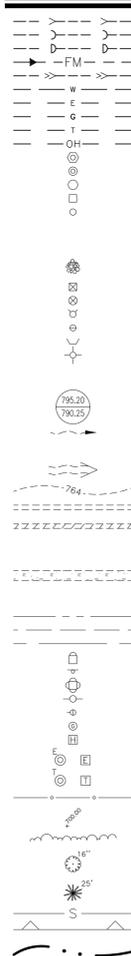


Final Engineering for PROPOSED HEINEN'S GROCERY STORE

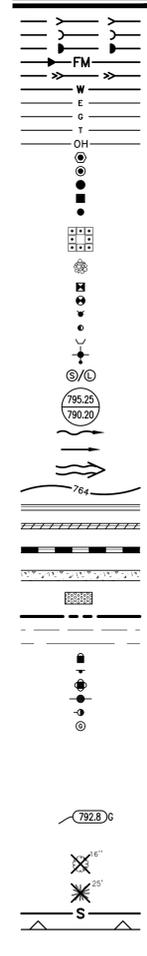
1244 E. CHICAGO AVENUE
CITY OF NAPERVILLE, ILLINOIS

STANDARD SYMBOLS

EXISTING



PROPOSED



ABBREVIATIONS

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

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

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:

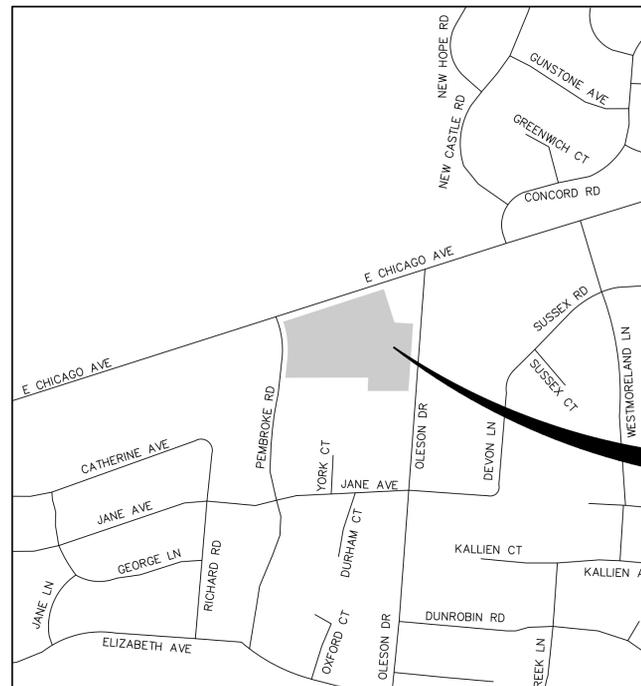
SOUTHWEST "ARROW" BOLT ON TOP FLANGE OF FIRE HYDRANT LOCATED APPROXIMATELY 40 FEET WEST OF THE CENTERLINE OF OLESEN DRIVE AND 675 FEET SOUTHWEST OF THE INTERSECTION OF EAST CHICAGO AVENUE AND OLESEN DRIVE ALONG THE CENTERLINE OF OLESEN DRIVE.

ELEVATION=757.09' DATUM=NAVD88 (GEOID 18)

CITY OF NAPERVILLE BENCHMARK:

BERNSTEIN 3D TOP SECURITY MONUMENT, CONSISTING OF A 1/2" DIA. STAINLESS STEEL DATUM POINT ON THREADED 1/2" 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



LOCATION MAP

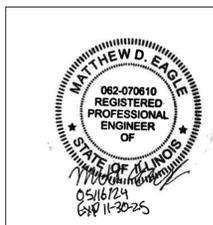
N.T.S.

