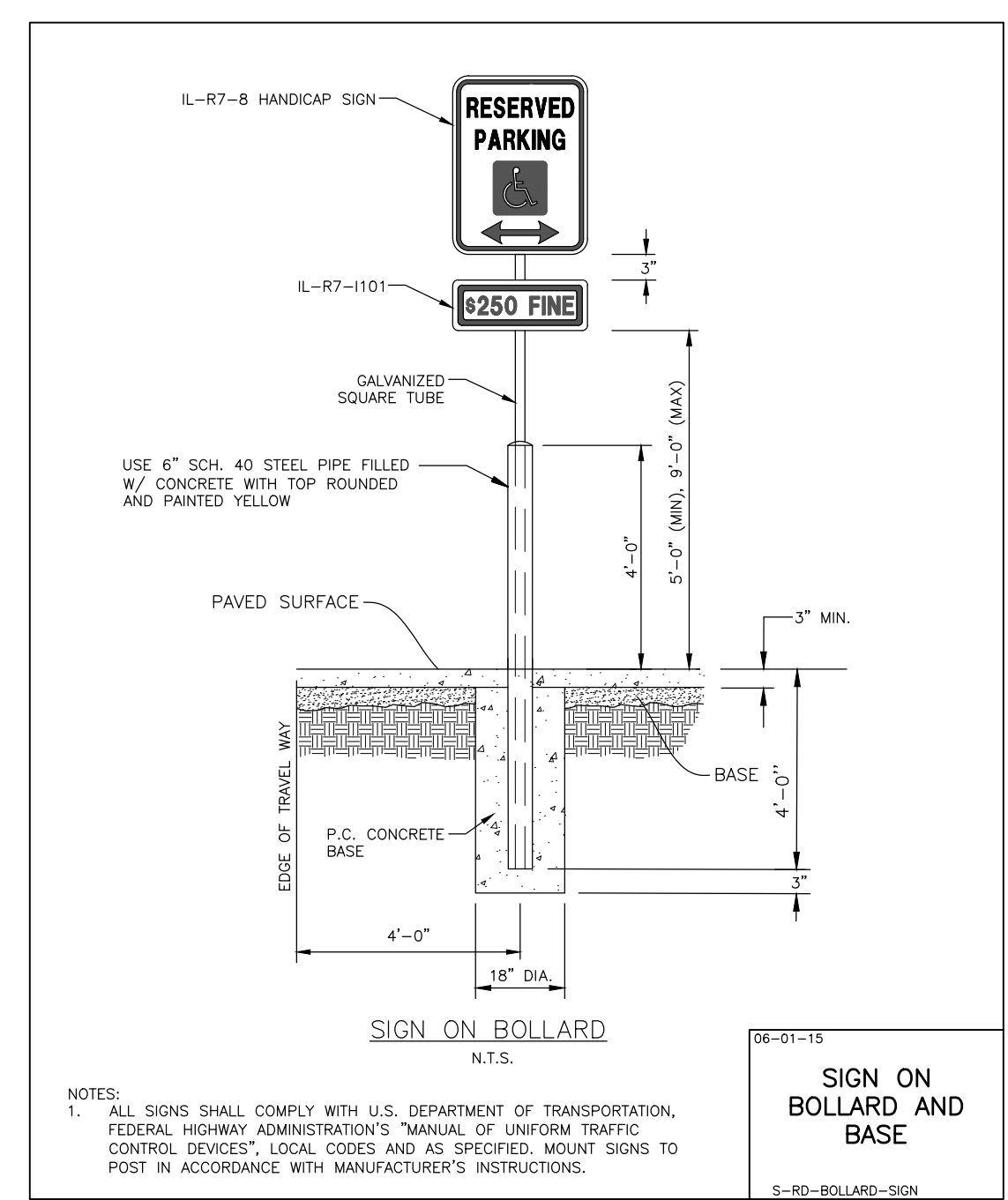
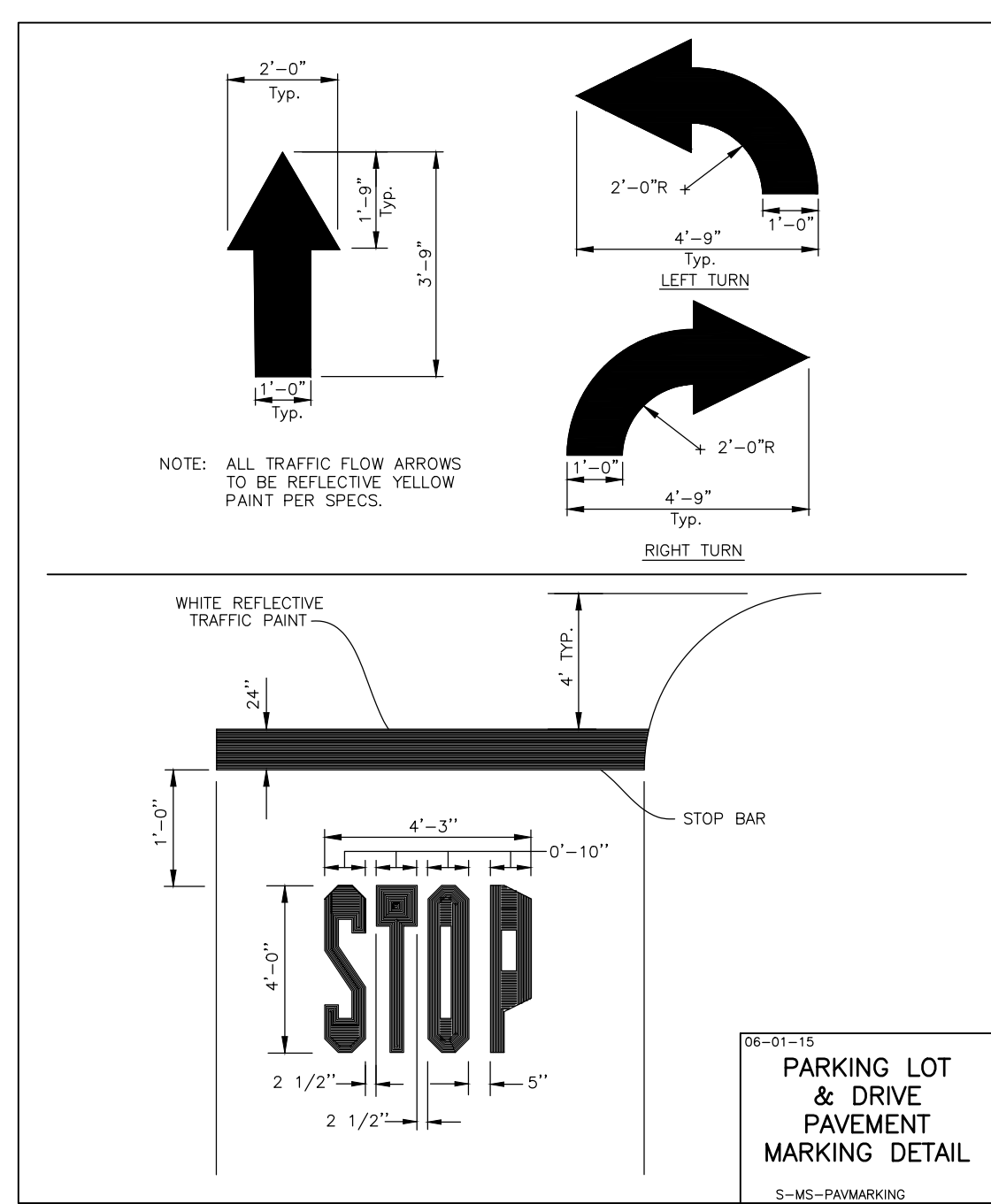
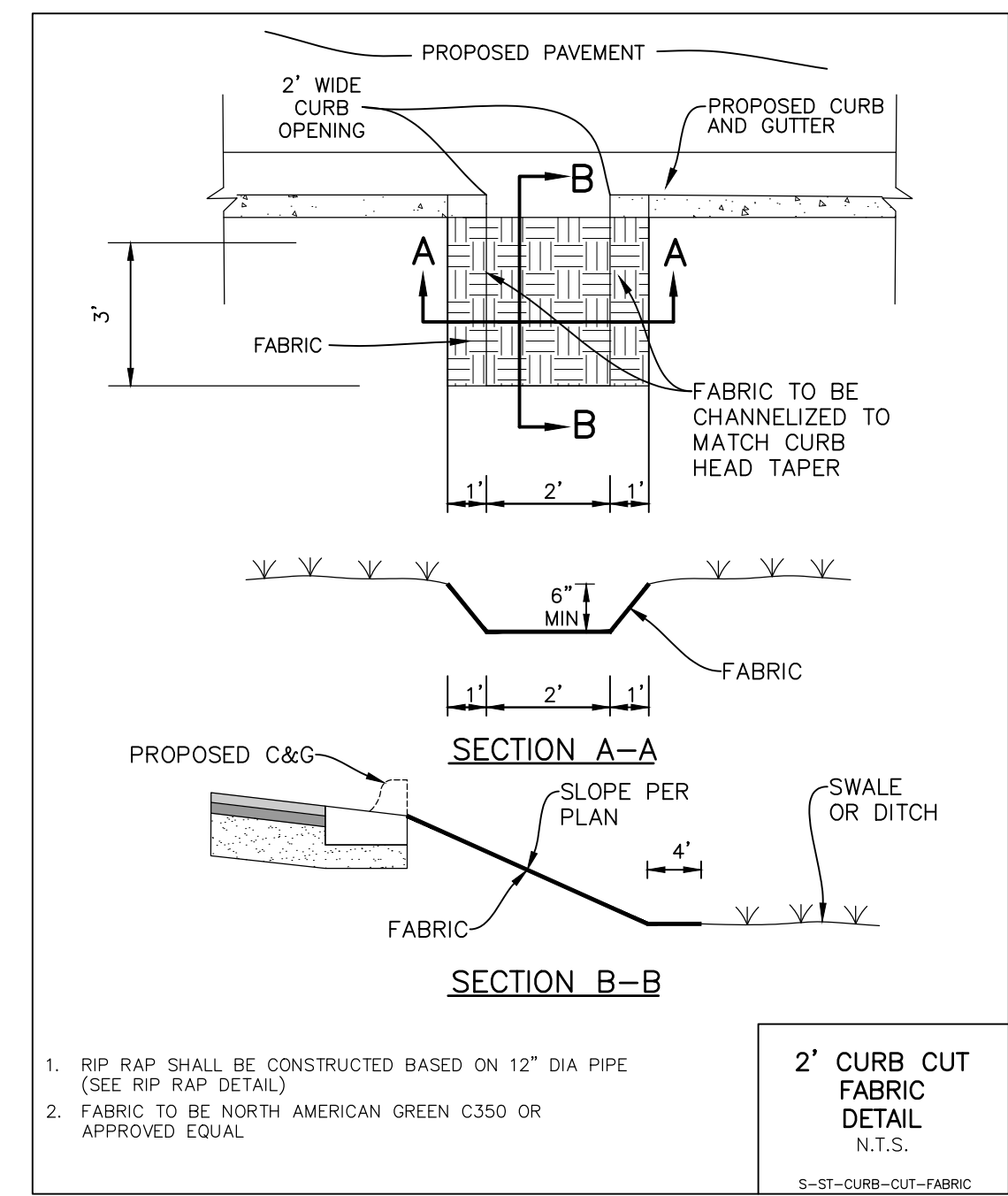
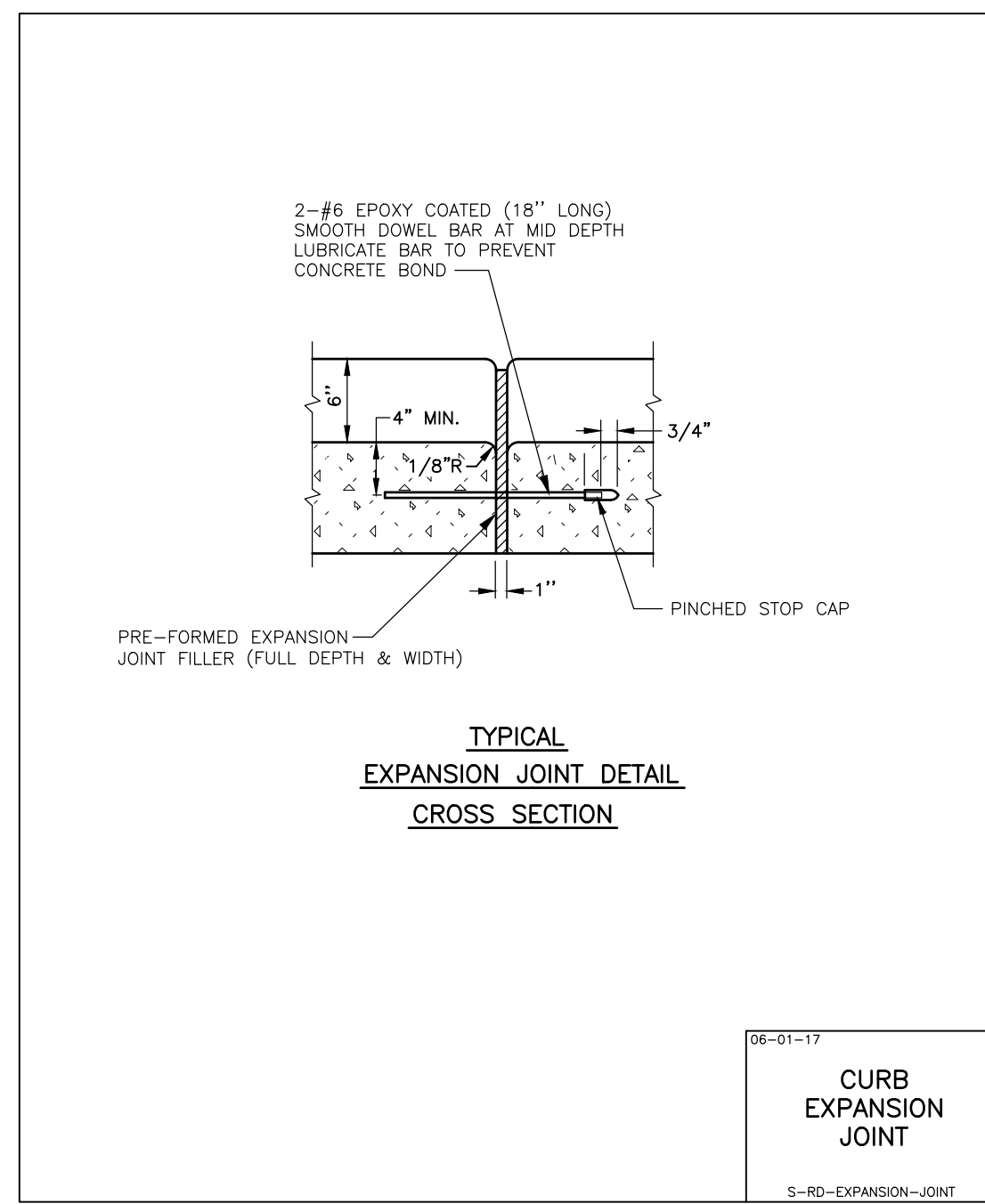
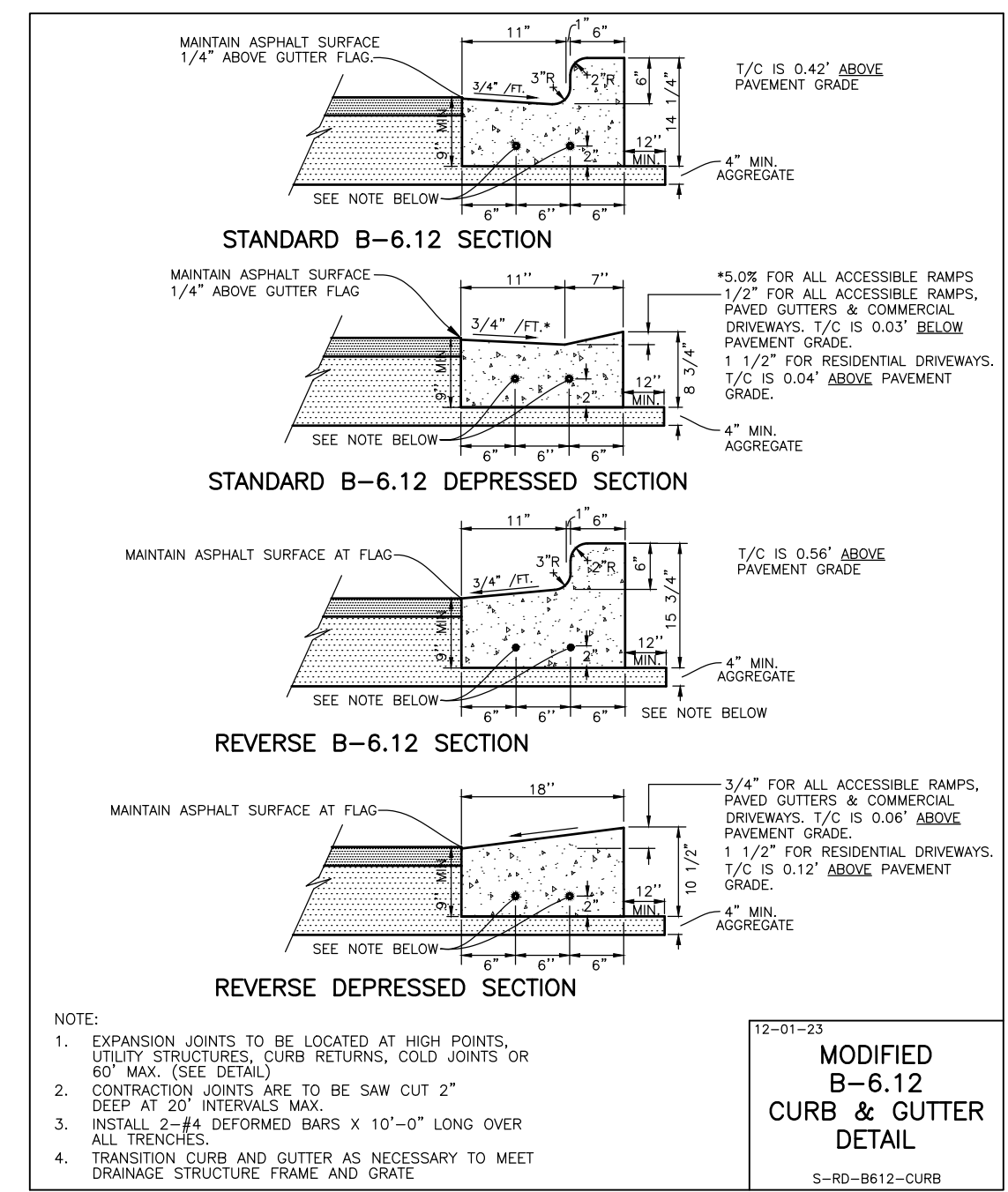
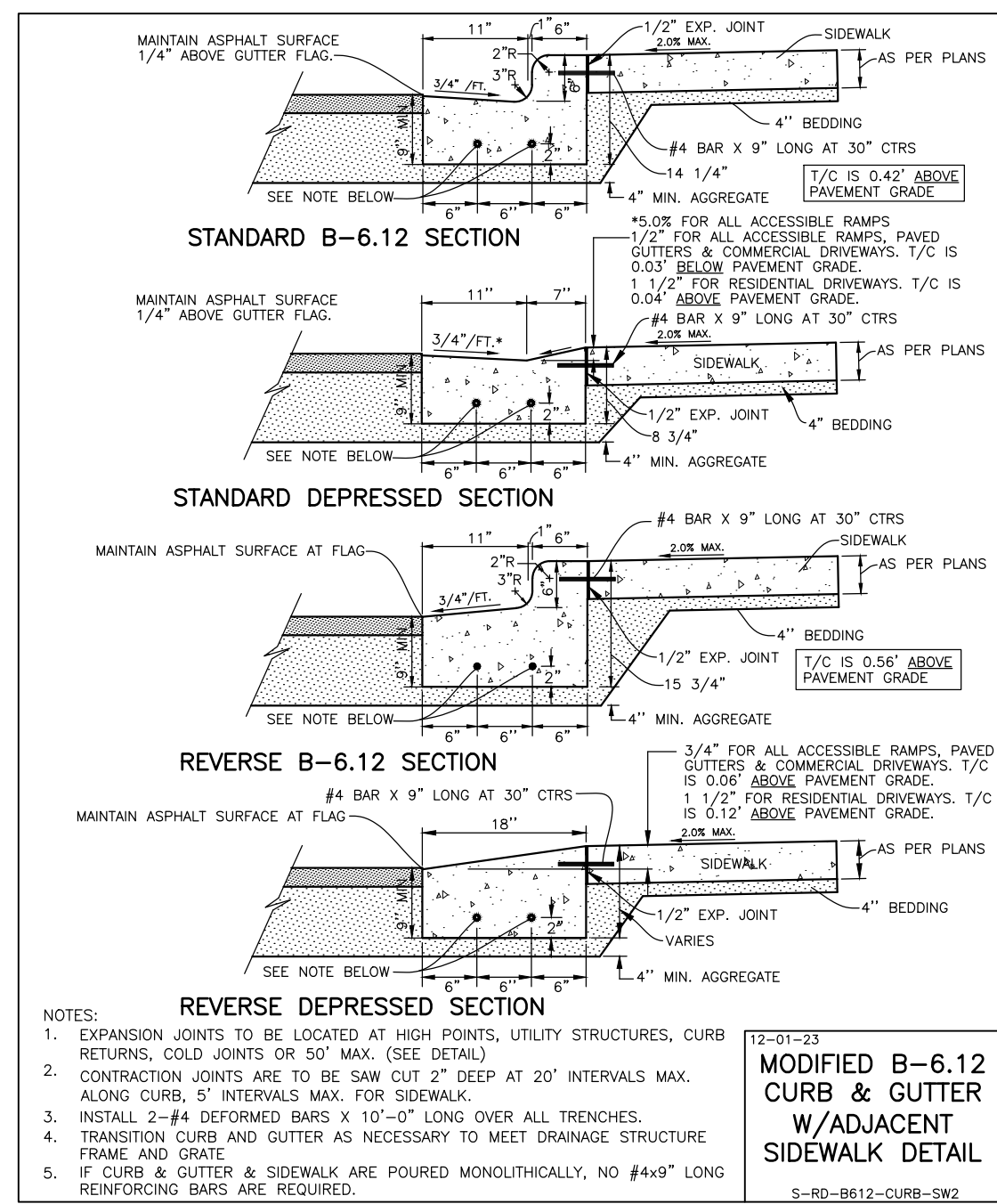
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UTILITY CROSSINGS

1) EX. SAN OVER WM B/P SAN = 745.37 T/P WM = 743.87 *LOWER WM*	4) ST OVER SAN B/P ST = 749.96 T/P SAN = 749.35 **CRITICAL CROSSING**
2) ST OVER WM B/P ST = 750.35 T/P WM = 748.85 *LOWER WM*	5) ST OVER EX. SAN B/P ST = 749.31 T/P SAN = 745.19
3) ST OVER SAN B/P ST = 749.97 T/P SAN = 748.80 **CRITICAL CROSSING**	6) ST OVER EX. SAN B/P ST = 749.40 T/P SAN = 744.89

NOTE: WATER AND SEWER CROSSINGS SHALL MEET STATE EPA SEPARATION AND PIPE MATERIAL REQUIREMENTS. (SEE DETAIL SHEET)

August 2, 2024 - 11:59 AM - D:\Projects\2024\1159 - Proj\Drawings\Final\Drawings\Plan_S&U\UTILITY.dwg - Updated by: jhiller



SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE CITY DETAILS, THE CITY DETAILS SHALL TAKE PRECEDENCE.

Manhard CONSULTING

1500 West 10th Street, Suite 200, Naperville, IL 60563
 Phone: 630.335.1100
 Fax: 630.335.1101
 Email: info@manhard.com

Professional Engineer License No. 001-00000000
 Professional Surveyor License No. 001-00000000
 Professional Geomatics License No. 001-00000000

City of Naperville Review #1/4
 City of Naperville Review #2
 City of Naperville Review #3

DATE: _____

REVISIONS:

NO. 1	DATE	DESCRIPTION
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PROPOSED HEINEN'S GROCERY STORE

CITY OF NAPERVILLE, ILLINOIS

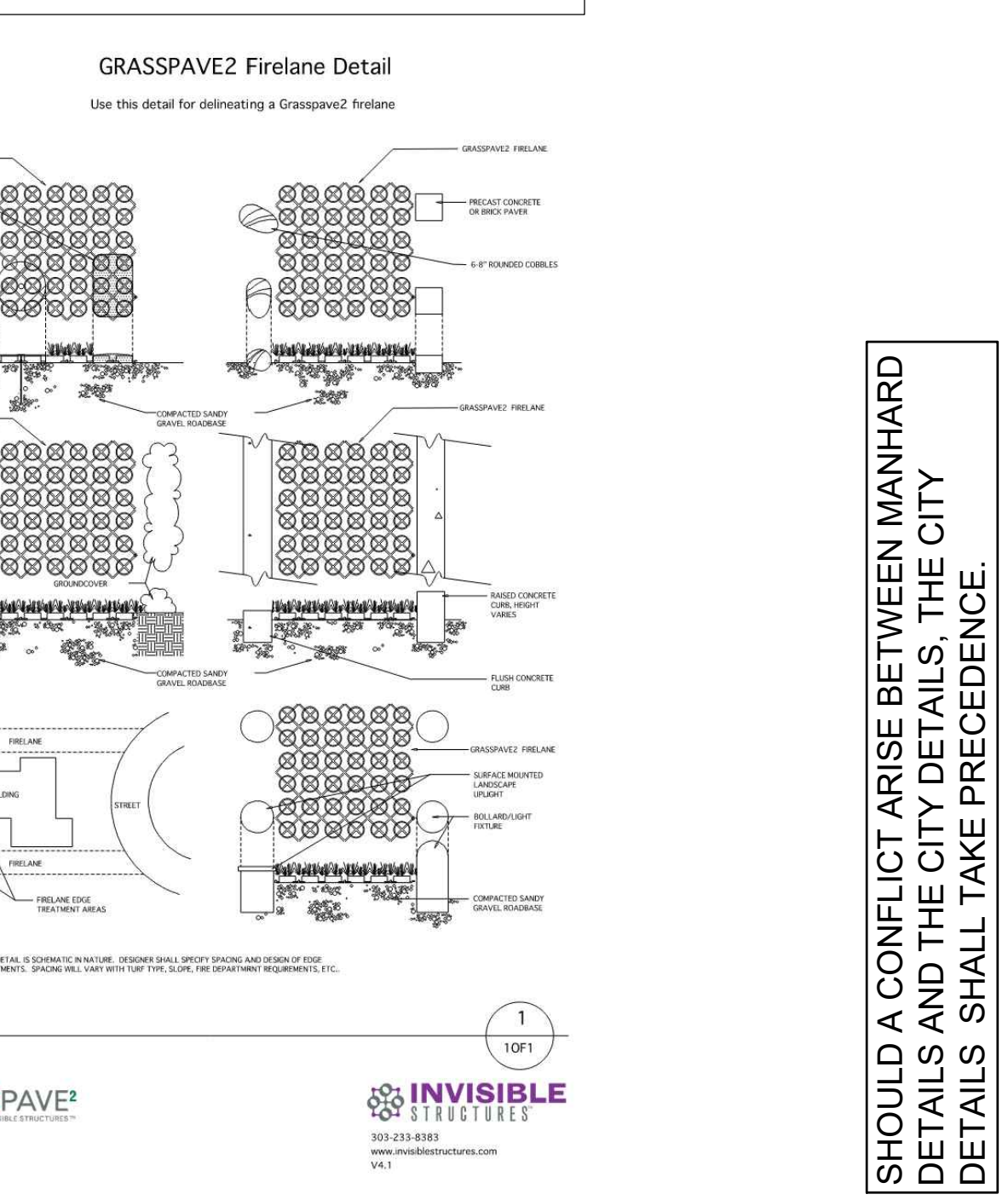