CLIENT:
AODK ARCHITECTURE
14394 DETROIT AVENUE
LAKEWOOD, OHIO 44107

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



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

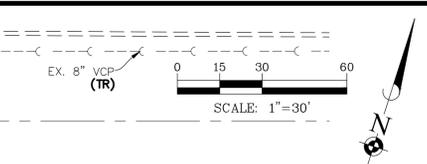
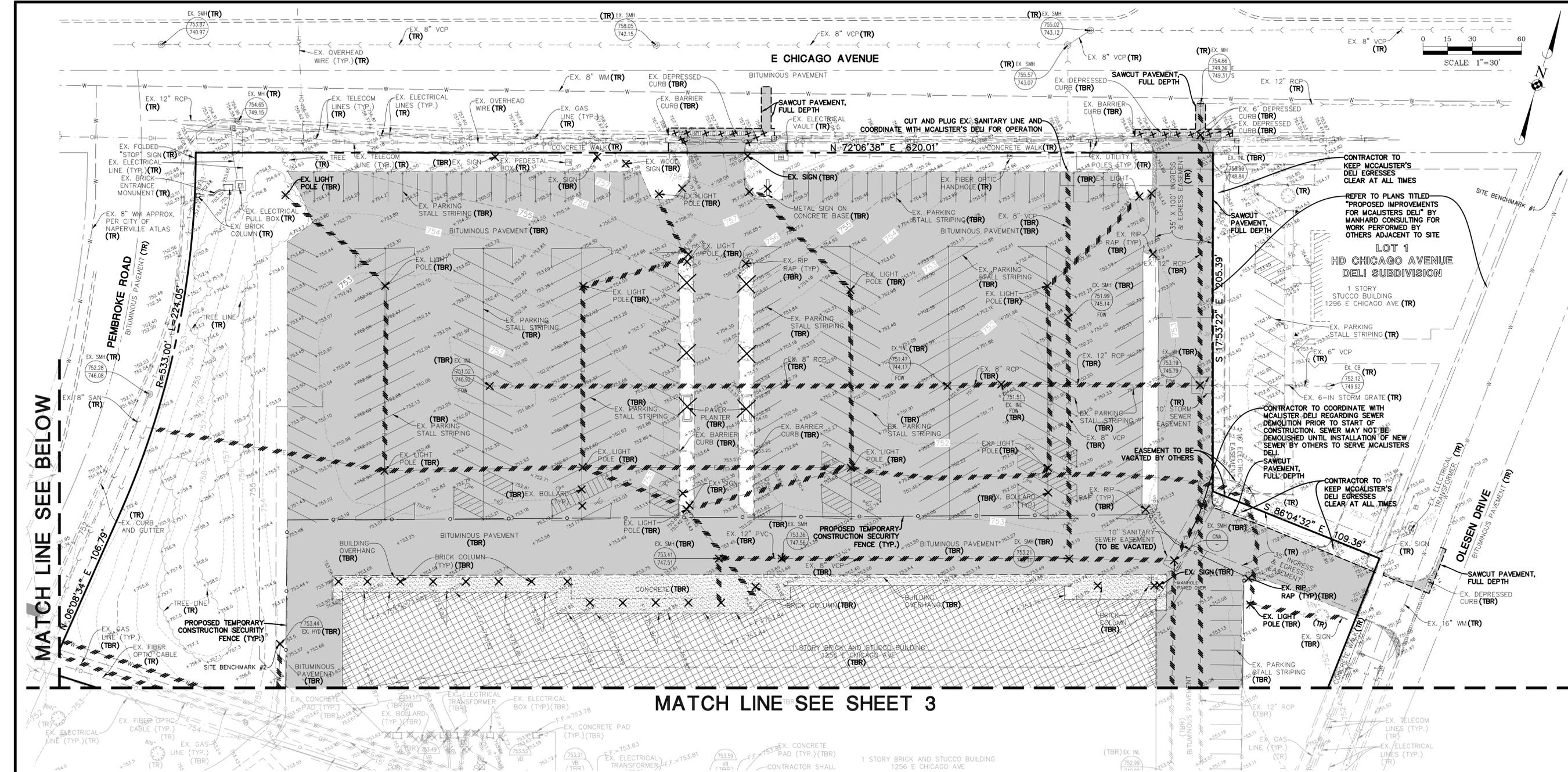


PROPOSED HEINEN'S GROCERY STORE
CITY OF NAPERVILLE, ILLINOIS
TITLE SHEET

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

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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 DUROT REVIEW
03-12-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW

Manhard CONSULTING

1296 E CHICAGO AVE
NAPERVILLE, IL 60563
TEL: 630.251.1000
WWW.MANHARDCONSULTING.COM

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Professional Geomatics License No. 000000000
Professional Environmental License No. 000000000

Civil Engineers • Surveyors • Water Resources Engineers • Wetland & Wetwaters Engineers • Planners
Construction Managers • Environmental Scientists • Landscape Architects

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

MATCH LINE SEE BELOW

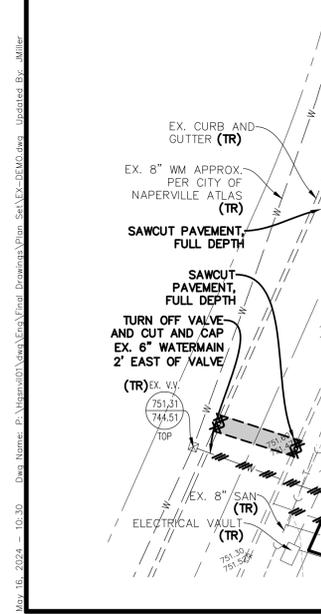
MATCH LINE SEE SHEET 3

MATCH LINE SEE ABOVE

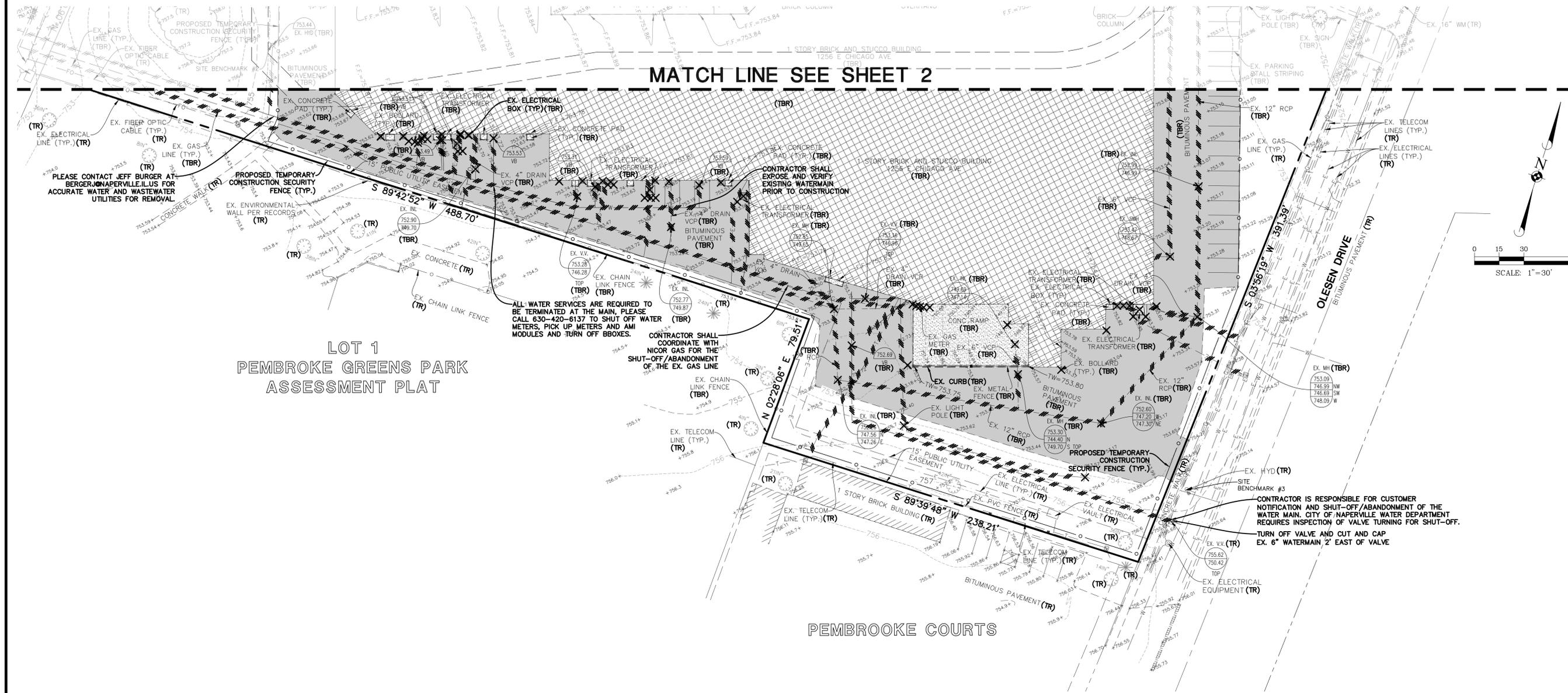
DEMOLITION LEGEND	
	BITUMINOUS PAVEMENT AND BASE TO BE REMOVED
	CONCRETE PAVEMENT AND BASE TO BE REMOVED
	BUILDING TO BE REMOVED
	SAWCUT LINE
	FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
	UTILITY STRUCTURE TO BE REMOVED
	UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER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