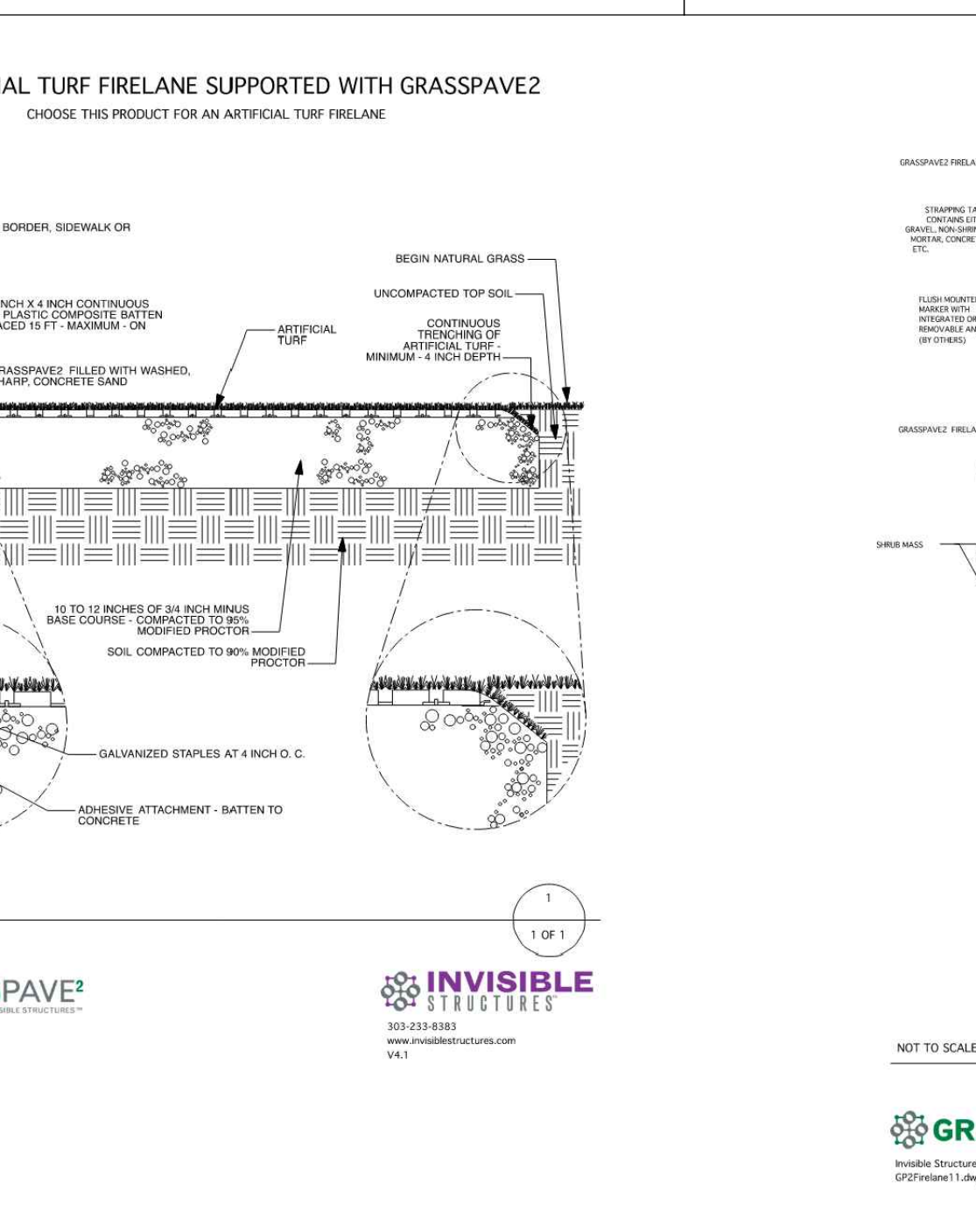
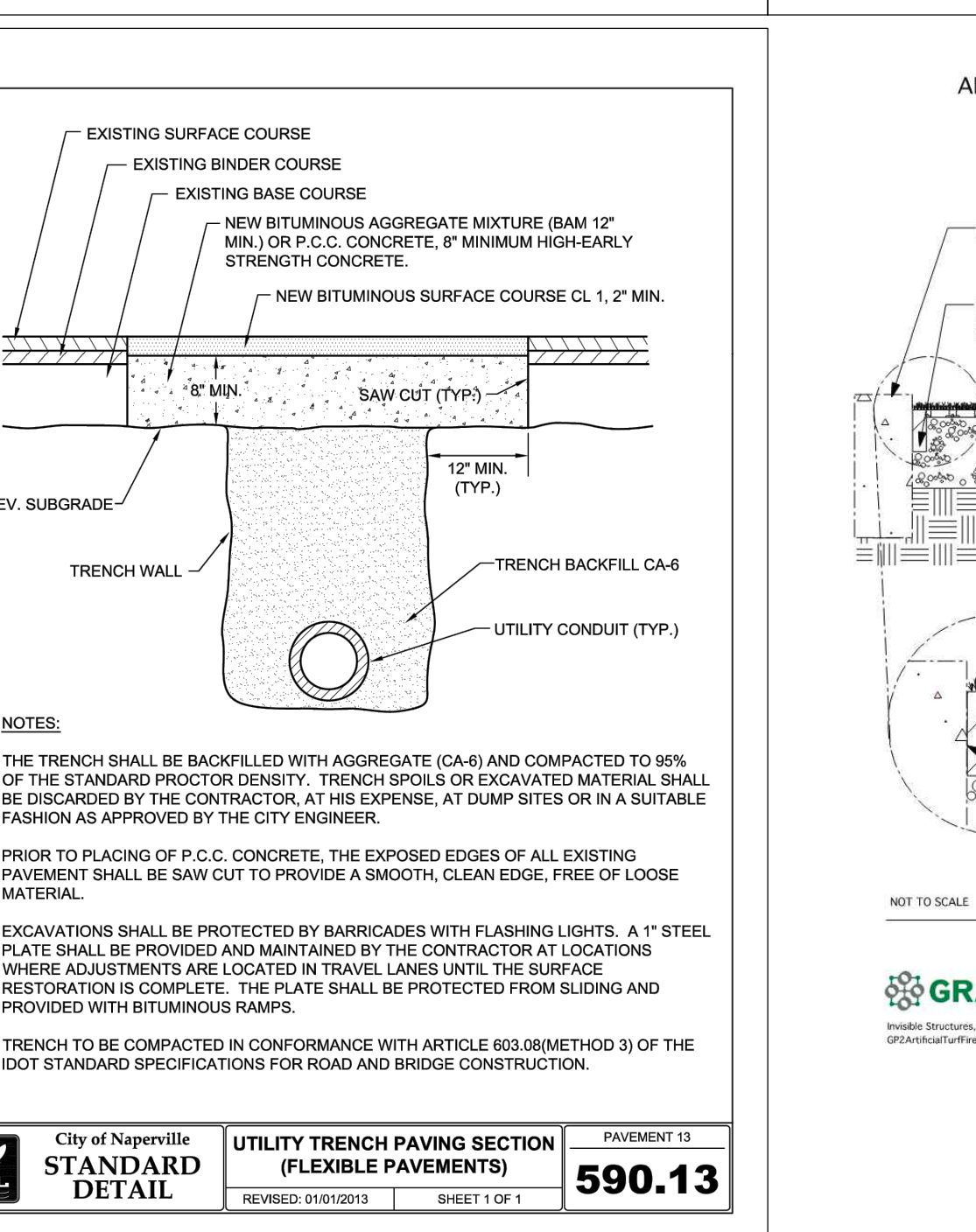
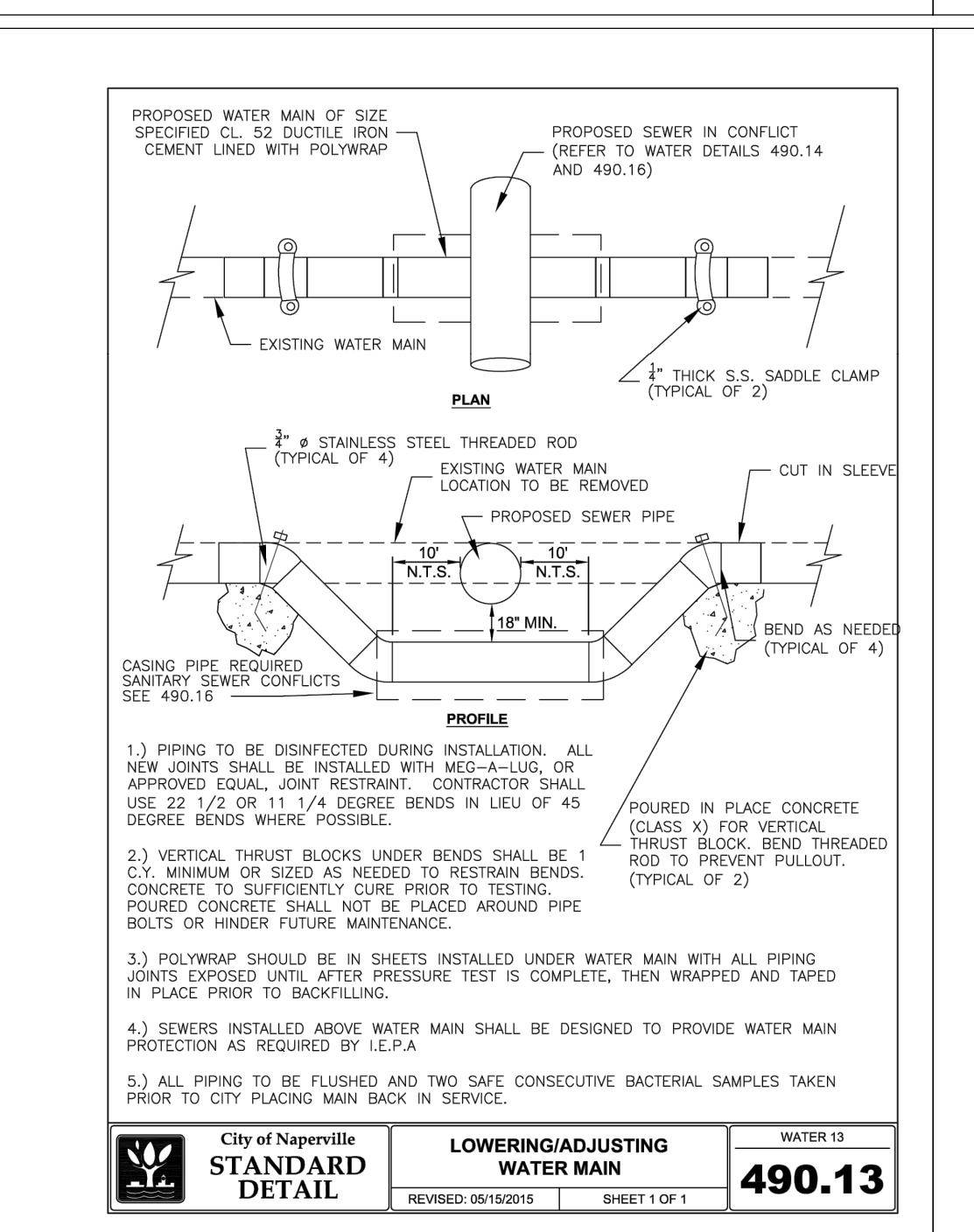
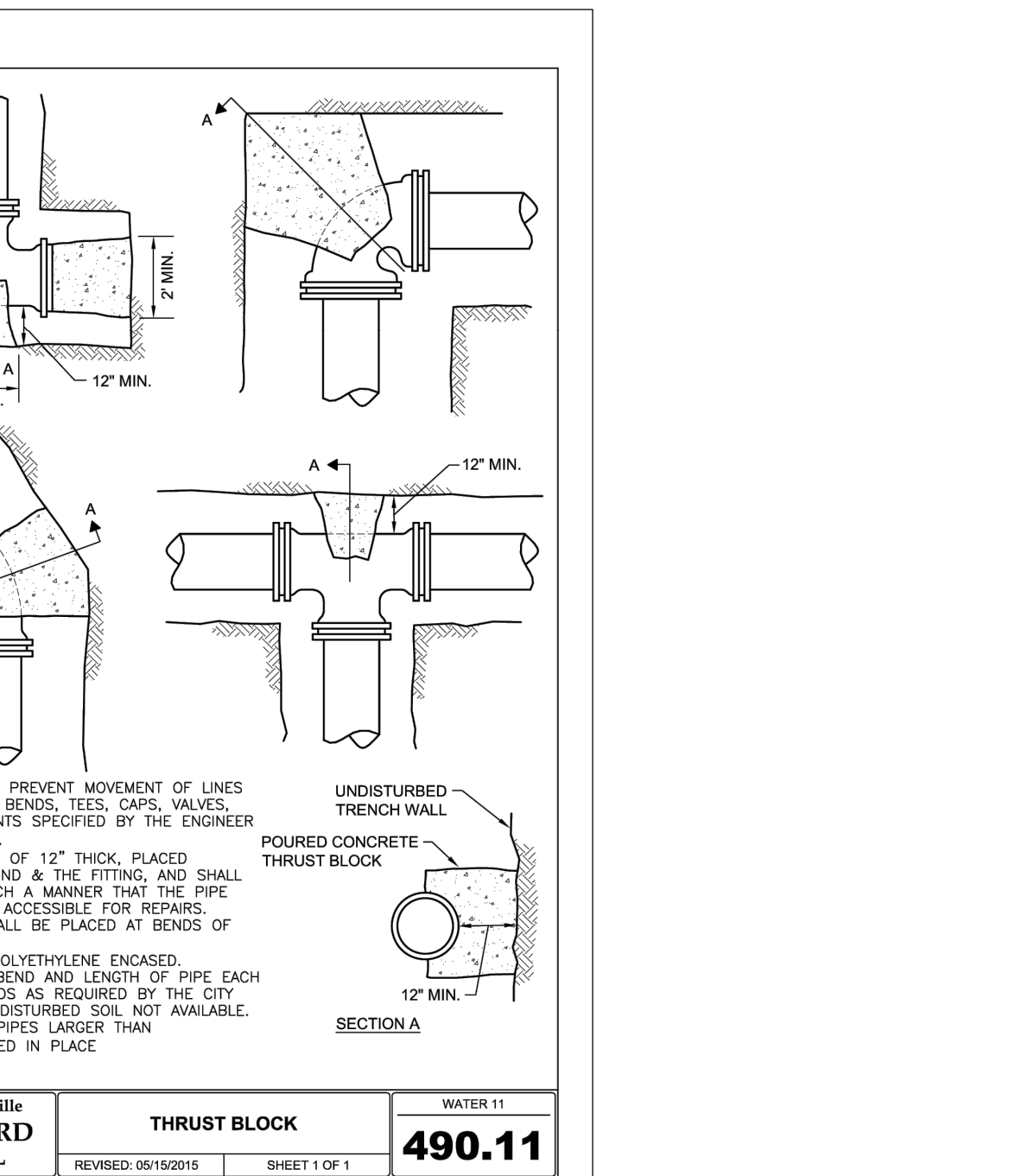
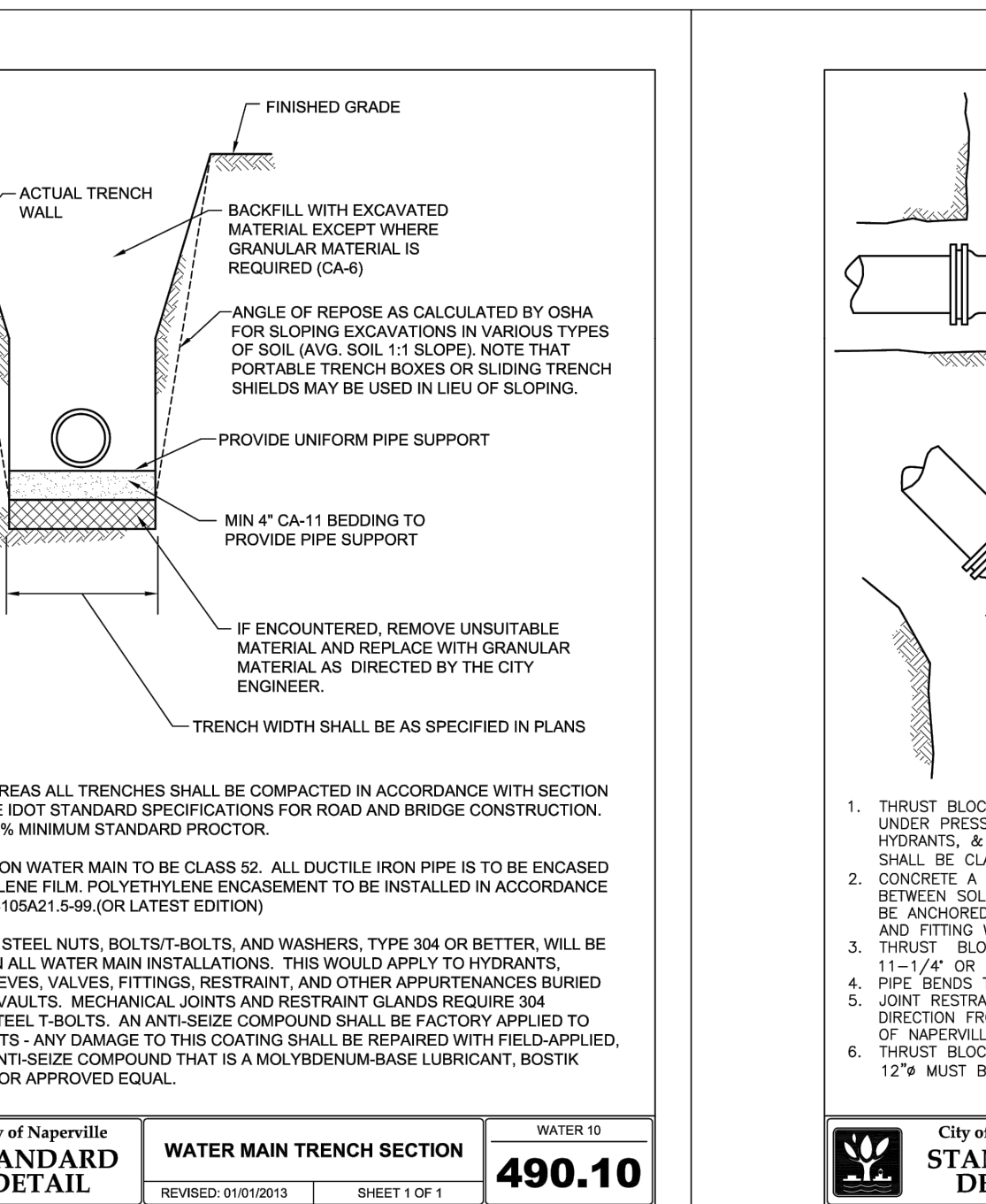
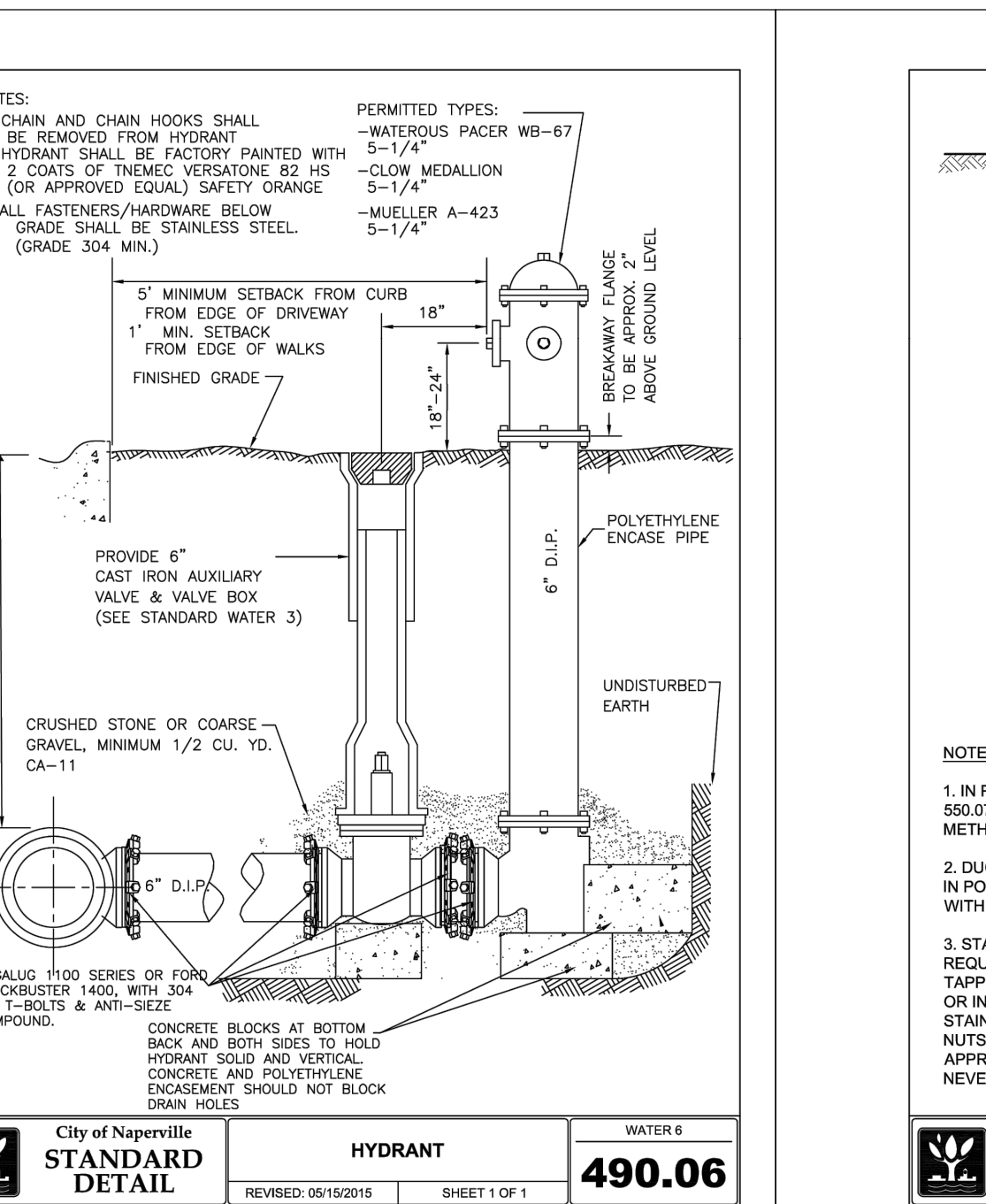
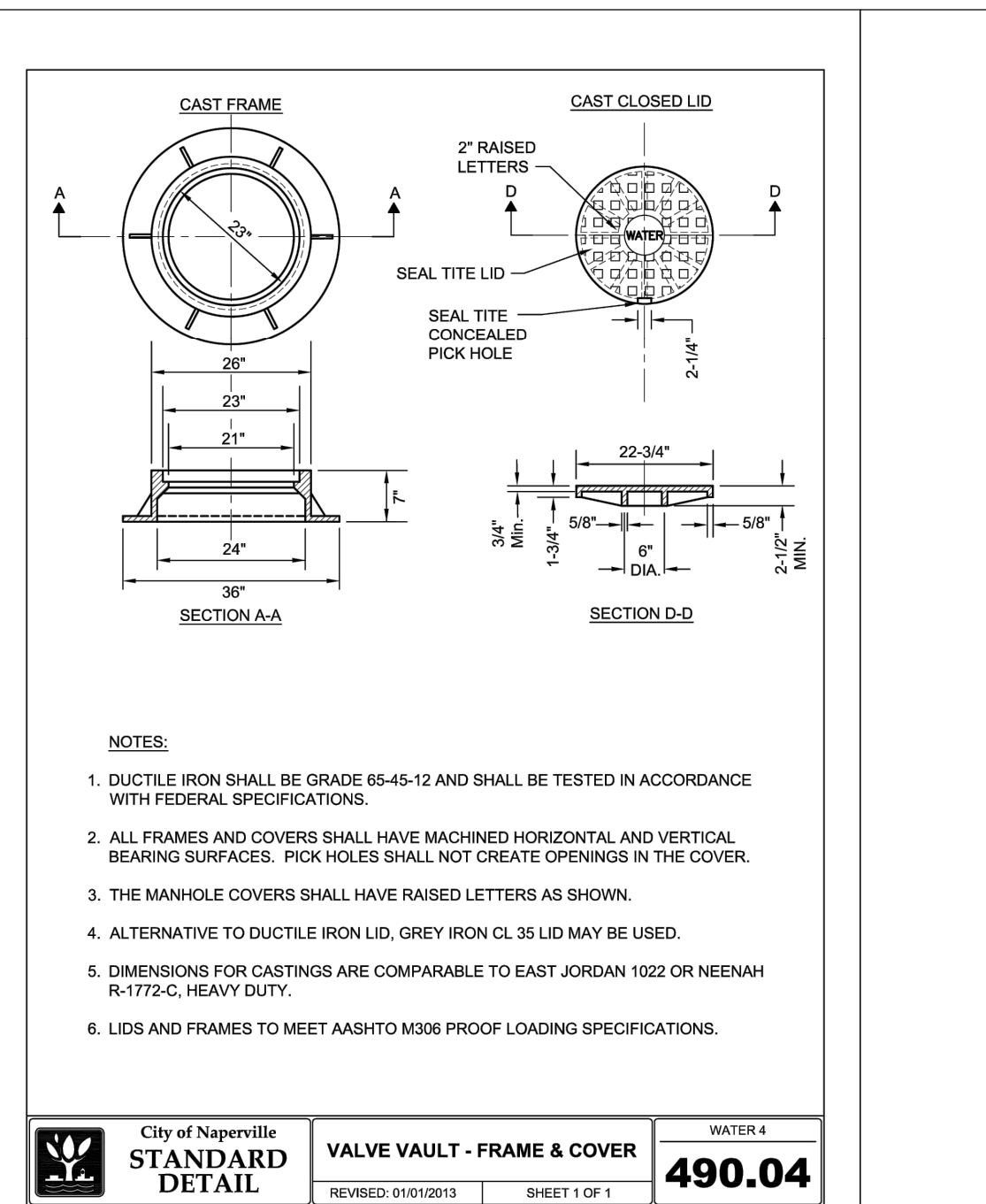
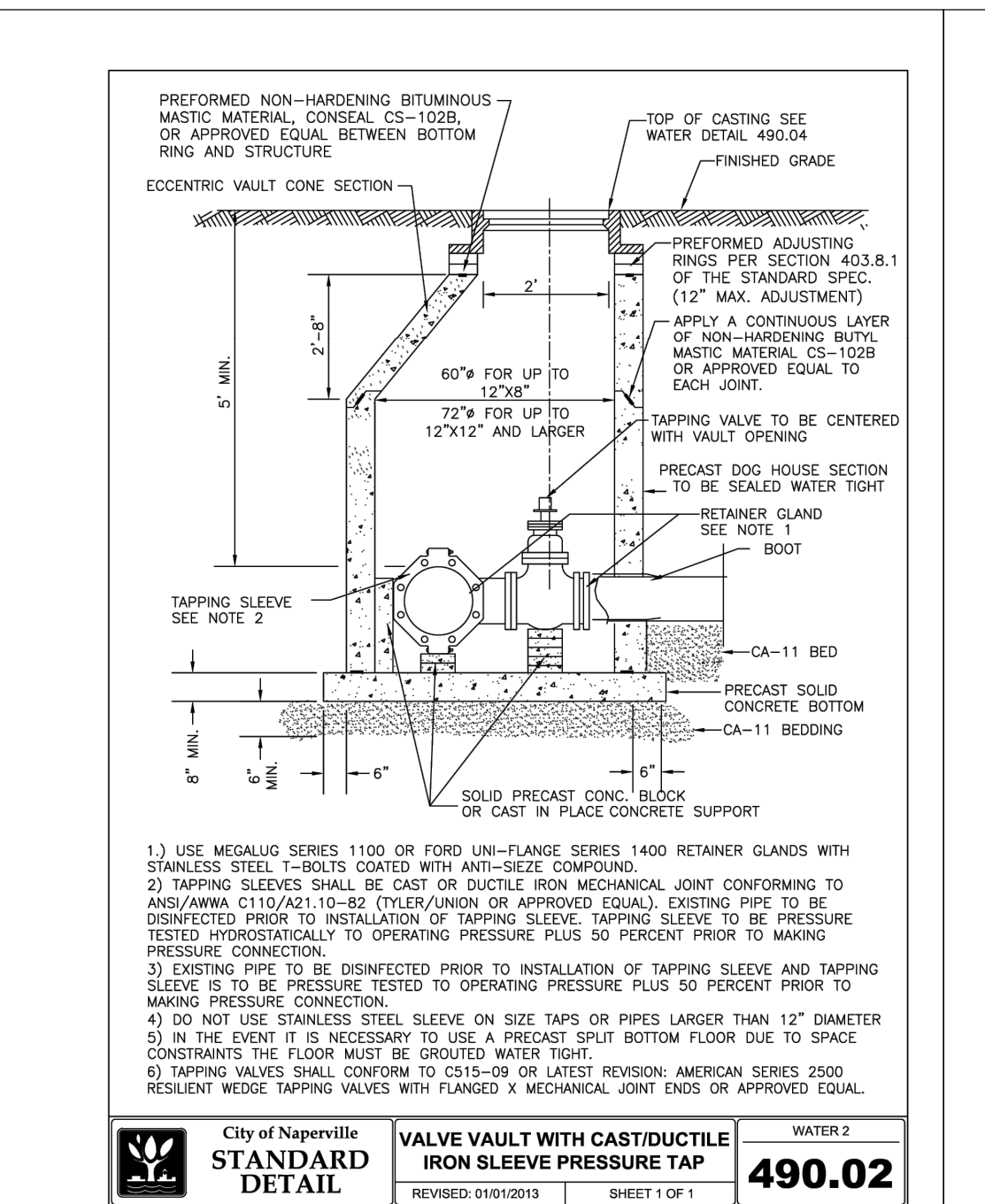
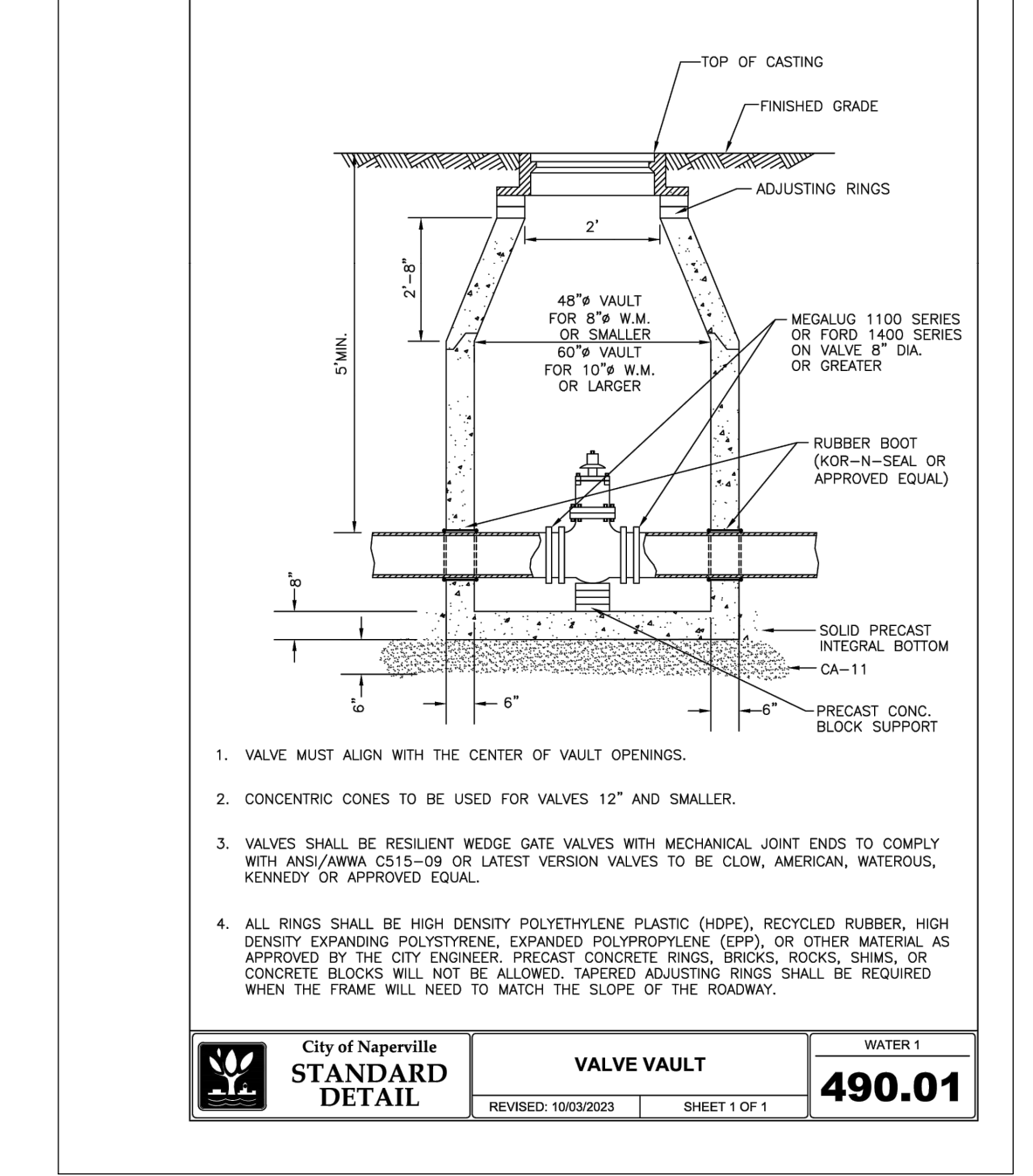
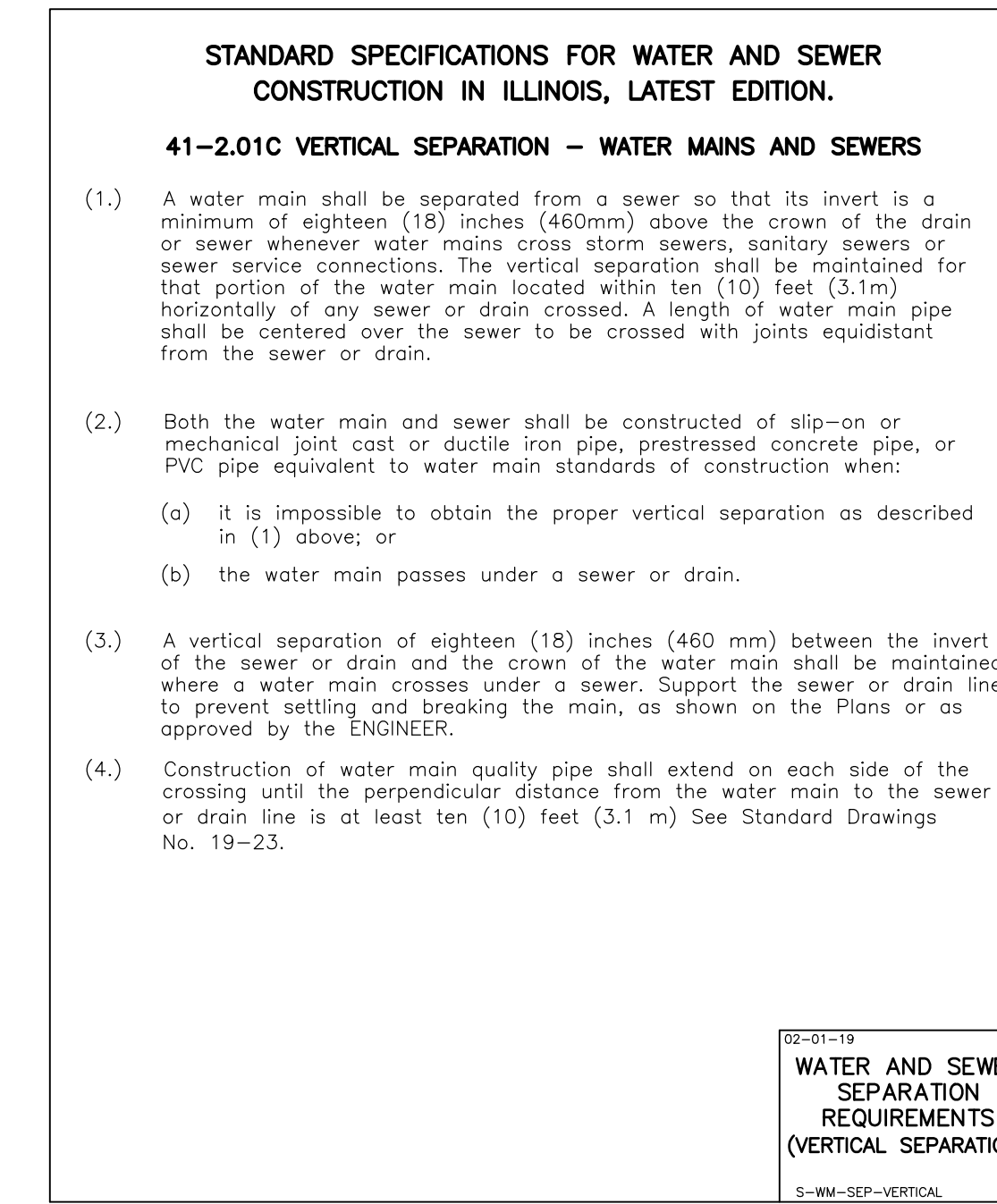
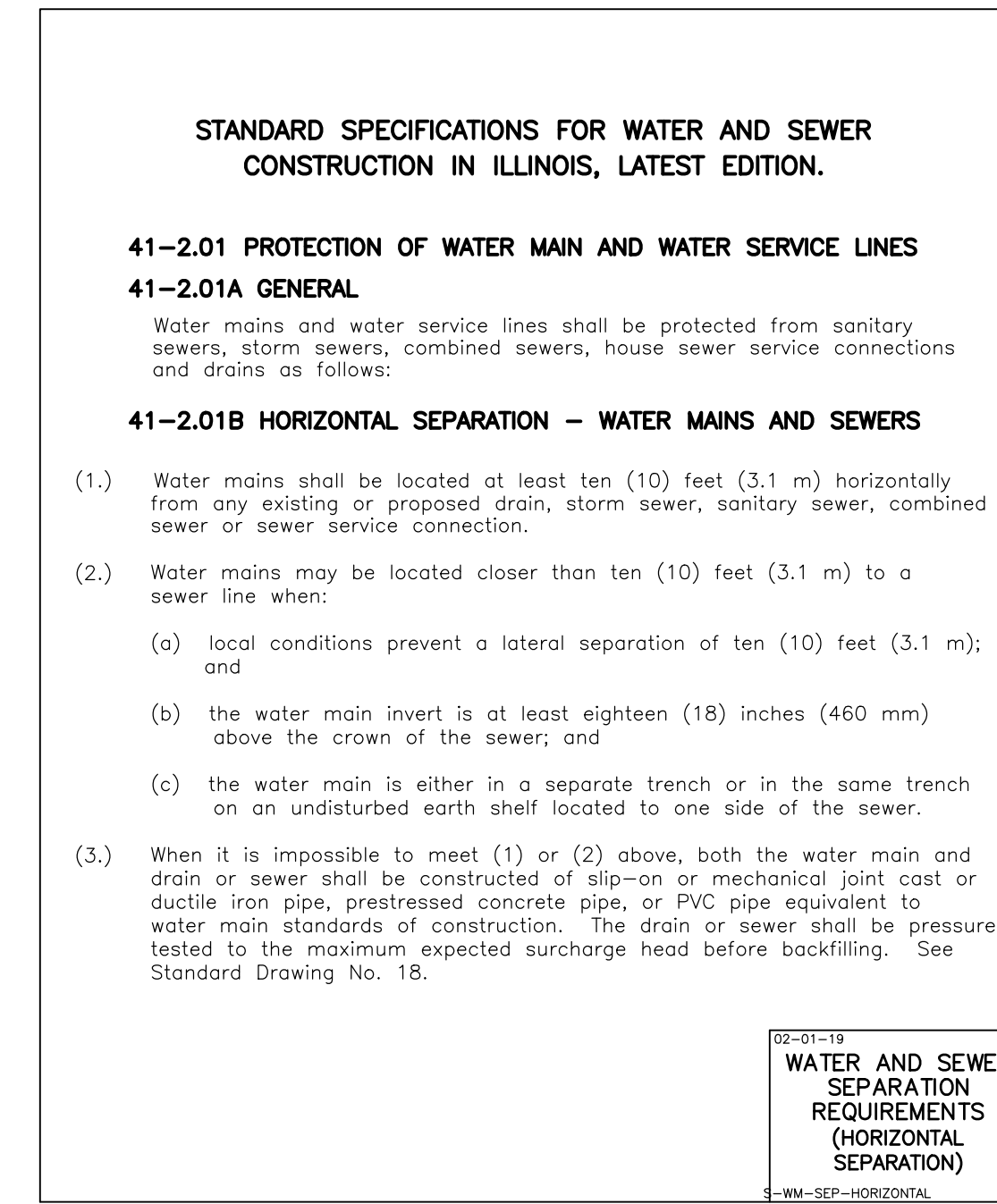
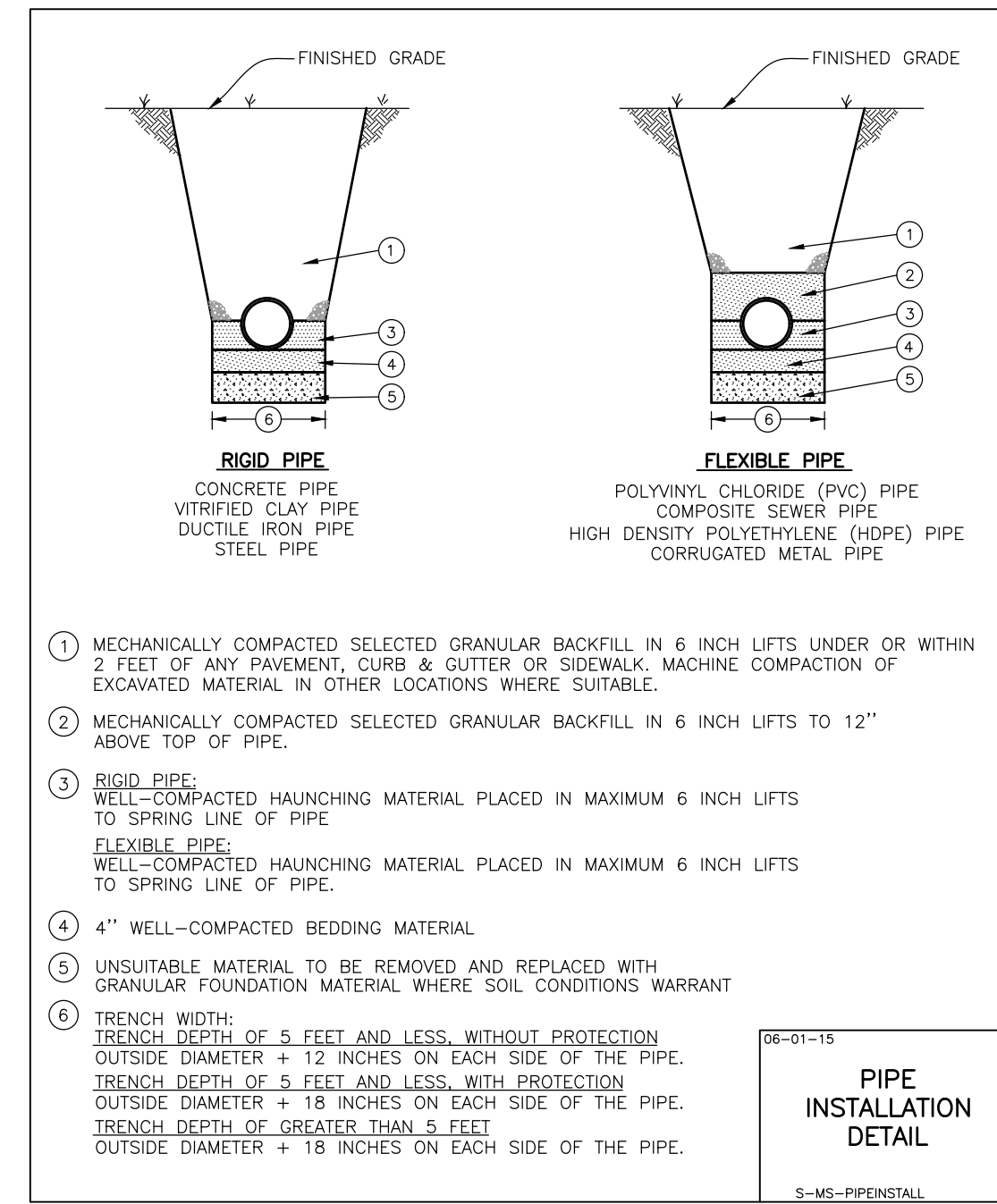
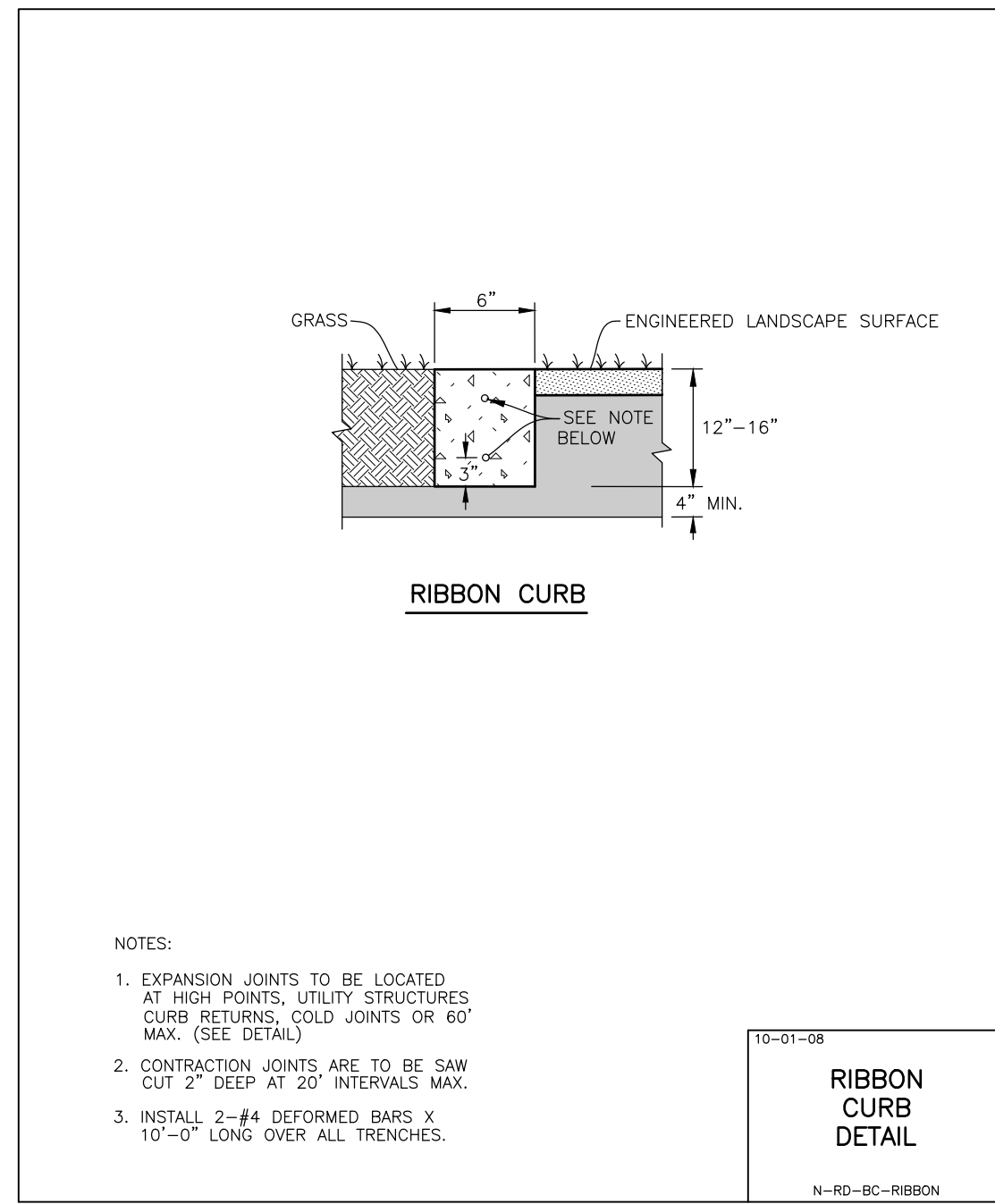
CONSTRUCTION DETAILS

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: JAW
 DATE: 08-30-23
 SCALE: N.T.S.

SHEET
14 OF 19
 ADK.NVIL01

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FINAL ENGINEERING - NOT FOR CONSTRUCTION



DATE	
REVISIONS	
08-16-24	REVISED PER CITY OF NAPERVILLE REVIEW #3/14
03-09-24	REVISED PER DUOT REVIEW
03-12-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY COMMENTS 1
DATE	

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PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 CONSTRUCTION DETAILS

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: JRM
 DATE: 08-30-23
 SCALE: N.T.S.
 SHEET 15 OF 19
 ADK.NVIL01

Date Name: E:\Vignelli\Manhard\Drawings\Plan_S&T\DETAILS.dwg - Updated By: Miller

CONCRETE FLARED END SECTION DETAIL

06-01-15

STORM 11

STANDARD DETAIL

REVISED: 06/01/2015

SHEET 1 OF 1

290.11

RIP-RAP

PIPE DIAMETER (IN.)	STONE RIP-RAP				BEDDING			
	QUALITY DESIGNATION	GRADATION NUMBER	MINIMUM THICKNESS (IN.)	MINIMUM WEIGHT RANGE (LB)	WEIGHT AVERAGE (LB)	SIZE AVERAGE (IN.)	MINIMUM THICKNESS (IN.)	
12"	B	3	8"	4'	1-50	10	4.5"	N/A
15"	B	3	8"	5	1-50	10	4.5"	N/A
18"	B	4	16"	6'	1-150	40	7"	6"
21"	B	4	16"	7'	1-150	40	7"	6"
24"	B	4	16"	8'	1-150	40	7"	6"
27"	B	4	16"	9'	1-150	40	7"	6"
30"	B	4	16"	10'	1-150	40	7"	6"
36"	B	5	22"	12'	3-400	90	10"	8"
42"	B	5	22"	14'	3-400	90	10"	8"
48"	B	6	26"	16'	6-600	170	12"	10"
54"	B	6	26"	18'	6-600	170	12"	10"
60"	B	6	26"	20'	6-600	170	12"	10"
72"	B	6	26"	24'	6-600	170	12"	10"

NOTE:

- FOR PIPE LARGER THAN 72" A SPECIAL DESIGN OF RIP-RAP OR APRON IS REQUIRED.
- REFER TO I.D.O.T. SPECIFICATIONS AND STANDARDS FOR BEDDING GRADATION.

STONE RIP RAP DETAIL

06-01-15

STORM 11

STANDARD DETAIL

REVISED: 06/01/2015

SHEET 1 OF 1

290.12

RIP RAP DETAIL (DISCHARGE TO DITCH)

06-01-15

STORM 11

STANDARD DETAIL

REVISED: 06/01/2015

SHEET 1 OF 1

290.12

GRATING FOR CONCRETE FLARED END SECTION

06-01-15

STORM 11

STANDARD DETAIL

REVISED: 06/01/2015

SHEET 1 OF 1

290.22

OCS-1A RESTRICTOR MANHOLE DETAIL

01-01-13

STORM 11

STANDARD DETAIL

REVISED: 01/01/2013

SHEET 1 OF 1

290.03

STORM MANHOLE - TYPE A

09-01-2018

STORM 5

STANDARD DETAIL

REVISED: 09/01/2018

SHEET 1 OF 1

290.01

INLET - TYPE A

09-01-2018

STORM 5

STANDARD DETAIL

REVISED: 09/01/2018

SHEET 1 OF 1

290.05

CATCH BASIN - TYPE A

09-01-2018

STORM 2

STANDARD DETAIL

REVISED: 09/01/2018

SHEET 1 OF 1

290.02

FRAME & GRATE FOR B-6.12 CURB & GUTTER

05-15-2015

STORM 11

STANDARD DETAIL

REVISED: 05/15/2015

SHEET 1 OF 1

290.11

FLAT SLAB TOP PRECAST REINFORCED CONCRETE

01-01-2013

STORM 3

STANDARD DETAIL

REVISED: 01/01/2013

SHEET 1 OF 1

290.03

STORM SEWER TRENCH SECTION IN PAVED AREAS

01-01-2013

STORM 20

STANDARD DETAIL

REVISED: 01/01/2013

SHEET 1 OF 1

290.20

CAST IRON STEPS

01-01-2013

STORM 6

STANDARD DETAIL

REVISED: 01/01/2013

SHEET 1 OF 1

290.06

BEEHIVE GRATE

05-15-2015

STORM 14

STANDARD DETAIL

REVISED: 05/15/2015

SHEET 1 OF 1

290.14

FRAME & LID OR GRATE

05-15-2015

STORM 10

STANDARD DETAIL

REVISED: 05/15/2015

SHEET 1 OF 1

290.10

SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE CITY DETAILS, THE CITY DETAILS SHALL TAKE PRECEDENCE.