MATCH LINE SEE SHEET 2



LOT 1
PEMBROKE GREENS PARK
ASSESSMENT PLAT

PEMBROKE COURTS

PLEASE CONTACT JEFF BURGER AT BERGERONAPERVILLE.IL.US FOR ACCURATE WATER AND WASTEWATER UTILITIES FOR REMOVAL.

PROPOSED TEMPORARY CONSTRUCTION SECURITY FENCE (TYP.)

ALL WATER SERVICES ARE REQUIRED TO BE TERMINATED AT THE MAIN, PLEASE CALL 630-420-6137 TO SHUT OFF WATER METERS, PICK UP METERS AND AMI MODULES AND TURN OFF BBOXES.

CONTRACTOR SHALL COORDINATE WITH NICOR GAS FOR THE SHUT-OFF/ABANDONMENT OF THE EX. GAS LINE

CONTRACTOR IS RESPONSIBLE FOR CUSTOMER NOTIFICATION AND SHUT-OFF/ABANDONMENT OF THE WATER MAIN. CITY OF NAPERVILLE WATER DEPARTMENT REQUIRES INSPECTION OF VALVE TURNING FOR SHUT-OFF. TURN OFF VALVE AND CUT AND CAP EX. 6" WATERMAIN 2' EAST OF VALVE

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

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- REFER TO SPECIFICATIONS SHEET FOR DEMOLITION NOTES.

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

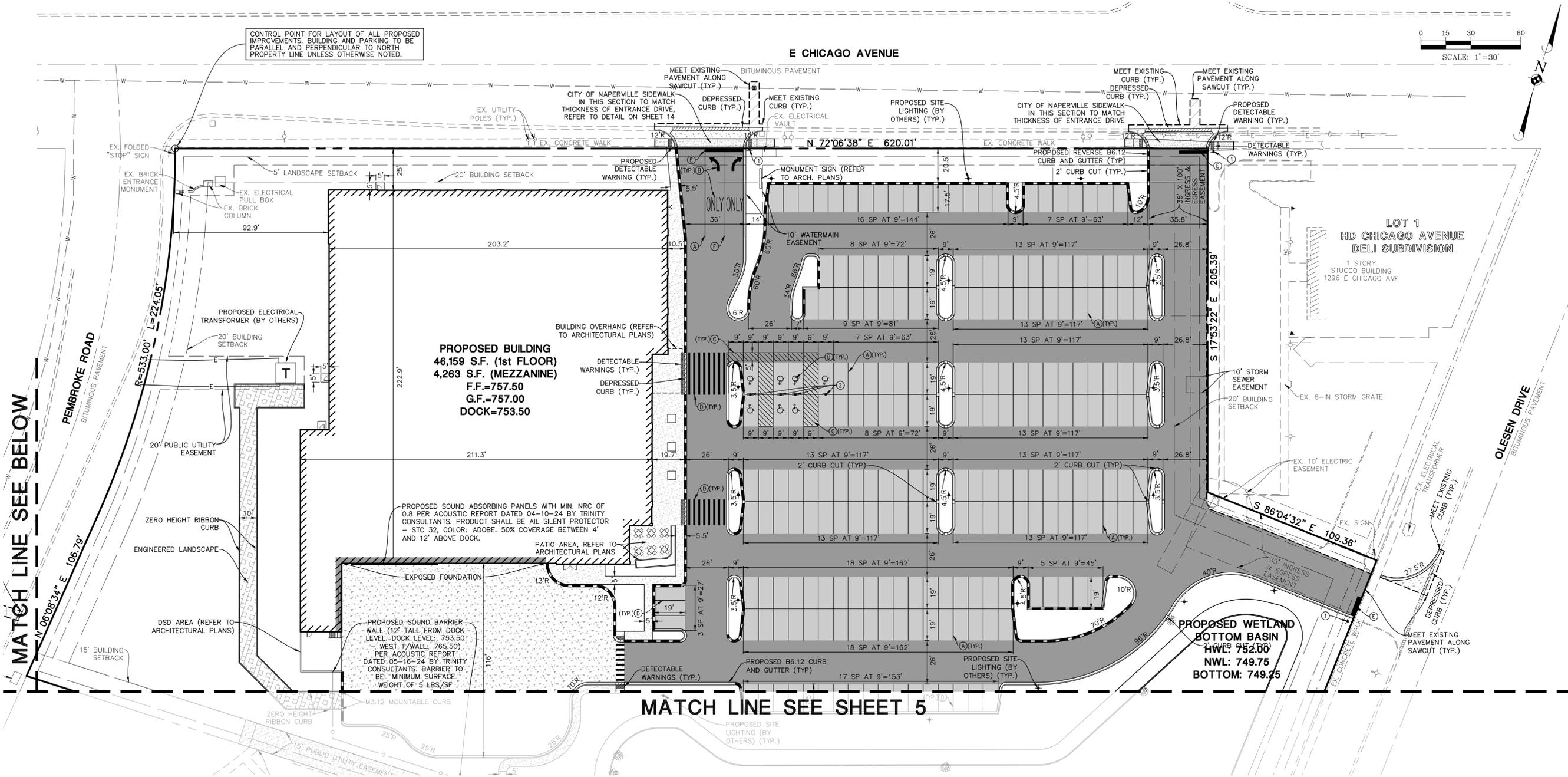
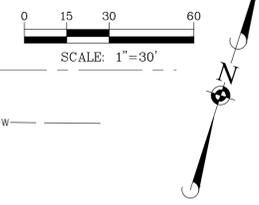
Manhard CONSULTING
 1800 West Lake Street, Suite 200, Naperville, IL 60563
 Tel: 630.330.0000 Fax: 630.330.0001
 www.manhardconsulting.com
 Civil Engineers • Surveyors • Water Resources Engineers • Wetland & Wetwaters Engineers • Planners • Construction Managers • Environmental Scientists • Landscape Architects

PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 EXISTING CONDITIONS AND DEMOLITION PLAN - SOUTH
 PROJECT MGR: MDE
 PROJ ASSOC: JRM
 DRAWN BY: JDM
 DATE: 08-30-23
 SCALE: 1"=30'
 SHEET
3 OF 19
 ADK.NVIL01

May 16, 2024 - 10:30 Des Name: P:\Manhard\01\Manhard\Final Demolition\Plan_South\Ex-DEM01.dwg User: JDM
 License: 001454474
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FINAL ENGINEERING - NOT FOR CONSTRUCTION

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



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
 BOTTOM BASIN**
 HWL: 752.00
 NWL: 749.75
 BOTTOM: 749.25

MATCH LINE SEE SHEET 5

MATCH LINE SEE BELOW

MATCH LINE SEE ABOVE

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

SIGN LEGEND	
(1)	R1-1 STOP SIGN
(2)	R7-8 HANDICAP PARKING SIGN (ON BOLLARD)
(3)	R5-1 DO NOT ENTER

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 GRASSPAVE2 REFER TO DETAIL ON SHEET 15

NOTE:
 CONTRACTOR SHALL FOLLOW RECOMMENDATIONS IN THE GEOTECHNICAL REPORT BY TESTING SERVICE CORPORATION (TSC) DATED JULY 25, 2023 INCLUDING SUBGRADE PREPARATION

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

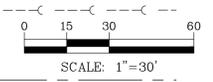
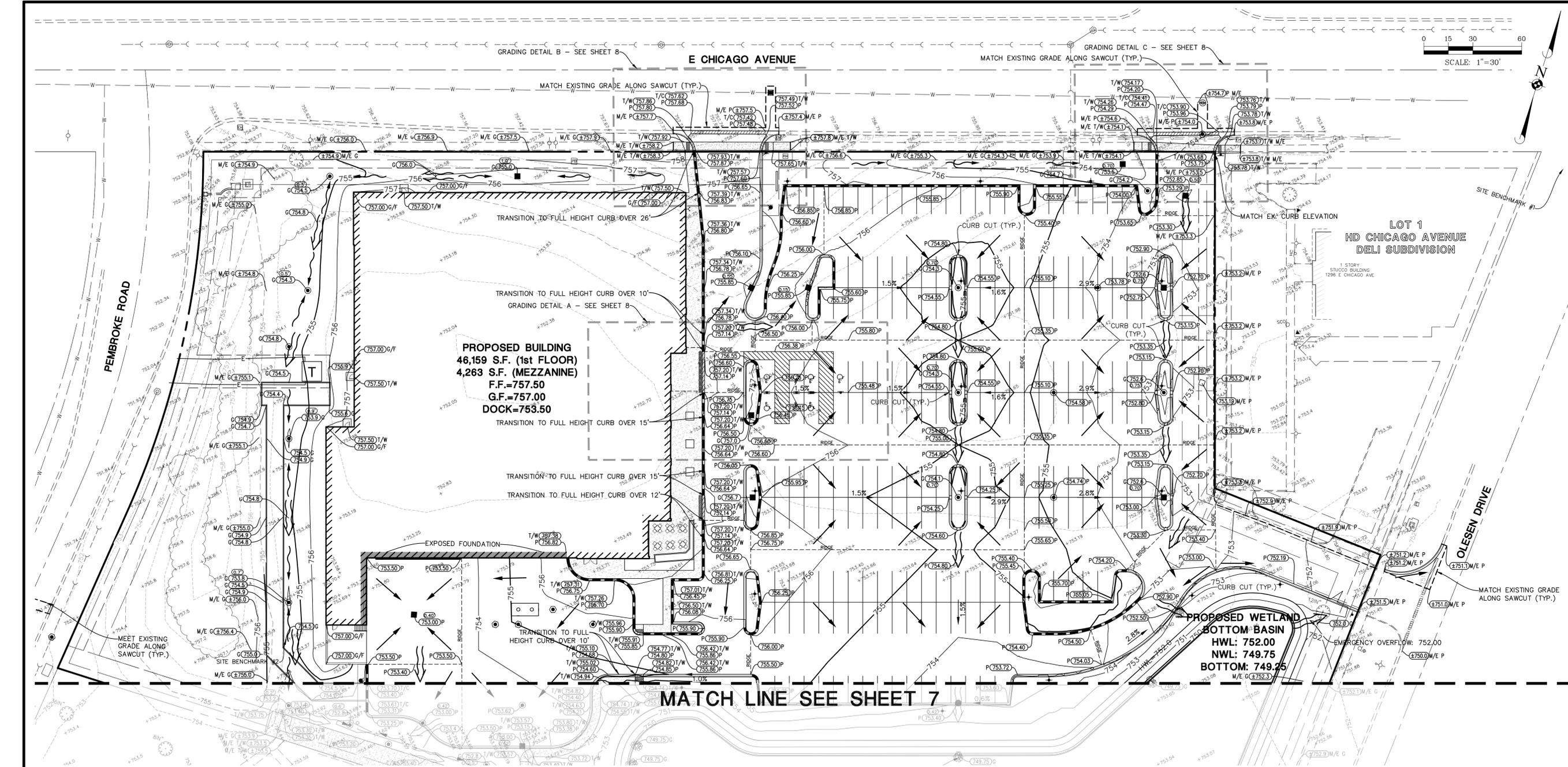
- SITE DIMENSIONAL AND PAVING NOTES:**
- ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE.
 - ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED.
 - ALL CURB RADI SHALL BE 3' MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
 - TIE ALL PROPOSED 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.L.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.