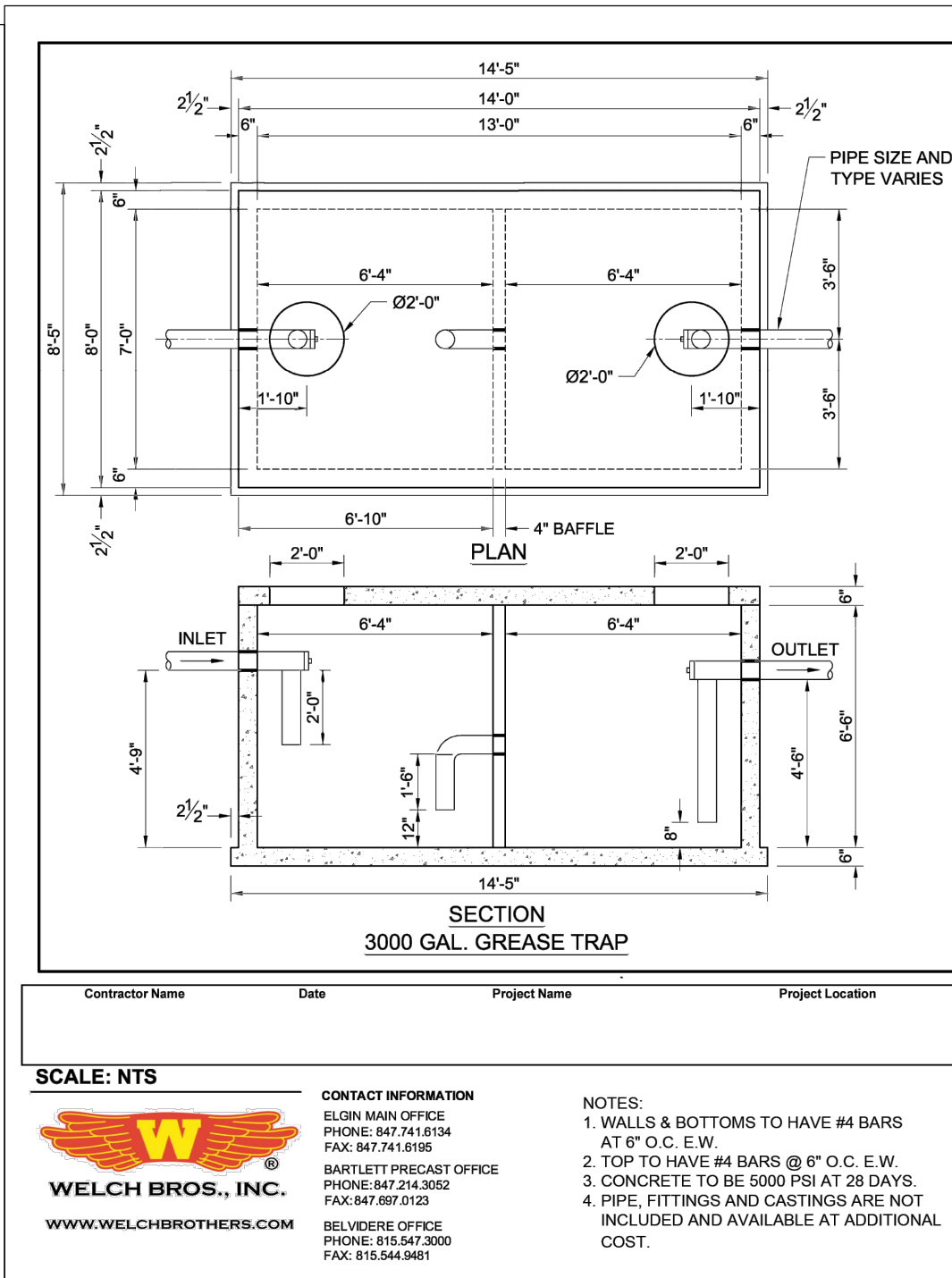
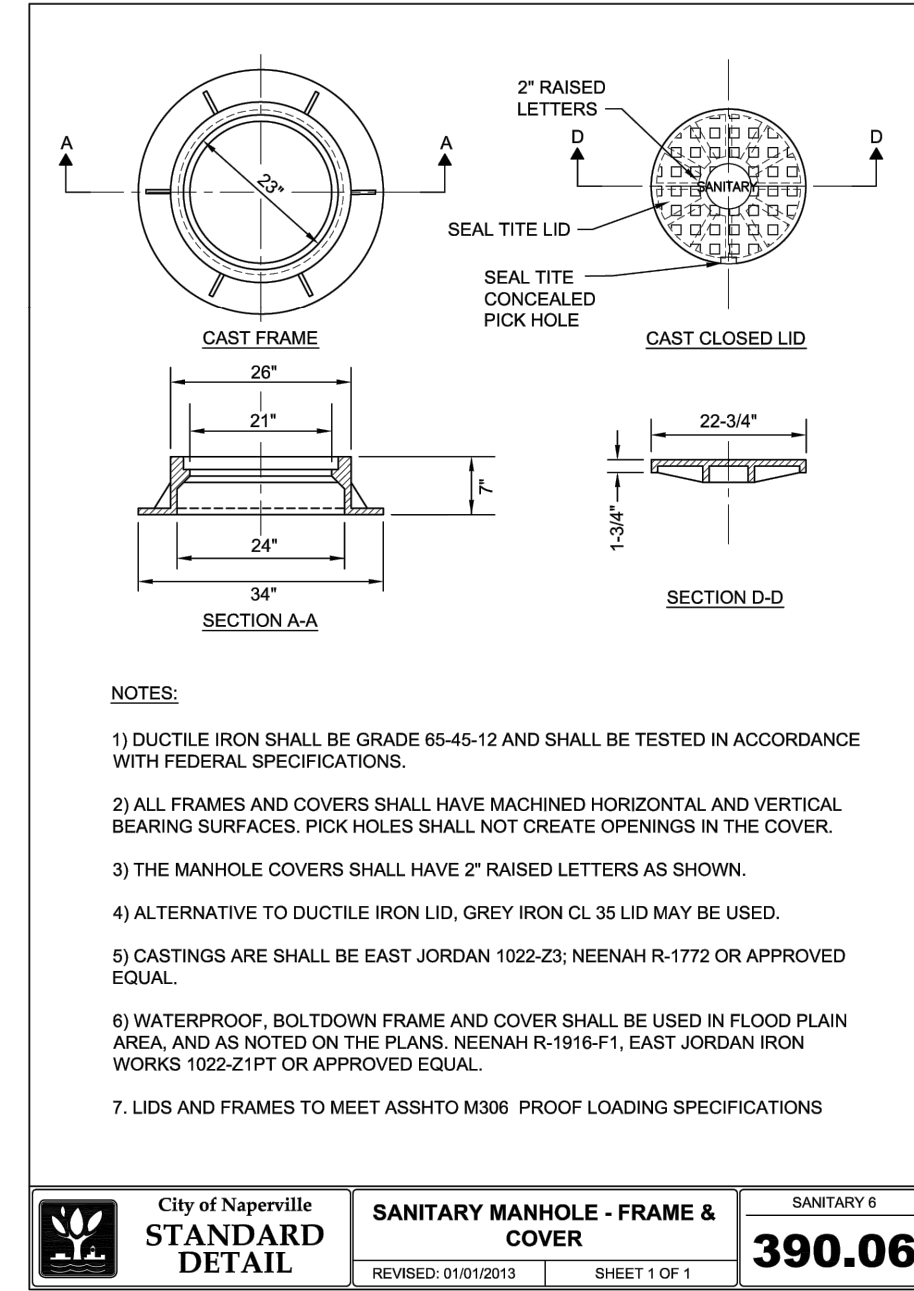
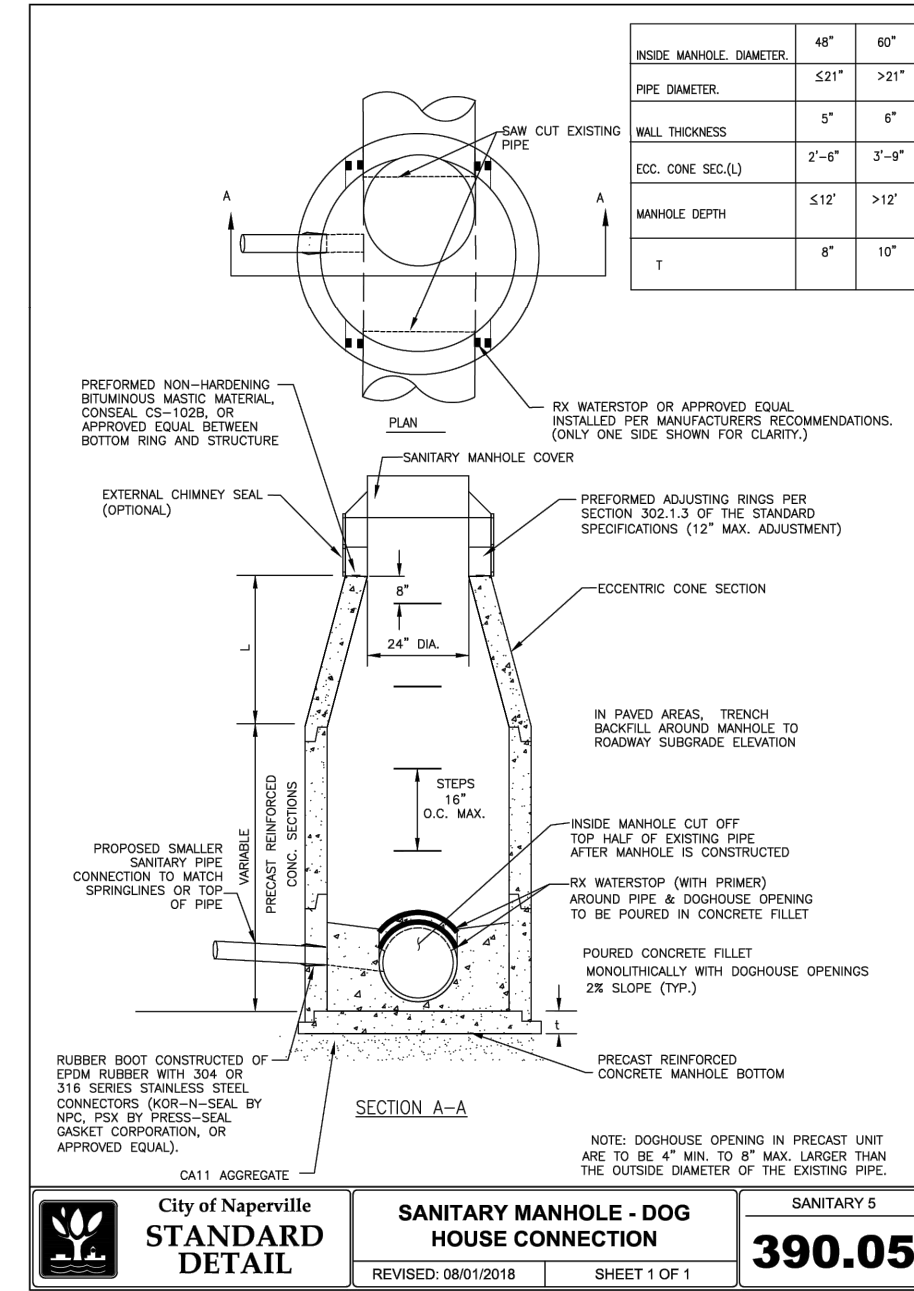
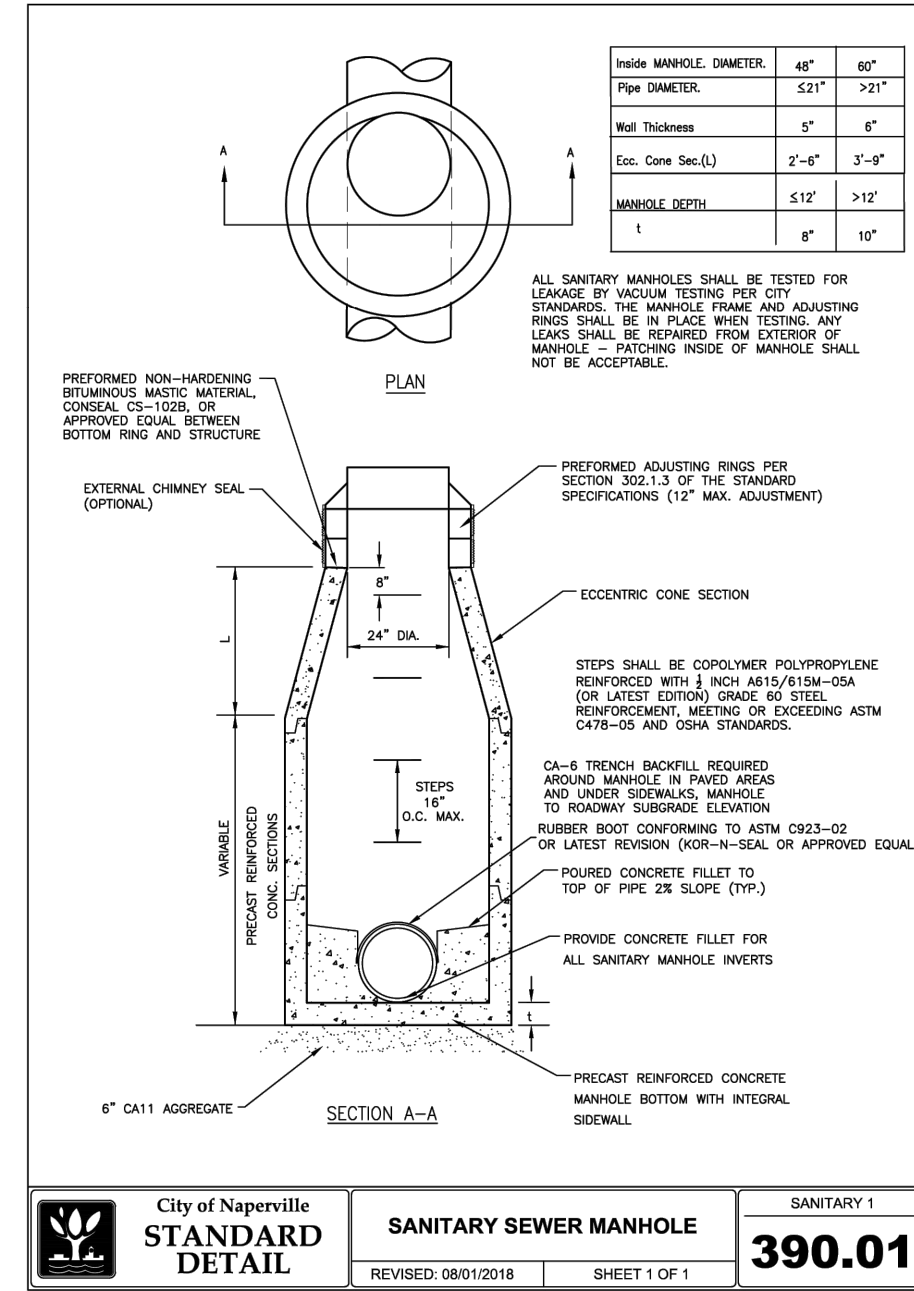
PROPOSED HEINEN'S GROCERY STORE
CITY OF NAPERVILLE, ILLINOIS
CONSTRUCTION DETAILS

FINAL ENGINEERING - NOT FOR CONSTRUCTION

MANHARD CONSULTING

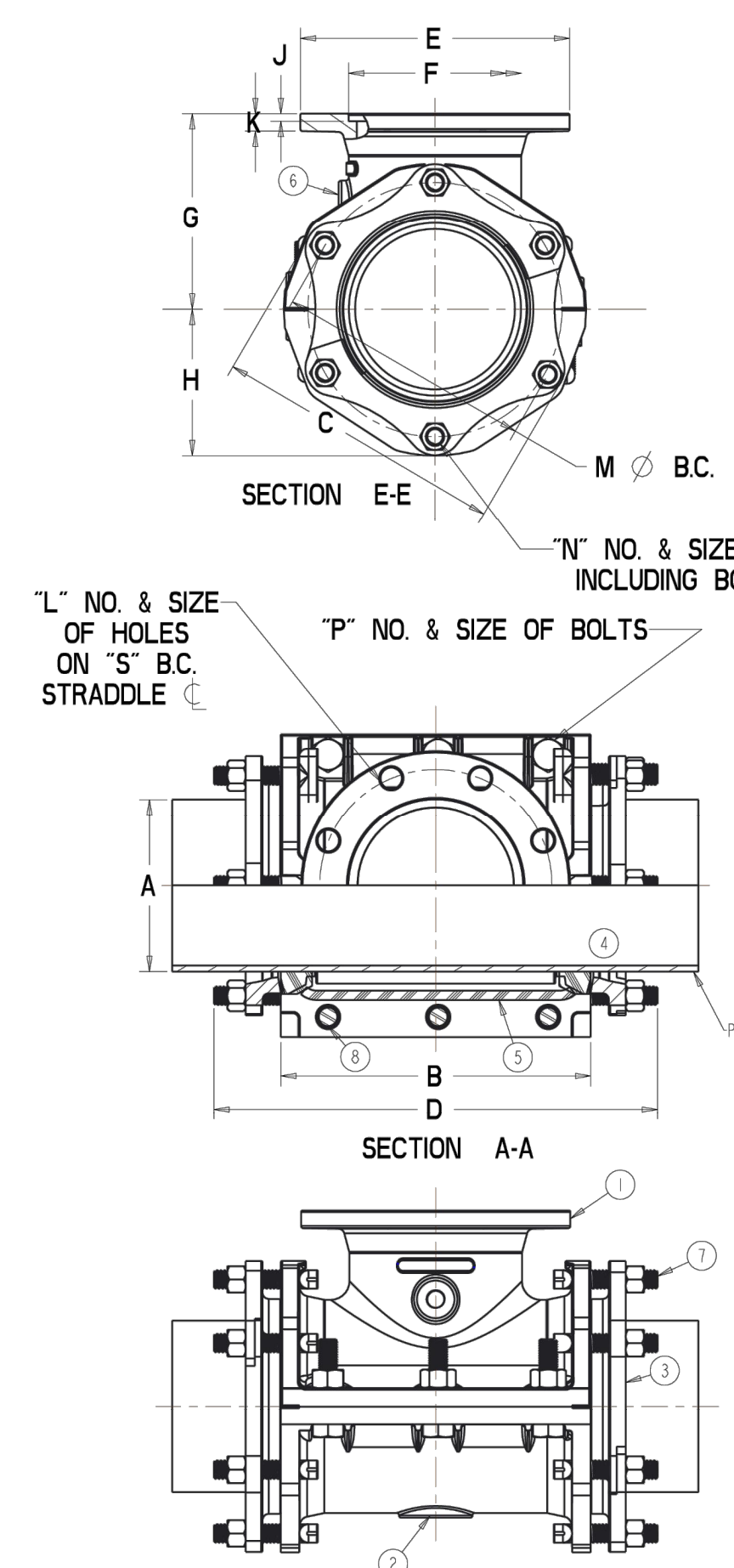
03-09-24 REVISED PER DUOT REVIEW
03-12-24 REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24 REVISED PER CITY COMMENTS 1

DATE: 08-30-23
SCALE: N.T.S.
SHEET 16 OF 19
ADK.NVL01



SIZE	A	Ø(Ø) OD RANGE	B	C	D REF	E	F	G	H	J	K	L	M	N	P	S
4x4	4.97 - 5.57	10.94	9.875	16.51	9.00	5.032	7.000	4.25	.250	.655	8 - .750	8.25	8 - .750	6 - .750	7.50	
6x4					9.00	5.035			.250		8 - .750			8 - .750	7.50	
6x6	7.05 - 7.60	12.66	12.250	18.17	11.00	7.060	8.000	5.96	.313	.715	8 - .875	10.38	12 - .750	8 - .750	9.50	
8x4					9.00	5.065	8.825		.250	.685	8 - .750			6 - .750	7.50	
8x6	9.22 - 9.79	11.97	14.375	18.36	11.00	7.065	9.342	7.19	.313	.765	8 - .875	12.75	12 - .750	6 - .750	9.50	
8x8					9.000	9.539			.313	.775	8 - .875			8 - .750	11.75	
10x4					9.00	5.016	11.125		.250	.938	8 - .750			8 - .875	7.50	
10x6					11.00	7.016	11.000		.313	1.000	8 - .875			8 - .875	9.50	
10x8	11.77 - 12.25	18.63	17.188	24.25	13.50	9.016	11.000	8.33	.313	1.125	8 - .875	15.44	16 - .750	10 - .875	11.75	
10x10					11.000	11.000			.313	1.188	8 - 1.000			10 - .875	14.25	
12x4					9.00	5.016			.250	.938	8 - .750			8 - .875	7.50	
12x6					11.00	7.016			.313	1.000	8 - .875			8 - .875	9.50	
12x8					13.50	9.016			.313	1.125	8 - .875			10 - .875	11.75	
12x10	14.03 - 14.51	21.75	19.688	27.25	16.00	11.016	12.00	9.44	.313	1.188	12 - 1.000	17.81	16 - .750	14 - .875	14.25	
12x12					13.016				.313	1.250	12 - 1.000			14 - .875	17.00	

ITEM	DESCRIPTION	REQ'D	MATERIAL	ASTM	NOTES
1	OUTLET	1	DUCTILE IRON	A536 65-45-12	
2	CAP	1	DUCTILE IRON	A536 65-45-12	
3	PIPE GLAND	2	CAST IRON	A126 CLASS B	
4	MJ GASKET	2	EPDM		MUELLER RUBBER SPEC 842
5	SIDE GASKET	2	EPDM		MUELLER RUBBER SPEC 846
6	PIPE PLUG	1	CAST IRON		
7	PIPE GLAND BOLTS & NUT	*N*	S88 OR A242	GRADE B OR TYPE 1	
8	SQUARE SIDE BOLT NUTS	*P*	STEEL ZINC PLATED	GRADE B	SC3



APPROVED
 By Jason W. Brubaker on 2/03 pm, Jun 02, 2009
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PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 CONSTRUCTION DETAILS

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: JRM
 DATE: 08-30-23
 SCALE: N.T.S.
 SHEET
17 OF 19
 ADK.NVIL01

REVISIONS
 DATE
 DESCRIPTION

08-09-24 REVISION PER CITY OF NAPERVILLE REVIEW #6
 03-09-24 REVISION PER DUDOT REVIEW
 03-09-24 REVISION PER CITY OF NAPERVILLE REVIEW #2
 02-09-24 REVISION PER CITY OF NAPERVILLE REVIEW

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SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE CITY DETAILS, THE CITY DETAILS SHALL TAKE PRECEDENCE.

MANHARD CONSULTING
STANDARD SPECIFICATIONS

GENERAL CONDITIONS

CONTRACTOR acknowledges and agrees that the use and reliance of these Plans and Specifications is sufficient consideration for CONTRACTOR'S covenants stated herein.

DEFINITION OF TERMS

- CLIENT shall mean AODK Architecture, which is the person or entity with whom Manhard Consulting has contracted with to prepare Civil Engineering PLANS and SPECIFICATIONS.
ENGINEER shall mean Manhard Consulting, a Civil Engineering consultant on the subject project.
PLANS and SPECIFICATIONS shall mean the Civil Engineering PLANS and SPECIFICATIONS prepared by the ENGINEER, which may be a part of the contract documents for the subject project.
CONTRACTOR shall mean any person or entity performing any work described in the PLANS and SPECIFICATIONS.
JURISDICTIONAL GOVERNMENTAL ENTITY shall mean any municipal, county, state or federal unit of government from whom an approval, permit and/or revision is required for any aspect of the subject project.

INTENT OF THE PLANS AND SPECIFICATIONS

The intent of the PLANS and SPECIFICATIONS is to set forth certain requirements of performance, type of equipment and structures, and standards of materials and construction. They may also identify labor and materials, equipment and transportation necessary for the proper execution of the work but are not intended to be infinitely determined so as to include minor items obviously required as part of the work. The PLANS and SPECIFICATIONS require new material and equipment unless otherwise indicated, and to require complete performance of the work in spite of omissions of specific references to any minor component part. It is not intended, however, that materials or work not covered by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS shall be supplied unless distinctly so noted. Materials or work described in words, which so qualify have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

INTERPRETATION OF PLANS AND SPECIFICATIONS

- CLIENT and/or CONTRACTOR shall promptly report any errors or ambiguities in the PLANS and SPECIFICATIONS to the ENGINEER. Questions as to meaning of PLANS and SPECIFICATIONS shall be interpreted by the ENGINEER, whose decision shall be final and binding on all parties concerned.
The ENGINEER will provide the CLIENT with such information as may be required to show revised or additional details of construction.
Should any discrepancies or conflicts on the PLANS or SPECIFICATIONS be discovered either prior to or after award of the contract, the ENGINEER'S attention shall be called to the same before the work is begun thereon and the proper corrections made. Neither the CLIENT nor the CONTRACTOR may take advantage of any error or omissions in the PLANS and SPECIFICATIONS. The ENGINEER will provide information when errors or omissions are discovered.

GOVERNING BODIES

All works herein proposed shall be completed in accordance with all requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, and all such pertinent laws, directives, ordinances and the like shall be considered to be a part of these SPECIFICATIONS. If a discrepancy is noted between the PLANS and SPECIFICATIONS and requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, the CLIENT and/or the CONTRACTOR shall immediately notify the ENGINEER in writing.

LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

When the PLANS and SPECIFICATIONS include information pertaining to the location of existing underground facilities and utilities (including but not limited to water mains, sanitary sewers, storm sewers, electric, telephone, gas and cable TV lines), such information represents only the opinion of the ENGINEER as to the approximate location and elevation of such facilities and utilities. At the locations wherein detailed positions of these facilities and utilities become necessary to the new construction, including all points of connection, the CONTRACTOR shall furnish all labor and tools to verify or definitely establish the horizontal location, elevation, size and material (if appropriate) of the facilities and utilities. The CONTRACTOR shall notify the ENGINEER at least 48 hours prior to construction if any discrepancies in existing utility information or conflicts with existing utilities exist. The ENGINEER assumes no responsibility whatever with respect to the sufficiency or accuracy of the information shown on the PLANS and SPECIFICATIONS relative to the location of underground facilities and utilities, nor the manner in which they are removed or adjusted.
It shall be the CONTRACTOR'S responsibility prior to construction, to notify all Utility Companies of the intent to begin construction and to verify the actual location of all such facilities and utilities. The CONTRACTOR shall also obtain from the respective Utility Companies the working schedules for removing or adjusting these facilities.

UNSATURATED SOILS

The PLANS have been prepared by the ENGINEER based on the assumption that all soils on the project are suitable to support the proposed improvements shown. The CLIENT or CONTRACTOR shall immediately notify the ENGINEER if he discovers or encounters an obstruction that prevents the installation of the improvement according to the line and grades shown on the PLANS.

PROTECTION OF TREES

All trees that are not to be removed shall be protected from damage. Trees shall not be removed unless requested to do so in writing by the CLIENT.

NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

The CONTRACTOR shall notify all applicable Jurisdictional Governmental Entities or companies, i.e., water, sewer, electric, telephone, gas and cable TV prior to beginning any construction so that said entity or company can establish the location and elevation of underground pipes, conduits or cables adjoining or crossing proposed construction.

TRAFFIC CONTROL

The CONTRACTOR shall provide when required by any JURISDICTIONAL GOVERNMENTAL ENTITY, all signs, equipment, and personnel necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause a change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. The CLIENT may, at his discretion, require the CONTRACTOR to furnish traffic control under other or other circumstances where in his opinion it is necessary for the protection of life and property. Emergency vehicle access shall be maintained at all times. Unless authorized by the CLIENT or CLIENT'S construction representative, all existing access points shall be maintained at all times by the CONTRACTOR. The need for traffic control shall be anticipated by the CLIENT.

WORK AREA

The CONTRACTOR, his agents and employees and their employees and all equipment, machinery and vehicles shall confine their work within the boundaries of the project or work area specified by the plan. The CONTRACTOR shall be solely liable for damage caused by him or his agents and employees and their equipment, machinery and vehicles on adjacent property or areas outside designated work areas.

UTILITY POLES

It shall be the responsibility of the CONTRACTOR to arrange for the relocation or bracing of existing utility poles that may be within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

RESTORATION

It is the intent of these SPECIFICATIONS that clean-up and final restoration shall be performed immediately upon completion of each phase of the work, both inside and outside the work area, or when so directed by the CLIENT. If such work is restored as nearly as possible to their original condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, bushes, hedges, trees, shrubs, fences, mailboxes, sewers, drain tiles, water mains, etc.

CLEANING UP

The CONTRACTOR shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees or work, and at the completion of the work he shall remove all his rubbish, tools, scaffolding and surplus materials and shall leave his work "boom clean" or its equivalent, unless more exactly specified.

ROAD CLEANING

The CONTRACTOR shall maintain roadways adjoining the project site free from mud and debris at all times. If mud and/or debris is carried onto the roadways from vehicles entering onto the highway from either the CONTRACTOR'S trucks, his employees' vehicles, or his material suppliers, the CONTRACTOR shall immediately remove said mud and/or debris.

SAFETY AND PROTECTION

The CONTRACTOR shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from fire, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR'S duties and responsibilities for safety and for protection of the work shall continue until such time as all work is completed and the CLIENT has notified CONTRACTOR that the work is acceptable. The duties of the ENGINEER do not include review of the adequacy of either the CONTRACTOR'S or the general public's safety in, on, or near the construction site.

HOLD HARMLESS

To the fullest extent permitted by law, any CONTRACTOR, material supplier or other entity by use of these plans and specifications hereby waives any right of contribution and agrees to indemnify, defend, save and hold harmless the CLIENT and ENGINEER and its agents, employees and consultants from and against all manner of claims, causes, causes of action, damages, losses and expenses, including but not limited to, attorneys' fees arising out of, resulting from or in connection with the performance of any work, pursuant to or with respect to these plans and specifications. However, this indemnity shall not be construed to indemnify ENGINEER, its consultants, agents or employees against its own negligence.

Claims, damages, losses and expenses as these words are used in the Agreement shall mean and include, but not be limited to (1) injury or damage occurring by reason of the failure of or use of or misuse of any hoist, riggings, blocking, scaffolding or any and all other kinds of items of equipment, whether or not the same be owned, furnished or loaned by any party or entity, including any contractor; (2) all attorneys' fees and costs incurred in bringing an action to enforce the provisions of this indemnity; (3) costs for time expended by the indemnified party and its employees, at its usual rates plus costs or travel, long distance telephone and reproduction of documents and (4) consequential damages.

In any and all claims against the CLIENT or ENGINEER or any of their agents or employees and consultants by any party, including any employee of the CONTRACTOR or any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or any other employee benefit acts or any insurance maintained by CONTRACTOR or any Subcontractor or any other party.

INSURANCE

Any party using or relying on these plans, including any contractor, material supplier, or other entity shall obtain, (prior to commencing any work) general public liability insurance insuring against all damages and claims for any bodily injuries, death or property damage arising out of any work, including the construction work provided for in these plans, and shall name the CLIENT and ENGINEER and its consultants, agents and representatives as additional insureds under such insurance policy, provided that any party using or relying on these plans having obligations to maintain specific insurance by reason of any agreement with CLIENT or any CONTRACTOR or ENGINEER shall provide evidence and certificates of insurance as required by such contract or agreement. Such insurance should contain a clause stating that the insurance is primary coverage for ENGINEER and ENGINEER'S other applicable coverage is considered secondary. Such insurance shall not limit any liability of any party providing work or services or providing materials.

THIRD PARTY BENEFICIARY

Manhard Consulting, Ltd., the ENGINEER, is intended to be a third party beneficiary of this willing agreement and requirement. Note: These Specifications are for Northern Illinois.

DETAILED SPECIFICATIONS

I. DEMOLITION

The CONTRACTOR shall coordinate with respective utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility company concerning portions of work which may be performed by the Utility Company's forces and any fees which are to be paid to the utility company for their services. The CONTRACTOR is responsible for paying for all fees and charges. Should removal and/or relocation activities damaged features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the contract documents. Except for materials designed to be relocated on this plan, all other construction materials shall be new. Prior to demolition occurring, all erosion control devices are to be installed.

All existing utility lines and conduits located under proposed buildings shall be removed and properly backfilled. All utility lines and conduits located under drives, on-site roads, parking lots or sidewalks shall be filled with a flowable backfill and end plugged. All existing structures shall be removed. All existing utility lines located under drive areas shall be left in place and plugged at all structures.

The CONTRACTOR is responsible for demolition, removal and disposal (in a location approved by all JURISDICTIONAL GOVERNING ENTITIES) of all structures, pads, walls, frames, foundations, road, parking lots, drives, drainage structures, utilities, etc., such that the improvements shown on these plans can be constructed. All demolition work shall be in accordance with all applicable federal, state and local laws and regulations. All facilities to be removed shall be undercut to suitable material and brought to grade with suitable compacted fill material per the specifications.

The CONTRACTOR is responsible for obtaining all permits required for demolition and disposal.

Electrical, telephone, cable, water, fiber optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company. CONTRACTOR must protect the public at all times with fencing, barricades, enclosures, and other appropriate best management practices. Continuous access shall be maintained for surrounding properties at all times during demolition.

All fire access lanes within the project area shall remain in service, clean and debris, and accessible for use by emergency vehicles. The CONTRACTOR shall coordinate water main work with the Fire Department and the JURISDICTIONAL GOVERNING ENTITY to plan the proposed improvements and to ensure adequate fire protection is available to the location of this specific work and through all phases of construction. CONTRACTOR shall be responsible for any required water main shut offs with the JURISDICTIONAL GOVERNING ENTITY during construction. Any costs associated with water main shut offs will be the responsibility of the CONTRACTOR and no extra compensation will be provided. CONTRACTOR shall maintain all existing parking areas, sidewalks, drives, etc. clear and free from any construction activity and/or material to ensure easy and safe

pedestrian and vehicular traffic to and from the site. CONTRACTOR shall coordinate phase all construction activity within proximity of the building and utility interruptions with the facility manager and the Jurisdictional governing entity.

CONTRACTOR may limit saw-cut and pavement removal to only those areas where it is required as shown in these construction plans, however if any damage is incurred on any of the surrounding pavement, etc. the CONTRACTOR shall be responsible for ITS removal and repair.

Any existing wells encountered shall be exposed and sealed 3' below proposed finish grade by the CONTRACTOR in accordance with Section 920.120 (latest edition) of the Illinois Water Well Construction Code, Department of Public Health, and all applicable local rules and regulations. CONTRACTOR is responsible for obtaining all permits required by JURISDICTIONAL GOVERNMENTAL ENTITIES for abandoning existing wells.

Any existing septic tanks and grease traps encountered shall have all liquids and solids removed and disposed of by a licensed commercial hauler in accordance with JURISDICTIONAL GOVERNING ENTITY regulations, and the tank and grease traps shall then be filled with suitable materials or removed from the site and disposed of by a licensed hauler.

Voids left by any item removed under any proposed building, pavement, walk, etc. or within 24" thereof shall be filled and compacted with suitable materials by the CONTRACTOR.

The CONTRACTOR shall be responsible for the disconnection of utility services to the existing buildings prior to demolition of the buildings. Any material containing asbestos found within existing structures shall be removed from the site and disposed of off-site by the CONTRACTOR in accordance with federal, state and local laws and regulations. CONTRACTOR shall develop and implement a daily program of dust control and shall submit and obtain JURISDICTIONAL GOVERNING ENTITY approval of dust control procedures prior to demolition of any structures. Modification of dust control procedures shall be performed by the CONTRACTOR to the satisfaction of the JURISDICTIONAL GOVERNING ENTITY as requested.

The CONTRACTOR shall coordinate all demolition with the JURISDICTIONAL GOVERNING ENTITY and CLIENT to ensure protection and maintenance of sanitary sewer and water utilities as necessary and to provide stormwater conveyance until new facilities are constructed, tested and placed into operation.

The locations of all existing utilities shown on this plan have been determined from the best information available and are given for the convenience of the CONTRACTOR and are not to be interpreted as the exact location, or as the only obstacles that may occur on the site. The ENGINEER assumes no responsibility for their accuracy. Prior to the start of any demolition activity, the CONTRACTOR shall notify the utility companies for location of existing utilities and shall verify existing conditions and proceed with caution around any anticipated features.

The CONTRACTOR is responsible for removing the existing irrigation system in the areas of proposed improvements. The contractor shall cap the existing irrigation system to remain such that the remaining system shall continue to function properly.

The parking lot shall be completed in sections such that it does not interrupt the facility operations. The CONTRACTOR shall coordinate with the construction manager for work to be completed in sections.

II. EARTHWORK

STANDARDS

This work shall be completed in conformance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition except as modified below.

SOIL BORING DATA

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction site, should be made available by the CLIENT to the CONTRACTOR. These borings are presented for whatever purpose the CONTRACTOR chooses to make of them. The ENGINEER makes no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof. Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different than indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations and observations to determine soil and groundwater conditions.

EARTHWORK CALCULATIONS AND CROSS SECTIONS The CONTRACTOR understands that any earthwork calculations, quantities or cross sections that have been furnished by the ENGINEER are for information only and are provided without any guarantee by the CLIENT or ENGINEER whatsoever as to their sufficiency or accuracy. CONTRACTOR warrants that he has performed his own subsurface investigations as necessary and his own calculations and cross sections to determine site soil conditions and earthwork volumes. The ENGINEER makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction to tolerances and construction methods that are beyond the control of the ENGINEER.

CLEARING, GRUBBING AND TREE REMOVAL The site shall be cleared, grubbed, and trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage by the CONTRACTOR. The CONTRACTOR shall be responsible for the removal of all trees and stumps located within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

TOPSOIL STRIPPING Upon completion of demolition, clearing, grubbing and tree removal, all topsoil shall be stripped from under all buildings and pavements areas, and other areas necessary to complete the work. Topsoil stripped shall be placed in stockpiles in locations as designated by the CLIENT.

TOPSOIL RESPREAD Upon completion of roadway and/or parking lot improvements and installation of underground utilities a minimum of six inches (6") of topsoil shall be respread over all unpaved areas which have been disturbed by earthwork construction, except building pads and other designated areas, which shall be kept free from topsoil.

SEEDING Upon completion of topsoil respread, the CONTRACTOR shall apply seed and fertilizer to all respread areas in accordance with DOT standards or as designated on landscape drawings and specifications provided by the CLIENT.

SOODING Upon completion of topsoil respread, the CONTRACTOR shall install sod to all areas designated on the plans or as designated on the landscape drawings and specifications provided by the CLIENT.

'EXCAVATION AND EMBANKMENT Upon completion of topsoil stripping, all excavation and embankments shall be completed as shown on the PLANS. All suitable excavated materials shall be hauled, placed (moisture conditioned if necessary) and compacted in the embankment areas. The CONTRACTOR shall include all dewatering, temporary ditches and cutverts necessary to complete the excavation and embankment.

Specified inclusions in the scope of Excavation and Embankments is grading and shaping of all cut or fill areas including swales and ditches; handling of sewer spoil, etc., and all work required to provide positive drainage at the end of each working day and upon completion of a section.

The CONTRACTOR shall be responsible for the excavation of all swales and ditches and for the excavation or filing of the roads, building pads and parking lots within the work limits to lines & grades shown on the plans. He shall be responsible for obtaining compaction in accordance with the minimum values listed on the plans. The CONTRACTOR shall be responsible for the removal of all trees and stumps located within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

PERCENT COMPACTION PAVEMENT & GRADE AREAS

Table with 5 columns: Type Material, Standard, Percent, Grade Areas, Percent. Rows include Sandy Soils, Modified Proctor (65% 90%), Clayey Soils, Standard Proctor (65% 90%).

The CONTRACTOR shall notify the CLIENT if proper compaction cannot be obtained so that the CLIENT may determine what remedial measures may be needed.

A soils testing firm employed by the CLIENT shall determine which soils are unsuitable. Materials in their natural state being defined as unsuitable that would be suitable material if moisture conditioned, shall be conditioned by the CONTRACTOR and used as suitable embankment material or hauled from the site.

- 1. Any soil whose optimum moisture content exceeds 25%.
2. Any cohesive soil with an unconfined compressive strength of 1.5 tons per square foot or less.
3. Any soil whose silt content exceeds 60% by weight.
4. Any soil whose maximum density is less than 100 pounds per cubic foot.
5. Any soil containing organic, deleterious, or hazardous material.

Ditches and swales are to be excavated to the lines and grades indicated on the PLANS. All suitable materials excavated from the ditches shall be used in construction of the embankments.

The CONTRACTOR shall notify the CLIENT immediately upon encountering groundwater during excavation. If in the opinion of the CLIENT or the JURISDICTIONAL GOVERNING ENTITY, the condition necessitates the installation of perforated drain tile bedded in washed gravel or open storm sewer structure within excavated with fabric, the CONTRACTOR shall install the same.

During excavation and embankment, grades may be adjusted to achieve an overall site earthwork balance. The CONTRACTOR shall cooperate fully with the CLIENT in adjustment of grades, construction methods and placement of material to meet the above goals and shall immediately advise CLIENT if he believes that the earthwork will not be assured.

EROSION CONTROL Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

UNDERCUTTING DURING EARTHWORK If the subgrade cannot be dried adequately by discing as outlined above for placement of material to planned grades and if the CLIENT determines that the subgrade does not meet the standards set forth above, the CLIENT may require undercutting.

MISCELLANEOUS CONTRACT ITEMS The following items may be required at the CLIENT'S option, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY:

- (1) GEOTEXTILE FABRIC Geotextile fabric or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY where proper compaction of embankments over existing soft soils is not possible. Geotextile fabric shall meet the material specifications of and shall be installed in accordance with the above standards.
(2) EROSION CONTROL BLANKET Erosion control blanket or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY for the stabilization of disturbed areas. Erosion control blanket shall meet the material specifications of and shall be installed in accordance with the above standards. The Illinois Urban Manual and/or the details shown on the PLANS.

III. UNDERGROUND IMPROVEMENTS STANDARDS All underground improvements shall be constructed and tested in accordance with the Standard Specifications for Water and Sewer Construction in Illinois and Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition. In the event of conflicting guidelines, the more restrictive shall govern.

SELECTED GRANULAR BACKFILL Selected Granular Backfill shall be required for all sewer and water main trenches lying under existing or proposed streets, driveways, parking lots and within 24" thereof, and unless noted on PLANS.

MANHOLES, INLETS & CATCH BASINS Manholes, Inlets and Catch Basins shall be constructed of reinforced precast concrete ring construction with tongue and groove joints in conformance with the latest revision of ASTM designation C-478. All joints between sections and frames (except sanitary manholes, see Section III-B Manholes, below) shall be sealed with mastic type bituminous joint compound. CONTRACTOR shall remove all excess mastic on inside of structure and buffer joints with mortar. Manholes are to have offset cones except that no cone shall be used on storm manholes 6'-0" deep or less in which case a reinforced concrete flat top section shall be used, and Valve Vaults shall have conical cones. Only concrete adjustment rings will be permitted where necessary and shall be limited to two adjustment rings totaling not more than 8" in height. All manholes and catch basin steps shall be copolymer polypropylene with continuous 1/4" steel reinforcement as manufactured by YA Industries, or approved equal.

AUGERBORING AND CASING Auger boring and casing pipe, installed where shown on the PLANS. The carrier pipe shall be securely banded and banded and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the ends shall be sealed with hydraulic cement.

SEWER (OPEN BORE) The CONTRACTOR shall auger (open bore) where noted on PLANS.

The CONTRACTOR shall auger (open bore) where noted on PLANS.

HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS

Horizontal and vertical separation of water and sewer mains shall be in accordance with Standard Specifications for Water and Sewer Construction in Illinois Section 411-2.01A and 411-2.01B and Standard Drawing 18, 19, 20, 21, 22, 23 and 24.

STRUCTURE ADJUSTMENTS

Structures shall be adjusted to the finished grade as shown on PLANS.

B. SANITARY SEWERS AND APPURTENANCES

SANITARY SEWER PIPE

- Sanitary sewer pipe including building services, shall conform to the following:
(1) Polyvinyl Chloride (PVC) Sewer Pipe shall conform to ASTM D3034 (4-inch thru 18-inch) or ASTM F679 (18-inch thru 48-inch) minimum SDR 26 with flexible elastomeric sealed gasketed joints conforming to ASTM D3212 and F477.
(2) Ductile Iron Sewer Pipe shall conform with ANSII/AWWA C151/A21.51 Class 50, cement lined with push on type joints conforming to ANSII/AWWA C111/A21.11.

Sanitary sewers shall include bedding and backfilling. MANHOLES Manholes shall be constructed in conformance with Section IIIA Manholes, etc. above. The concrete base and bottom section shall be constructed of precast reinforced concrete monolithically cast sections including benches, pipe connection and invert flow lines. Manhole frames and lids shall be Neenah R-1772 or approved equal, with lids imprinted "SANITARY", with recessed pick handles. Manhole joints between manhole rings and frames and between manhole sections shall be set on preformed plastic gasket consisting of a homogeneous blend of refined hydrocarbon resins and plasticizing compounds reinforced with inert mineral filler to provide a water tight seal. All pipe connection openings shall be precast with resilient rubber watertight pipe sleeves. A 10" elastomeric band (chimney seal) shall be installed extending from the manhole top to the manhole frame as shown on detail. Manholes shall include steps, frame & grate, bedding, and trench backfill.

FOUNDATION, BEDDING AND HAUNCHING Foundation, Bedding and Haunching shall be wet coarse aggregate or moist fine aggregate in accordance with the above standards and placed as shown on the detail.

TESTING Sanitary sewers shall be air tested and tested for deflection in accordance with the requirements of Section 311-1.12 TESTING AND INSPECTION FOR ACCEPTANCE OF SANITARY SEWERS' of the Standard Specifications for Water and Sewer Construction in Illinois or the JURISDICTIONAL GOVERNING ENTITY, whichever is more restrictive. In addition, a televised inspection of the completed sanitary sewers shall be conducted and a copy of the videotape and report furnished to the JURISDICTIONAL GOVERNING ENTITY.

All sanitary manholes are to be tested for water tightness in accordance with ASTM C998 'Standard Practice for Infiltration and Effluent Acceptance Testing of Installed Precast Concrete Pipe Sewers, Inc.' or ASTM C1244 'Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test'.

SERVICES A wye branch or "tee" and sanitary service line, properly plugged and sealed shall be constructed as shown on the PLANS. The ends of all services shall be marked with a 4"x4" post extending 36" above grade and painted red. The CONTRACTOR shall keep accurate records of all Wye or Tee locations as measured from the downstream manhole as well as the service lengths and furnish same to CLIENT.

RISEIS Riseis shall be constructed in locations as shown on the PLANS and according to the detail.

DROP MANHOLE CONNECTIONS Drop manhole connections to existing manholes shall be constructed according to the PLANS and the detail.

'SANITARY SEWER FORCE MAIN - INTENTIONALLY OMITTED TELEVISION INSPECTION Upon completion of construction a television inspection of the sanitary sewer system shall be performed on all portions of the sewer if required by the JURISDICTIONAL GOVERNING ENTITY. Videotapes and written report of all television inspections shall be provided to the CLIENT. The form of report and type and format of the videotape shall be approved by the JURISDICTIONAL GOVERNING ENTITY.

All sewers and appurtenances shall be cleaned prior to inspection and testing required by this section. All defects and corrective work required as the result of television inspection shall be performed by the CONTRACTOR without delay. All dips, cracks, leaks, improperly sealed joints and departures from approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. Upon completion thereof, the sewer shall be retested and such further inspection made as may appear warranted by the CLIENT.

MISCELLANEOUS All floor drains shall be connected to the sanitary sewer.

C. WATER MAINS AND APPURTENANCES WATER MAIN PIPE (8" AND LARGER) Water main pipe shall conform to the following:
(1) Ductile iron pipe shall be per ANSII/AWWA C151/A21.51, Thickness Class 52, minimum 150 psi working pressure, cement lined in accordance with ANSII/AWWA C104/A21.4, with 'push on' type joints (2).

Installation shall be in accordance with ANSII/AWWA C600 (Ductile Iron). All water main shall have mechanical joint cast iron or ductile iron fittings in accordance with ANSII/AWWA C110/A21.10 or compact ductile iron fittings in accordance with ANSII/AWWA C152/A21.53 with 250 psi working pressure.

Poured or monolithic concrete thrust blocks are required to brace all ends, plugs, caps, and bends in 11/4 degree deflection or greater. Minimum cover for all water mains, including services, shall be 5'-6" from the finished grade. Water main shall include bedding and backfilling.

VALVE VALVES All valves shall be resilient wedge gate valves conforming to the latest revision of ANSII/AWWA C515, with a rated working pressure of 200 psi in accordance with JURISDICTIONAL GOVERNING ENTITY requirements, except that butterfly valves conforming to ANSII/AWWA C504 shall be constructed on all water mains 18" diameter and larger. Valves shall be non-rising stem and shut close by turning clockwise.

VALVE VAULTS Valve vaults shall be constructed in conformance with Section IIIIA Manholes, etc. above. Frame and lids shall be as approved by the JURISDICTIONAL GOVERNING ENTITY and shall be imprinted "WATER".

'VALVE BOXES - INTENTIONALLY OMITTED FIRE HYDRANTS Fire hydrants shall be per JURISDICTIONAL GOVERNING ENTITY requirements. All fire hydrants shall be located as shown on the PLANS and shall be painted in a manner acceptable to the JURISDICTIONAL GOVERNING ENTITY after installation and shall be adjusted to final grade.