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

Manhard CONSULTING
 1800 West Park Drive, Suite 200, Naperville, IL 60563
 Tel: 630.330.8800 Fax: 630.330.8801
 Civil Engineers • Surveyors • Water Resources Engineers • Wetland & Wetlands Engineers • Planners
 Construction Managers • Environmental Scientists • Landscape Architects • Planners

PROPOSED HEINEN'S GROCERY STORE
 CITY OF NAPERVILLE, ILLINOIS
 SITE DIMENSIONAL AND PAVING PLAN - NORTH

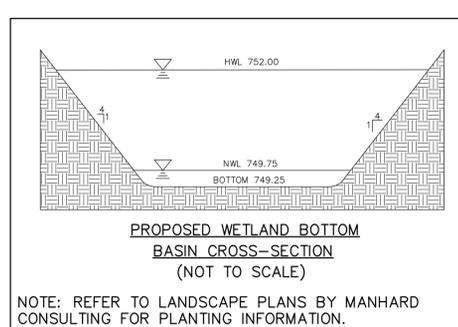
8/30/24 15:04 - 15:04 - P:\Manhard\01\Manhard\Final_Drawing\Plan_S&P_S&P.dwg, Updated By: Manhard



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
 BOTTOM BASIN**
 HWL: 752.00
 NWL: 749.75
 BOTTOM: 749.25

- 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 IMPROVEMENTS.
 - 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 3:1V 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 2:1V AT CURBS AND 3:1V AT SIDEWALKS PER CITY OF NAPERVILLE DETAIL UNLESS OTHERWISE NOTED.



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

MANHARD CONSULTING
 1299 E CHICAGO AVE
 STUCCO BUILDING
 NAPERVILLE, IL 60563
 (630) 241-1100
 WWW.MANHARDCONSULTING.COM

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

DATE: 08-30-23
 SCALE: 1"=30'
 SHEET 6 OF 19
 ADK.NVIL01

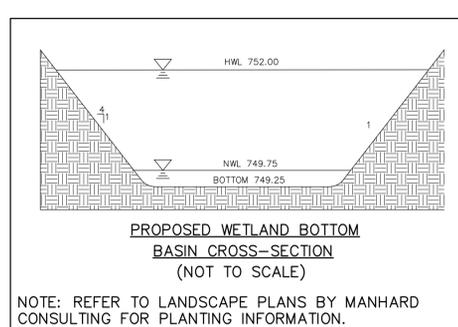
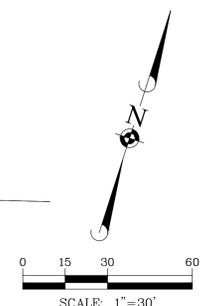
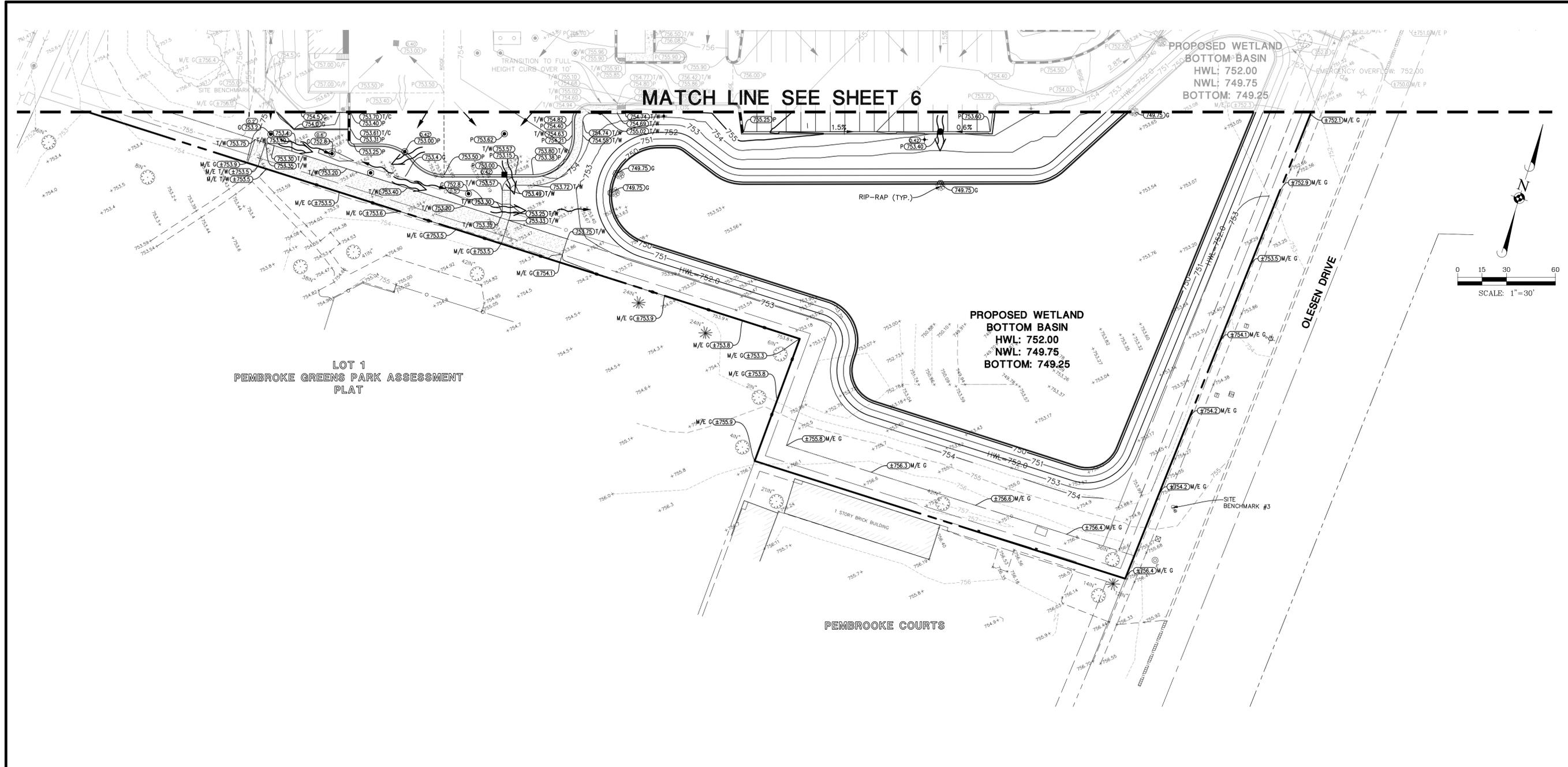
REVISIONS:

NO.	DATE	DESCRIPTION
01	08-16-24	REVISED PER CITY OF NAPERVILLE REVIEW #1/4
02	08-19-24	REVISED PER DUOT REVIEW
03	09-24-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
04	10-02-24	REVISED PER CITY OF NAPERVILLE REVIEW #3

DESIGNED BY: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: EJB
 DATE: 08-30-23
 SCALE: 1"=30'
 SHEET 6 OF 19
 ADK.NVIL01

Manhard Consulting
 Civil Engineers • Surveyors • Water Resources Engineers • Wetland & Wetlands Engineers • Planners
 Construction Managers • Environmental Scientists • Landscape Architects • Planners

FINAL ENGINEERING - NOT FOR CONSTRUCTION



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.
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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

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 Phone: 630.335.1100 | Fax: 630.335.1101 | Email: info@manhardconsulting.com

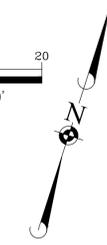
Professional Engineers • Professional Surveyors • Professional Land Surveyors • Professional Landscape Architects • Professional Planners • Construction Managers • Environmental Scientists

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

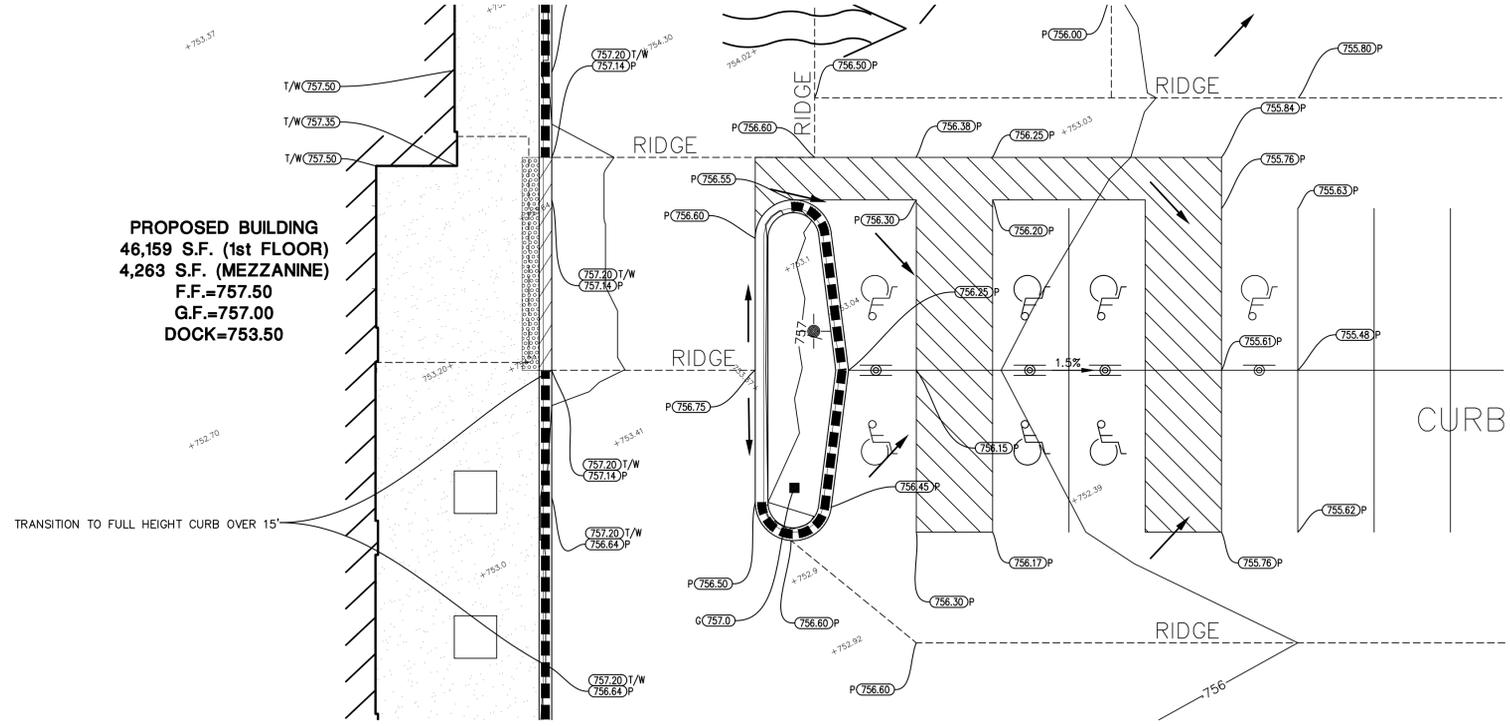
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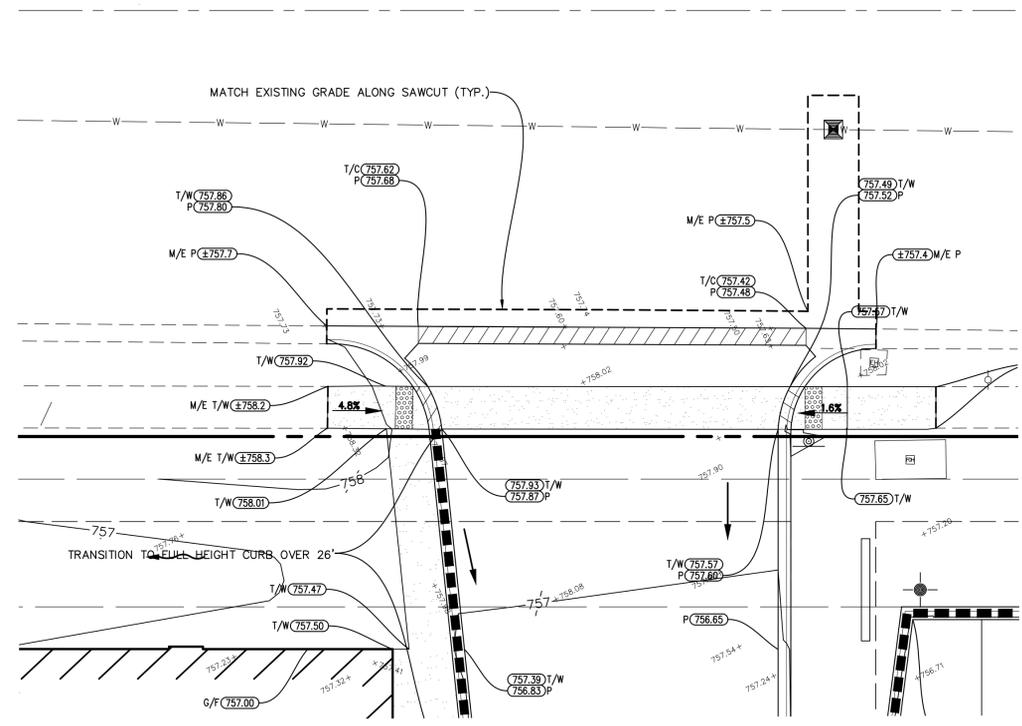
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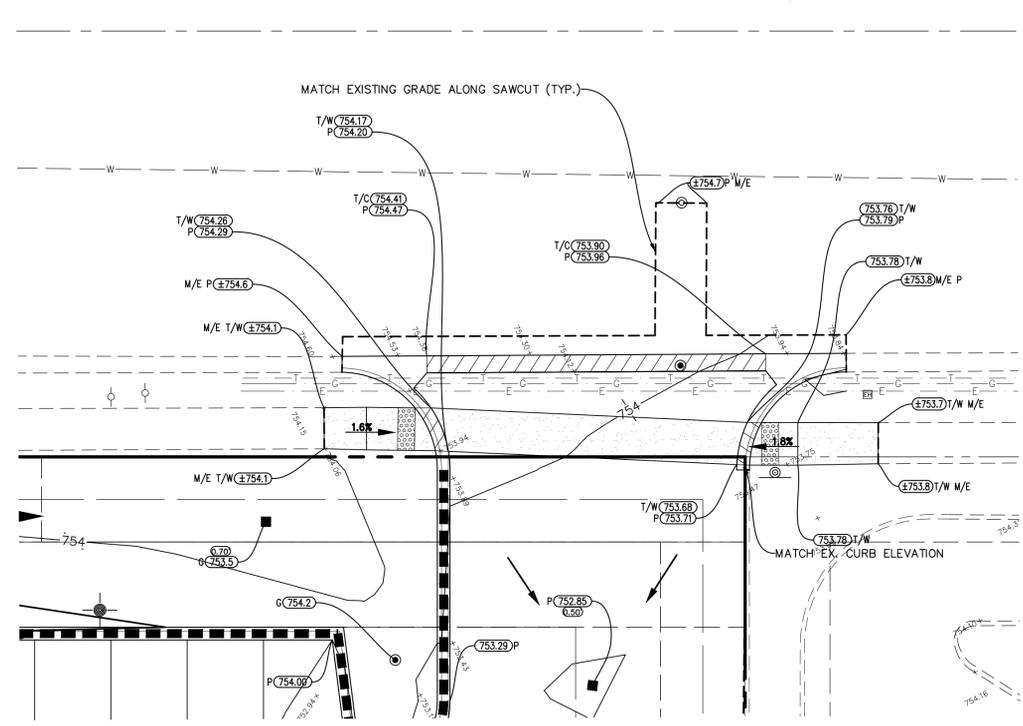
GRADING DETAIL A



GRADING DETAIL B



GRADING DETAIL C



DATE	REVISIONS
08-16-24	REVISED PER CITY OF NAPERVILLE REVIEW #3/4
03-29-24	REVISED PER DUOT REVIEW
03-12-24	REVISED PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISED PER CITY OF NAPERVILLE REVIEW