TAP, STOPS AND BOX The CONTRACTOR shall determine from the JURISDICTIONAL GOVERNING ENTITY as to the exact style, type, and manufacture of corporation stops, ground key stops and services boxes preferred by the JURISDICTIONAL GOVERNING ENTITY and shall furnish same.

'SMALL WATER SERVICES (2" DIAMETER OR LESS) - INTENTIONALLY OMITTED DISINFECTION Disinfections shall meet all of the requirements of the State of Illinois, Environmental Protection Agency, Public Water Supplies Division. The safe quality of the water supply shall be demonstrated by bacteriological analysis of samples collected at sampling taps on at least two consecutive days following disinfection of the mains and copies of the said report submitted to the JURISDICTIONAL GOVERNING ENTITY and the CLIENT.

PRESSURE TEST Allowable leakage, test pressure and duration shall be as per the requirements of the JURISDICTIONAL GOVERNING ENTITY.

PRESSURE CONNECTION TO EXISTING WATER MAIN The CONTRACTOR shall maintain system pressure on existing water main at all times. Existing water main shall be located and material excavated, and valve basin slab and main supports installed. The existing water main shall be cleaned and the exterior disinfected prior to installing the tapping tee (material to conform to AWWA C110). The tapping valve shall be installed (valve to conform to AWWA C500) and the pressure tap completed in accordance with the detail on the plans. Valve shall be constructed in conformance with the detail. Payment for pressure connection to existing water main shall include disinfection, tapping valve and tee, valve vault, frame and lid, bedding, and trench backfill.

'DRY CONNECTION TO EXISTING WATER MAIN - INTENTIONALLY OMITTED POLYETHYLENE ENCASMENT (FOR DUCTILE IRON WATER MAIN ONLY) The CLIENT, or JURISDICTIONAL GOVERNING ENTITY may request that portions of the water main be encased in a polyethylene encasement in accordance with ANSII/AWWA C105/A21.5 should soil conditions so warrant its use.

FOUNDATION, BEDDING AND HAUNCHING Foundation, Bedding and Haunching shall be wet coarse aggregate or moist fine aggregate in accordance with the above standards and placed as shown on the detail.

TRACER WIRE If the distance between valves when installing PVC pipe exceeds 1,000', tracer wire stations will be required for current induction. Tracer wire stations in grass areas will be Rhino Trivex Flex Tracing Wire Stations or approved equal. In paved areas, they will be Valvol Tracer Wire Access Box for H2O loading or approved equal.

For open cut construction, using PVC pipe, a continuous, insulated, 12 gauge copper wire suitable for direct burial shall be taped on top of all piping to provide for locating following construction. This wire shall be securely terminated inside every valve vault on stainless steel hardware with an exposed lead of at least 12". A mechanically secure soldered connection shall be provided for all wire splices. Where construction is by directional drilling or similar trenchless technology the tracer wire shall be 3/16" x 1/8 PVC coated stainless steel armor cast cable with minimum breaking strength of 3,700 lbs (Lexco, Chicago, IL) or Trace-Safe water blocking tracer wire (BT series 19 gauge conductor RT 180W water, RT 180W sewer).

Before final approval of any water main, there will be a monitored tracer wire continuity test in order to confirm proper installation of any tracer wire.

D. STORM SEWERS AND APPURTENANCES STORM SEWER PIPE Storm sewer pipe shall conform to the following:
(1) Reinforced concrete pipe minimum Class IV in conformance with the latest revision of ASTM designation C76 with C443 flexible gasket joints, except that bituminous mastic joints may be used in grass areas.
(2) Polyvinyl Chloride (PVC) Pipe: ASTM D3034 (4-inch thru 18-inch) or ASTM F679 (18-inch thru 36-inch), rated SDR 35, continually marked with manufacturer's name, pipe size, cell classification, SDR rating. Joints shall be flexible elastomeric sealed joints conforming to ASTM D3212. (Only permitted when specifically indicated

CITY OF NAPERVILLE
TRANSPORTATION, ENGINEERING AND DEVELOPMENT BUSINESS GROUP
STANDARD CONSTRUCTION PLAN NOTES FOR DEVELOPMENT PROJECTS

GENERAL NOTES

- 1. THE OWNER OR THEIR REPRESENTATIVE IS RESPONSIBLE TO OBTAIN ANY AND ALL PERMITS REQUIRED BY APPLICABLE GOVERNMENTAL AGENCIES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF NAPERVILLE DESIGN MANUAL AND STANDARD SPECIFICATIONS (CURRENT EDITION) AND WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (CURRENT EDITION).
3. ALL CONTRACTORS DOING WORK IN THE PUBLIC RIGHT-OF-WAY MUST BE LICENSED (WHEN APPLICABLE) TO MAKE PUBLIC IMPROVEMENTS WITHIN THE NAPERVILLE CORPORATE LIMITS.
4. THE CONTRACTOR/DEVELOPER ASSUMES ALL RESPONSIBILITY AND LIABILITY FOR ANY ACTION RESULTING FROM THEIR WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
5. THE CONTRACTOR/DEVELOPER SHALL INDEMNIFY AND HOLD HARMLESS THE CITY OF NAPERVILLE.
6. PRIOR TO COMMENCEMENT OF ANY OFF-SITE CONSTRUCTION, THE CONTRACTOR SHALL SECURE WRITTEN AUTHORIZATION THAT ALL OFF-SITE EASEMENTS HAVE BEEN SECURED AND THAT PERMISSION HAS BEEN GRANTED TO ENTER ONTO PRIVATE PROPERTY.
7. THE CONTRACTOR AND THEIR ON-SITE REPRESENTATIVES WILL BE REQUIRED TO ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF NAPERVILLE PRIOR TO ANY WORK BEING STARTED. A PRE-CONSTRUCTION MEETING WILL NOT BE SCHEDULED UNTIL THE PROJECT HAS BEEN APPROVED BY THE CITY OF NAPERVILLE DEVELOPMENT REVIEW TEAM AND THE REQUIRED SURETY HAS BEEN POSTED.
8. A MINIMUM OF 48 HOURS NOTICE SHALL BE GIVEN TO THE CITY OF NAPERVILLE TEST BUSINESS GROUP (630-420-6100 OPTION 1) PRIOR TO STARTING WORK OR RESTARTING WORK AFTER SOME ABSENCE OF WORK FOR ANY REASON.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADEQUATELY IDENTIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION. BEFORE STARTING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT JULIE FOR THE LOCATION OF ANY AND ALL UTILITIES. THE TOLL-FREE NUMBER IS 800-892-0123. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY PRIVATE FACILITIES OR NON-JULIE MEMBER FACILITIES.
10. THE CONTRACTOR CAN SCHEDULE ALL NECESSARY SITE INSPECTIONS WITH THE CITY OF NAPERVILLE BY CALLING (630) 420-6100 OPTION 1 BETWEEN THE HOURS OF 8:00AM AND 4:00PM (CLOSED 1:00PM TO 2:00PM DAILY) ON WEEKDAYS WHEN THE CITY IS OPEN FOR BUSINESS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE SITE PERMIT NUMBER FOR THE PROJECT IN ORDER TO SCHEDULE THE INSPECTIONS).
11. RECORD DRAWINGS ARE REQUIRED TO BE SUBMITTED AND APPROVED BY THE CITY OF NAPERVILLE PRIOR TO FINAL OCCUPANCY BEING GRANTED.
12. FINAL ACCEPTANCE OF PUBLIC IMPROVEMENTS SHALL BE GRANTED ONLY AFTER A FINAL INSPECTION HAS BEEN COMPLETED AND HAS REVEALED THAT ALL IMPROVEMENTS HAVE BEEN SATISFACTORILY COMPLETED IN ACCORDANCE WITH THE NAPERVILLE STANDARD SPECIFICATIONS. UTILITIES ARE NOT CONSIDERED ACCEPTED UNTIL THEY ARE FORMALLY ACCEPTED BY THE CITY COUNCIL AS REQUIRED IN ACCORDANCE WITH THE NAPERVILLE MUNICIPAL CODE.

GENERAL NOTES (PROJECT SPECIFIC)

- 1. TRAFFIC SIGNALS AND THEIR ASSOCIATED EQUIPMENT UNDER THE JURISDICTION OF DUPAGE COUNTY ARE NOT INCLUDED IN THE JULIE SYSTEM. THE CONTRACTOR SHALL CONTACT DUPAGE COUNTY DOT AND IDOT DIRECTLY REGARDING THE LOCATION OF TRAFFIC SIGNALS (CABLING AND ASSOCIATED SYSTEMS) UNDER DUPAGE COUNTY OR IDOT JURISDICTION.

STORM SEWER NOTES (GENERAL)

- 1. NO CONNECTION TO AN EXISTING PUBLIC STORM SEWER MAY BE MADE WITHOUT PERMISSION OF THE CITY ENGINEER.
2. THE CONTRACTOR SHALL REPAIR ANY EXISTING FIELD DRAINAGE TILE DAMAGED DURING CONSTRUCTION AND PROPERLY REROUTE AND/OR CONNECT SAID TILE TO THE NEAREST STORM SEWER OUTLET. ALL LOCATIONS OF ENCOUNTERED FIELD DRAINAGE TILE SHALL BE PROPERLY INDICATED ON THE CONTRACTOR'S RECORD DRAWINGS.

STORM SEWER NOTES (STORM SEWER WORKS IN PLANS)

- 1. THE FOLLOWING MATERIALS ARE PERMITTED FOR STORM SEWER AND PIPE CULVERTS, WHERE A PARTICULAR MATERIAL IS SPECIFIED IN THE PLANS OR SPECIAL PROVISIONS, NO OTHER KIND OF MATERIAL WILL BE PERMITTED:
1a. REINFORCED CONCRETE PIPE (RCP) - REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C 76, CLASSES I, II, III, IV OR V. BITUMINOUS JOINTS SHALL CONFORM TO ASTM DESIGNATIONS C 14 OR C 76 AS MAY BE APPLICABLE. BITUMINOUS MATERIAL SHALL CONSIST OF A HOMOGENEOUS BLEND OF BITUMEN, INERT FILLER, AND SUITABLE SOLVENT APPROVED BY THE CITY ENGINEER. RUBBER GASKET JOINTS SHALL CONFORM TO ASTM C 433. REINFORCED CONCRETE PIPE SHALL ALSO BE PERMITTED AS ROUND, ELLIPTICAL, OR BOX SHAPED OR AS REINFORCED CONCRETE ARCH CULVERT.
1b. NON-REINFORCED CONCRETE PIPE - NON-REINFORCED CONCRETE PIPE SHALL BE ALLOWED FOR PIPES WITH A 10 INCH OR SMALLER DIAMETER. NON-REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C 14, CLASS 3. BITUMINOUS JOINTS SHALL CONFORM TO ASTM DESIGNATIONS C 14 OR C 76 AS MAY BE APPLICABLE. BITUMINOUS MATERIAL SHALL CONSIST OF A HOMOGENEOUS BLEND OF BITUMEN, INERT FILLER, AND SUITABLE SOLVENT APPROVED BY THE CITY ENGINEER. RUBBER GASKET JOINTS SHALL CONFORM TO ASTM C 433. THE CONTRACTOR'S RECORD DRAWINGS.
1c. DUCTILE IRON PIPE (DIP) - DUCTILE IRON PIPE SHALL CONFORM TO ANSI A 21.51 (AWWA C-151), CLASS THICKNESS DESIGNED PER ANSI A 21.50 (AWWA C-150), TAR (SEAL) COATED AND CEMENT LINED PER ANSI A 21.4 (AWWA C-104), WITH MECHANICAL OR RUBBER RING (SLIP SEAL OR PUSH ON) JOINTS. ALL DUCTILE IRON PIPE SHALL BE WRAPPED WITH POLYETHYLENE.
1d. POLYVINYL CHLORIDE PIPE (PVC) - POLYVINYL CHLORIDE (PVC) PIPE SHALL CONFORM TO ASTM D 3034, TYPE PSM. THE MINIMUM STANDARD DIMENSION RATIO (SDR) SHALL BE 26. THE PIPE SHALL BE MADE OF PVC PLASTIC HAVING A MINIMUM CELL CLASSIFICATION OF 1245-C, AND SHALL HAVE A MINIMUM PIPE STIFFNESS OF FORTY-SIX (46) LBS. PER INCH (317 KPA). JOINTS FOR PVC PIPE SHALL BE FLEXIBLE ELASTOMERIC SEALS PER ASTM D 3212.
1e. HIGH DENSITY POLYETHYLENE PIPE (HDPE) - HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 252 AND M 294. PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN PE COMPOUNDS WHICH CONFORM TO THE REQUIREMENTS OF CELL CLASS 32420C AS DEFINED AND DESCRIBED IN ASTM D 3350. RUBBER GASKET JOINTS SHALL BE USED.
1f. FULLY GALVANIZED CORRUGATED STEEL PIPE - FULLY GALVANIZED CORRUGATED STEEL PIPE MAY BE USED FOR RESIDENTIAL DRIVEWAY CROSSINGS ONLY WHEN A DITCH SECTION IS PRESENT. THE MINIMUM CULVERT SIZE IS 12" DIAMETER.
2. BEDDING, OTHER THAN CONCRETE EMBEDMENT, SHALL CONSIST OF GRAVEL, CRUSHED GRAVEL, OR CRUSHED STONE 1/4 INCH TO 1 INCH IN SIZE. AS A MINIMUM, THE MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS. THE GRADATION SHALL CONFORM TO GRADATION CA-7 OR CA-11 OR THE STANDARD SPECIFICATIONS.
3. BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS. THE GRADATION SHALL CONFORM TO GRADATION CA-6 OF THE STANDARD SPECIFICATIONS. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4. JOINTS CONNECTING DISSIMILAR PIPE MATERIALS SHALL BE MADE WITH SEWER CLAMP NON-SHEAR TYPE COUPLINGS; CASCADE CSS, ROMAC LSS, FERRO, INC. SHEAR RING, OR APPROVED EQUAL. WHEN AVAILABLE, A STANDARD JOINT WITH A TRANSITION GASKET MAY BE USED. THE NAME OF THE MANUFACTURER, CLASS, AND DATE OF ISSUE SHALL BE CLEARLY IDENTIFIED ON ALL SECTIONS OF PIPE. THE CONTRACTOR SHALL ALSO SUBMIT BILLS OF LADING, OR OTHER QUALITY ASSURANCE DOCUMENTATION WHEN REQUESTED BY THE CITY ENGINEER. ALL NUTS AND BOLTS FOR COUPLINGS SHALL BE STAINLESS STEEL.
5. MANHOLES FOR STORM SEWERS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES AND SHALL BE CONSTRUCTED OF PRECAST CONCRETE UNITS IN ACCORDANCE WITH ASTM C478-05 (OR LATEST EDITION) AND SHALL CONFORM TO THE CITY OF NAPERVILLE STANDARD DETAIL. ALL MANHOLES SHALL BE WATER-TIGHT. ALL VISIBLE LEAKS SHALL BE SEALED IN A MANNER ACCEPTABLE TO THE CITY ENGINEER.
6. MANHOLES SHALL BE FURNISHED WITH A SELF-SEALING FRAME AND SOLID COVER (EAST JORDAN IRON WORKS 1022 WITH TYPE A SOLID COVER, OR APPROVED EQUAL) WITH THE WORD "STORM" IMPRINTED ON THE COVER IN RAISED LETTERS. ALL FRAMES AND LIDS SHALL MEET OR EXCEED AASHTO H-20 LOADING SPECIFICATIONS. FRAMES SHALL BE SHOP PAINTED WITH ASPHALTIC BASE PAINT. BOTH THE MANHOLE FRAME AND COVER SHALL HAVE MANHOLE RINGS AND VERTICAL BEARING SURFACES. INVERTED MANHOLE FRAMES ARE NOT ALLOWED. PICK HOLES SHALL NOT CREATE OPENINGS IN THE MANHOLE COVER.
7. MANHOLE STEPS ON MAXIMUM 16 INCH CENTER SHALL BE FURNISHED WITH EACH MANHOLE, SECURELY ANCHORED IN PLACE, TRUE TO VERTICAL ALIGNMENT, IN ACCORDANCE WITH THE NAPERVILLE STANDARD DETAILS. STEPS SHALL BE COPOLYMER POLYPROPYLENE REINFORCED WITH 1/2 INCH A615/A615M-05A (OR LATEST EDITION) GRADE 60 STEEL REINFORCEMENT, MEETING OR EXCEEDING ASTM C 478-05 (OR LATEST EDITION) AND OSHA STANDARDS.
8. CATCH BASINS AND INLETS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 24 INCHES AND SHALL BE CONSTRUCTED OF PRECAST CONCRETE UNITS IN ACCORDANCE WITH ASTM C478-05 (OR LATEST EDITION) AND SHALL CONFORM TO THE CITY OF NAPERVILLE STANDARD DETAIL. ALL CATCH BASINS AND INLETS SHALL BE WATER-TIGHT AT ALL POINTS BELOW GRADE. ALL VISIBLE LEAKS SHALL BE SEALED IN A MANNER ACCEPTABLE TO THE CITY ENGINEER. CATCH BASINS AND INLETS SHALL BE FURNISHED WITH A FRAME AND GRATE BASED UPON THE LOCATION OF THE INSTALLATION AS LISTED BELOW. ALL FRAMES AND GRATES SHALL MEET OR EXCEED AASHTO H-20 LOADING SPECIFICATIONS. FRAMES SHALL BE SHOP PAINTED WITH ASPHALTIC BASE PAINT.
A) PAVEMENT: EAST JORDAN IRON WORKS 1022 FRAME WITH TYPE M1 RADIAL FLAT GRATE, OR APPROVED EQUAL.
B) BARRIER CURB AND GUTTER: EAST JORDAN IRON WORKS 7220 FRAME WITH TYPE M1 GRATE AND T1 CURB BOX, OR APPROVED EQUAL.
C) DEPRESSED CURB: EAST JORDAN IRON WORKS 5120 FRAME AND GRATE, OR APPROVED EQUAL.
D) MOUNTABLE CURB: EAST JORDAN IRON WORKS 7525 FRAME AND GRATE, OR APPROVED EQUAL.
E) NON-PAVED AREAS: EAST JORDAN IRON WORKS 6527 BEEHIVE GRATE, OR APPROVED EQUAL. ALTERNATELY, IN AREAS WHERE THERE IS THE LIKELIHOOD OF PEDESTRIAN TRAFFIC, EAST JORDAN IRON WORKS 1022 FRAME WITH TYPE M1 RADIAL FLAT GRATE, OR APPROVED EQUAL MAY BE USED.
9. THE STEEL CASING PIPE SHALL BE BITUMINOUS COATED, A MINIMUM OF 30 MILS THICKNESS INSIDE AND OUT, AND SHALL BE OF LEAK PROOF CONSTRUCTION, CAPABLE OF WITHSTANDING THE ANTICIPATED LOADINGS. SEE TABLE 200-1 IN THE NAPERVILLE STANDARD SPECIFICATIONS FOR THE MINIMUM WALL THICKNESSES OF VARIOUS STEEL CASING DIAMETERS. THE STEEL CASING PIPE SHALL HAVE MINIMUM YIELD STRENGTH OF 35,000 PSI AND SHALL MEET THE REQUIREMENTS OF A139/A139M-04 (OR LATEST EDITION). GRADE B RING DEFLECTION SHALL NOT EXCEED 2% OF THE NOMINAL DIAMETER. THE STEEL CASING PIPE SHALL BE DELIVERED TO THE JOBSITE WITH BEVELED ENDS TO FACILITATE FIELD WELDING.
10. ALL PIPE SHALL BE LAID TRUE TO LINE AND GRADE. DIRT AND OTHER FOREIGN MATERIAL SHALL BE PREVENTED FROM ENTERING THE PIPE OR PIPE JOINT DURING HANDLING OR LAYING OPERATIONS. ALL STORM SEWER PIPE TO PIPE CONNECTIONS SHALL BE SEALED WITH BUTYL MASTIC TO ENSURE WATER TIGHTNESS. LIFT HOLES TO BE SEALED USING BUTYL MASTIC AND CONCRETE PLUGS. AT NO TIME SHALL CONNECTIONS BETWEEN THE STORM SEWER AND SANITARY SEWER BE ALLOWED.
11. FOR STRUCTURES LOCATED IN PAVED AREAS, A MINIMUM OF FOUR, 2-INCH DIAMETER HOLES SHALL BE DRILLED OR PRECAST INTO THE STRUCTURE WITHIN 1 FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1-FOOT BY 1- FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIAL TO PREVENT SLIPPAGE DURING BACKFILLING.
12. ALL STORM SEWER STRUCTURE FRAMES WITHOUT INSIDE FLANGES SHALL BE SHAPED WITH NONSHRINKING HYDRAULIC CEMENT TO FORM A FILLET TO THE STRUCTURE OR ADJUSTING RING.
WHEN ADJUSTMENTS ARE NECESSARY, NO MORE THAN 12 INCHES OF VERTICAL ADJUSTMENT MAY BE MADE USING THE MINIMUM PRACTICAL NUMBER OF INDIVIDUAL RINGS.

ALL RINGS SHALL BE HIGH DENSITY POLYETHYLENE PLASTIC (HDPE), RECYCLED RUBBER, HIGH DENSITY EXPANDING POLYSTYRENE, EXPANDED POLYPROPYLENE (EPP), OR OTHER MATERIAL AS APPROVED BY THE CITY ENGINEER. PRECAST CONCRETE RINGS, BRICKS, ROCKS, SHIMS, OR CONCRETE BLOCKS WILL NOT BE ALLOWED. TAPERED ADJUSTING RINGS SHALL BE REQUIRED WHEN THE FRAME WILL NEED TO MATCH THE SLOPE OF THE ROADWAY.
A RESILIENT, FLEXIBLE, NON-HARDENING, PREFORMED BITUMINOUS MASTIC MATERIAL, CONSIST OF B OR APPROVED EQUAL, SHALL BE USED BETWEEN THE CONE OR TOP BARREL SECTION OF THE STRUCTURE AND THE ADJUSTING RINGS. A THICK BEAD OF NON-HARDENING ELASTOMERIC JOINT SEALANT CONFORMING TO ASTM C-920, TYPE S, GRADE NS, SHALL BE APPLIED BETWEEN ALL INDIVIDUAL RINGS, AND BETWEEN THE ADJUSTING RINGS AND THE FRAME. THE SEALANT OR MASTIC MATERIAL SHALL BE APPLIED IN SUCH A MANNER THAT NO SURFACE WATER OR GROUND WATER INFLOW CAN ENTER THE STRUCTURE.

EROSION CONTROL AND DRAINAGE NOTES (GENERAL)

- 1. THE CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
2. DURING EXTENDED DRY PERIODS, THE CONSTRUCTION AREA(S) MAY NEED TO BE WATERED DOWN TO PREVENT THE BLOWING OF SOIL FROM THE SITE.
3. DURING CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED TO MINIMIZE THE TRACKING OF DIRT ONTO THE PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP PUBLIC STREET PAVEMENT CLEAN OF DIRT AND DEBRIS. ANY DIRT THAT IS TRACKED ONTO THE PUBLIC STREETS SHALL BE REMOVED THE SAME DAY. IF THE AMOUNT TRACKED ON THE PUBLIC STREET IS EXCESSIVE, CLEANING MAY BE REQUIRED MORE FREQUENTLY.

EROSION CONTROL AND DRAINAGE NOTES (PROJECT SPECIFIC)

- 1. ALL EROSION CONTROL MEASURES SHALL BE PROPERLY INSTALLED, AS PERMITTED, PRIOR TO ANY LAND DISTURBANCE ACTIVITIES. ALL EROSION CONTROL SHALL BE MAINTAINED UNTIL FURF IS ESTABLISHED.
2. ACCEPTABLE PERIMETER EROSION CONTROL INCLUDES SILT FENCE, SILT WORM AND ANY OTHER APPLICATION APPROVED BY THE CITY ENGINEER.
3. ALL OPEN GRATE STRUCTURES SHALL HAVE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLANS. INLET BASKETS ARE THE PREFERRED METHOD; STRAW BALES SHALL NOT BE USED.
4. STOCKPILES NOT BEING DISTURBED FOR MORE THAN 14 DAYS SHALL BE SEEDED.
5. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY, AFTER ANY 0.5 INCH RAINFALL, OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN THEIR FUNCTION.

EROSION CONTROL AND DRAINAGE NOTES (NPDES PERMIT)

- 1. IT IS THE RESPONSIBILITY OF THE OWNER OR HIS DESIGNEE TO INSPECT ALL TEMPORARY EROSION CONTROL MEASURES PER THE REQUIREMENTS OF THE NPDES PERMIT AND CORRECT ANY DEFICIENCIES AS NEEDED.

GEOMETRIC AND PAVING NOTES

- 1. THE DEVELOPER AND CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO ADEQUATELY PROTECT THE PAVEMENT AND PROPERTY, CURB AND GUTTER AND OTHER RIGHT-OF-WAY IMPROVEMENTS, WHETHER NEWLY CONSTRUCTED OR EXISTING, FROM ANY AND ALL DAMAGE. SUFFICIENT MEANS SHALL BE EMPLOYED BY THE CONTRACTOR TO PROTECT AGAINST SUCH DAMAGE TO THE SATISFACTION OF THE CITY ENGINEER.
2. ANY NEW OR EXISTING IMPROVEMENTS THAT ARE DAMAGED SHALL BE REPAIRED OR REPLACED IN A MANNER THAT IS SATISFACTORY TO THE CITY ENGINEER.
3. THE CONTRACTOR AND/OR DEVELOPER SHALL SECURE ALL NECESSARY RIGHTS AND PERMISSIONS TO PERFORM ANY WORK ON PRIVATE PROPERTY NOT WITHIN THE OWNERSHIP RIGHTS OF THE DEVELOPER. THE DEVELOPER SHALL BEAR THE SOLE RESPONSIBILITY FOR DAMAGES THAT MAY OCCUR AS A RESULT OF WORK PERFORMED UNDER CONTRACTS THEY INITIATE.
4. THE CONTRACTOR/DEVELOPER WILL BE RESPONSIBLE FOR BRINGING PAVEMENTS (STREET, CURB AND GUTTER, SIDEWALK, DRIVEWAY) ON THE PROPERTY UP TO CITY STANDARDS INCLUDING ANY REPAIRS TO SUBSTANDARD PAVEMENTS THAT EXISTED PRIOR TO OR OCCURRED DURING CONSTRUCTION.
5. WHEREVER NEW WORK WILL MEET EXISTING CONDITIONS OTHER THAN LAWN AREAS, REGARDLESS OF WHETHER THE NEW OR EXISTING WORK IS ASPHALT OR CONCRETE, THE EXISTING ADJACENT SIDEWALK, DRIVEWAYS, PAVEMENT OR CURB SHALL BE NEATLY SAW CUT. THE SAW CUT SHALL BE IN A NEAT STRAIGHT LINE SUFFICIENTLY DEEP SO THAT IT RENDERS A SMOOTH VERTICAL FACE TO MATCH TO. IF THE CONTRACTOR IS NOT CAREFUL OR DOES NOT SAW DEEP ENOUGH AND THE CUT LINE BREAKS OUT OR CHIPS TO AN IMPERFECT EDGE, THEN THE EXISTING SIDE MUST BE RE-CUT SQUARE AND DONE OVER UNTIL IT IS CORRECT.
6. ALL PAVEMENT PATCHES WITHIN THE PUBLIC RIGHT-OF-WAY MUST CONFORM TO CITY STANDARDS. REFERENCE NAPERVILLE STANDARD DETAILS 590.12 AND 590.13.

TRAFFIC CONTROL AND PROTECTION NOTES

- 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 CITY OF NAPERVILLE 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 WORKZONE. 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 CITY ENGINEER.
4. ANY TEMPORARY OPEN HOLES SHOULD BE BARRICADED AND PROTECTED IN ACCORDANCE WITH APPLICABLE STANDARDS.

TRAFFIC CONTROL AND PROTECTION NOTES (ARTERIAL ROADS)

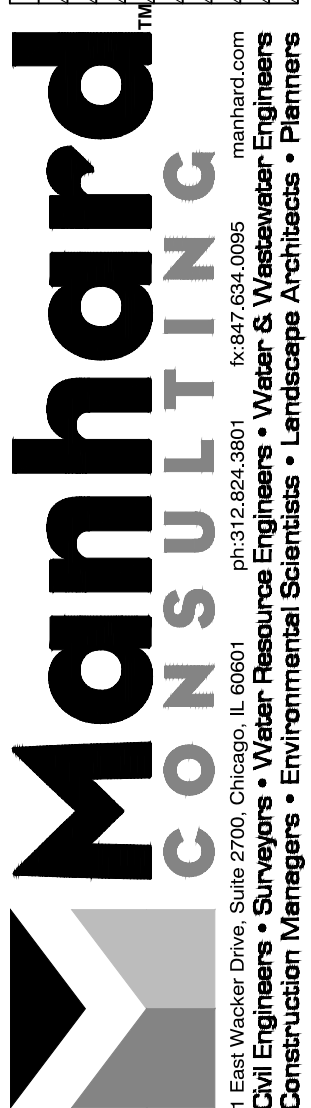
- 1. LANE CLOSURES ON ARTERIAL ROADWAYS WITHIN THE CITY OF NAPERVILLE ARE NOT PERMITTED BETWEEN THE HOURS OF 6AM-9AM AND 3PM-7PM MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE CITY ENGINEER. LANE CLOSURES ON ARTERIAL STREETS ARE PERMITTED BETWEEN 7AM AND 7PM ON WEEKENDS, UNLESS OTHERWISE PERMITTED BY THE CITY ENGINEER. ARTERIAL ROADWAYS ARE DEFINED AS BOTH MAJOR AND MINOR ARTERIAL ROADWAYS AS DESIGNATED ON THE CITY'S MASTER THROUGHFARE PLAN, LATEST EDITION.
2. ANY WORK THAT IMPACTS A TRAFFIC LANE ON AN ARTERIAL ROADWAY REQUIRES AN ARROWBOARD AS PART OF THE TRAFFIC CONTROL.
3. 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 CITY WILL NOT ALLOW THE HOLES TO BE FILLED WITH GRAVEL.

V. WATER UTILITIES GENERAL NOTES

- A. NEW WATER MAIN VALVES, INCLUDING PRESSURE TAP VALVES, ADJACENT TO AN EXISTING WATER MAIN, AND EXISTING WATER MAIN VALVES SHALL ONLY BE OPERATED BY THE CITY OF NAPERVILLE, DEPARTMENT OF PUBLIC UTILITIES CEE/CM DIVISION PERSONNEL WITH 48-HOUR NOTICE (MONDAY-FRIDAY). CONTACT NAPERVILLE TEST BUSINESS GROUP AT 630-420-6088 FOR SCHEDULING.
B. ANY EXISTING UTILITY STRUCTURES REQUIRING ADJUSTMENT OR RECONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER. ADJUSTMENTS AND/OR RECONSTRUCTIONS NOT CALLED FOR ON THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. NO MORE THAN A TOTAL OF 12 INCHES OF ADJUSTING RINGS AND/OR ADJUSTING RINGS SHALL BE ALLOWED. ALL STRUCTURE FRAMES SHALL BE FLUSH WITH FINAL GRADE. CONCRETE ADJUSTMENT RINGS ARE NOT PERMITTED.
C. TREES SHALL BE INSTALLED A MINIMUM OF FIVE (5) FEET HORIZONTALLY FROM UNDERGROUND ELECTRICAL FEEDERS, SANITARY SEWERS, SANITARY SERVICES, WATER MAINS, AND WATER SERVICES. TREES SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET HORIZONTALLY FROM UTILITY STRUCTURES AND APPURTENANCES, INCLUDING, BUT NOT LIMITED TO, MANHOLES, VALVE VAULTS, VALVE BOXES AND FIRE HYDRANTS. NO TREES, SHRUBS OR OBSTACLES WILL BE ALLOWED 10' IN FRONT OF, 5' ON THE SIDES, AND 7' TO THE REAR OF THE ELECTRICAL TRANSFORMER.
D. ALL RESTRAINER GLANDS WHEN REQUIRED TO RESTRAIN VALVES, FITTINGS, HYDRANTS, AND PIPE JOINTS SHALL BE MECHANICAL JOINT WEDGE ACTION TYPE MEGALUG 1100 SERIES AS MANUFACTURED BY EBBA IRON, INC. OR UNI-FLANGE BLOCKBUSTER 1400 SERIES AS MANUFACTURED BY FORD METER BOX CO. AND SHALL BE FOR USE ON DUCTILE IRON PIPE CONFORMING TO ANSIAWWA C151/A21.51. FOR NOMINAL PIPE SIZES 3" THROUGH 48".
E. EXISTING DUCTILE IRON SYSTEMS FOR RESTRAINING PUSH-ON PIPE BELLS SHALL BE MEGALUG SERIES 1100HD OR FORD SERIES 1300.
F. EXISTING DUCTILE IRON SYSTEMS REQUIRING RESTRAINT SHALL BE MEGALUG SERIES 1100SD (SPLIT MEGALUG) FOR MECHANICAL JOINTS.
G. DUCTILE IRON WATER MAIN TO BE CLASS 52. ALL DUCTILE IRON PIPE IS TO BE ENCASED IN POLYETHYLENE FILM POLYETHYLENE ENCASEMENT TO BE INSTALLED IN ACCORDANCE WITH ANSIAWWA C105/A21.5-05.
H. A SET OF AS-BUILT RECORD DRAWING SHALL BE GIVEN TO THE CITY OF NAPERVILLE UPON COMPLETION OF IMPROVEMENTS SHOWING THE ELEVATION AND LOCATION (TIED TO TWO POINTS) OF ALL NEW AND EXISTING STRUCTURES INCLUDING FIRE HYDRANTS, VALVE BOXES AND VALVES, LINESTOP SLEEVES, WATER SERVICE CORPORATION STOPS, WATER MAIN FITTINGS/SEWERS, MANHOLES, SANITARY SERVICE WYES (MEASURED FROM DOWNSTREAM MANHOLE), AND ABANDONED WATER OR SANITARY SERVICE LINES. ALL ELEVATIONS SHOULD BE REFERENCED TO THE SAME BENCHMARK DATUM AS THE ORIGINAL DESIGN PLANS. HORIZONTAL TIES SHALL BE REFERENCED TO LOT LINES, BACK OF CURB, OR PROPERTY CORNERS.
I. ALL SANITARY SEWER PIPING SHALL BE PVC PIPE MEETING THE REQUIREMENTS OF ASTM D-2241 WITH JOINTS CONFORMING TO ASTM D-3139. ALL SANITARY SEWER FITTINGS SHALL BE PVC MEETING THE FOLLOWING REQUIREMENTS: 4" TO 12" SHALL BE INJECTION MOLDED FITTINGS MEETING ASTM D-2241. GREATER THAN 12" SHALL BE FABRICATED FITTINGS MEETING ASTM D-2241 OR C905. MINIMUM PRESSURE RATING SHALL BE 150 PSI.
J. THE VALVES LESS THAN 10" SHALL BE STANDARD PATTERN. GATE VALVES AND SHALL HAVE THE NAME OR MARK OF THE MANUFACTURER, SIZE AND WORKING PRESSURE PLAINLY CAST IN RAISED LETTERS ON THE VALVE BODY. VALVES MAY BE APPROVED FROM ONE OF THE FOLLOWING MANUFACTURERS: AMERICAN, CLOW, WATEROUS OR KENNEDY.
K. STAINLESS STEEL NUTS, BOLTS/BOLTS, AND WASHERS, TYPE 304 OR BETTER, WILL BE REQUIRED ON ALL WATER MAIN INSTALLATIONS. THIS WOULD APPLY TO HYDRANTS, TAPPING SLEEVES, VALVES, FITTINGS, RESTRAINT, AND OTHER APPURTENANCES BURIED OR IN VALVE VAULTS. MECHANICAL JOINTS AND RESTRAINT GLANDS REQUIRE 304 STAINLESS STEEL T-BOLTS. AN ANTI-SEIZE COMPOUND SHALL BE FACTORY APPLIED TO NUTS OR BOLTS - ANY DAMAGE TO THIS COATING SHALL BE REPAIR WITH FIELD APPLIED APPROVED ANTI-SEIZE COMPOUND THAT IS A MOLYBDENUM-BASE LUBRICANT. BOLT/TIE NEVER SEED OR APPROVED EQUAL.
L. THE CONTRACTOR SHALL ROTATE AND/OR ADJUST ANY EXISTING AND/OR NEW HYDRANT TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC UTILITIES.
M. WATER MAINS SHALL BE SUBJECT TO A HYDROSTATIC/LEAKAGE TEST IN ACCORDANCE WITH NAPERVILLE STANDARD SPECIFICATIONS. TEST PRESSURE SHALL BE NO LESS THAN 150 PSI FOR A PERIOD OF 4 HOURS AND NOT VARY BY MORE THAN + 5 PSI. DURING THE TEST THE TEST GAUGE SHALL BE APPROVED BY THE CITY AND SHALL BE GLYCERIN OR OIL FILLED WITH A RANGE OF NOT MORE THAN 20 PSI AND INCREMENTS NOT GREATER THAN 5 PSI. A MINIMUM DIAL SIZE, WATER RECOVERY TEST SHALL BE COMPLETED AT THE END OF THE TESTING PERIOD TO SHOW ACTUAL LEAKING AND THAT THE WATER MAIN DID NOT HAVE TOO MUCH TRAPPED AIR IN THE TESTED SECTION.
N. THE CITY OF NAPERVILLE PUBLIC UTILITIES DOES NOT GUARANTEE THAT ANY VALVE OR FITTING IN THE EXISTING WATER DISTRIBUTION SYSTEM WILL HOLD AGAINST A HYDROSTATIC/LEAKAGE TEST. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND ACCEPTABLE

- PRESSURE TEST WHICH SHALL INCLUDE PROVISIONS AROUND EXISTING VALVES AND FITTINGS.
O. FIRE HYDRANT SHOULD BE BAGGED "NOT IN SERVICE" UNTIL ALL TESTING AND DISINFECTION HAS BEEN COMPLETED AND NEW WATER MAIN SECTION IS SERVICE.
P. SANITARY SEWER AND WATER SHALL BE CONSTRUCTED, TESTED, AND PLACED INTO SERVICE IN ACCORDANCE WITH CITY OF NAPERVILLE STANDARD SPECIFICATION AND SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
Q. ALL VALVE BOXES, VAULTS, HYDRANTS, AND MANHOLES SHALL NOT BE COVERED WITH CONSTRUCTION DEBRIS AND SHALL REMAIN ACCESSIBLE TO THE RESPECTIVE UTILITY COMPANY.
R. WATER SERVICE LINE SMALLER THAN 3" SHALL BE TYPE K COPPER. IF JOINTS ARE REQUIRED DUE TO LENGTH OF SERVICE, THEN ONLY COMPRESSION TYPE COUPLING SHALL BE PERMITTED. NO SOLDERED OR FLARED TYPE JOINTS ARE ALLOWED.
S. ALL SANITARY MANHOLES SHALL BE TESTED FOR LEAKAGE BY VACUUM TESTING. THE MANHOLE FRAME AND ADJUSTING RINGS SHALL BE IN PLACE WHEN TESTING. ANY LEAKS SHALL BE REPAIRED FROM EXTERIOR OF MANHOLE - PATCHING INSIDE OF MANHOLE SHALL NOT BE ACCEPTABLE. A VACUUM OF 10" (254 MM) HG SHALL BE PLACED ON THE MANHOLE AND THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9" (229 MM) HG. THE VACUUM SHALL NOT DROP BELOW 9" (229 MM) HG FOR THE FOLLOWING TIME PERIODS FOR EACH SIZE OF MANHOLE:
A48-INCH DIAMETER - 60 SECONDS
B60-INCH DIAMETER - 75 SECONDS
C72-INCH DIAMETER - 90 SECONDS
D84-INCH DIAMETER - 105 SECONDS
ANY MANHOLES THAT FAIL THE TEST SHALL BE SEALED AND RE-TESTED UNTIL ACCEPTABLE.
T. THE CONTRACTOR SHALL PROVIDE INTERNAL TELEVIEWED INSPECTION OF ALL INSTALLED SANITARY SEWER, LATERALS, MANHOLES AND CONNECTIONS TO THE PUBLIC SYSTEM. FOLLOWING COMPLETION OF TELEVISION WORK, THE CONTRACTOR SHALL SUBMIT VIDEO RECORDINGS ON DVD OR FLASH DRIVE ALONG WITH A COMPREHENSIVE TELEVISION REPORT WHICH WILL INDICATE THE LOCATION, FOOTAGES AND NATURE OF ANY DEFECTS. PRIOR TO FINAL ACCEPTANCE, THESE DEFECTS SHALL BE REPAIRED TO THE SATISFACTION OF THE WATER/WASTEWATER UTILITY AND RE-TELEVIEWED.
U. CONTRACTOR WORK HOURS ARE ONLY ALLOWED FROM 7:00 A.M. TO 5:00 P.M., MONDAY THROUGH SATURDAY. NO WORK SHALL BE PERMITTED ON SUNDAYS.
V. SANITARY PIPES WITH LESS THAN 4 FEET OR MORE THAN 25 FEET OF COVER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPING (CLASS 50, MINIMUM) AND ENCASED IN POLYUREA.
W. ALL EXCAVATIONS MORE THAN 20 FEET DEEP MUST BE PROTECTED BY A SYSTEM DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER.
X. CONTRACTOR SHALL MAINTAIN 2' MINIMUM CLEARANCE BETWEEN EXISTING UTILITIES AND NEW FOUNDATIONS AND UNDERGROUND FACILITIES. IN AREAS WHERE FOUNDATIONS AND UNDERGROUND FACILITIES ARE PROPOSED ADJACENT TO EXISTING UTILITIES, THE CONTRACTOR SHALL FILL POT HOLE BY VACUUM EXCAVATION OR HAND EXCAVATION TO LOCATE THE EXISTING UTILITY TO VERIFY MINIMUM CLEARANCE REQUIREMENT.
Y. FENCES SHALL BE INSTALLED A MINIMUM OF 5 FEET FROM ANY WATER OR SANITARY MAINS WHEN RUNNING PARALLEL WITH THEM. WHERE FENCES ARE INSTALLED CROSSING WATER OR SANITARY MAINS, THE POSTS SHALL BE LOCATED TO HAVE THE MAIN BETWEEN THEM.
Z. ALL BRASS COMPONENTS SHALL BE CERTIFIED TO BE LEAD FREE IN COMPLIANCE WITH NSF 61 AND NSF 372 AND IDENTIFIED WITH APPLICABLE MARKINGS.
AA. SANITARY FORCE MAIN - FORCE MAIN SHALL BE TESTED A MINIMUM OF 1 HOUR AT 1.5 THE SHUT OFF HEAD OF THE PUMP, 2.5 TIMES THE OPERATING PRESSURE OR 20 PSI WHICHEVER IS GREATEST. ALLOWABLE LEAKAGE SHALL BE IN ACCORDANCE WITH SECTION 412-114C OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION.

Table with columns for DATE, REVISIONS, and drawing details. Includes revision dates from 03-09-24 to 02-09-24.



PROPOSED HEINEN'S GROCERY STORE
CITY OF NAPERVILLE, ILLINOIS
CONSTRUCTION SPECIFICATIONS
SHEET 19 OF 19
ADK.NVL01

SHOULD A CONFLICT ARISE BETWEEN THE MANHARD SPECIFICATIONS AND THE VILLAGE SPECIFICATIONS, THE VILLAGE SPECIFICATIONS TAKE PRECEDENCE.