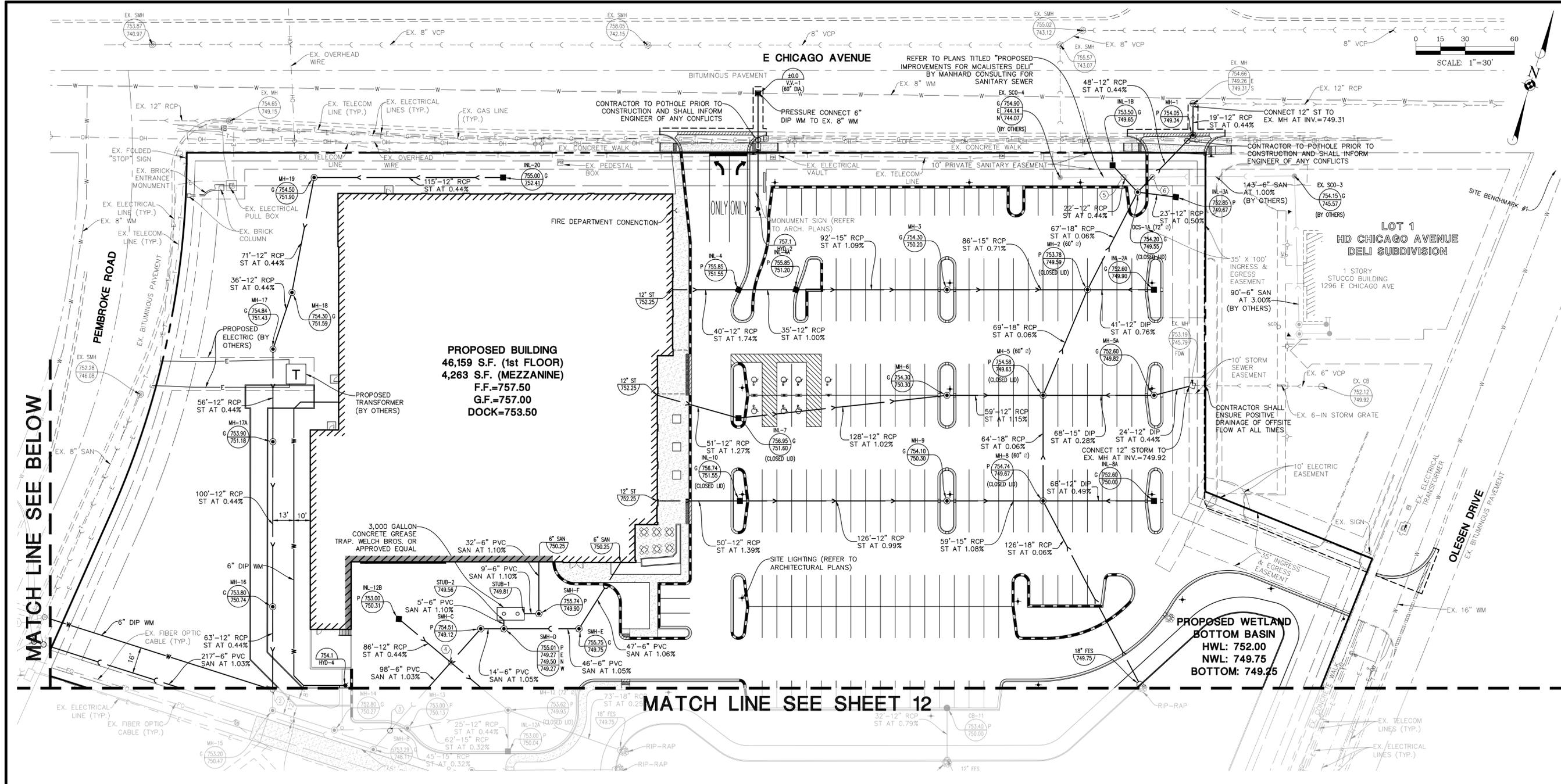
Manhard CONSULTING
 Manhard Consulting, Inc. 1000 West Lake Street, Suite 200, Naperville, IL 60563
 Civil Engineers • Surveyors • Wetland Resources Engineers • Wetland & Wetland-Adjacent Areas
 Construction Managers • Environmental Scientists • Landscape Architects • Planners

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	

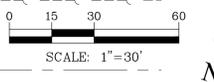
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FINAL ENGINEERING - NOT FOR CONSTRUCTION



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
 BOTTOM BASIN
 HWL: 752.00
 NWL: 749.75
 BOTTOM: 749.25



DATE	REVISIONS
08-16-24	REVISION PER CITY OF NAPERVILLE REVIEW #3/14
03-09-24	REVISION PER DUDOT REVIEW
03-12-24	REVISION PER CITY OF NAPERVILLE REVIEW #2
02-09-24	REVISION PER CITY OF NAPERVILLE REVIEW

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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.NVIL01

DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC GENERAL NOTES:

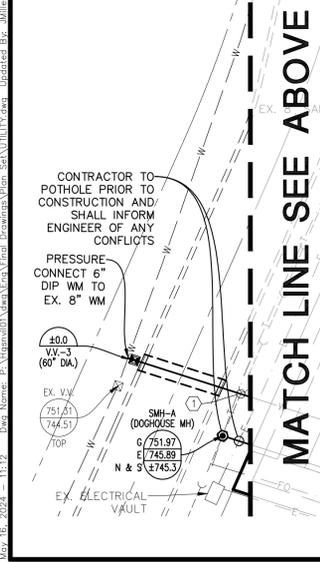
- THE DEVELOPER SHALL SUPPLY THE DPU-E ENGINEER WITH CATALOG CUTS FOR ALL CT/METER EQUIPMENT (INCLUDING BUT NOT LIMITED TO METER SOCKETS, PT CABINET, CT CABINET, DISCONNECT CABINET) AND TRANSFORMER PAD/VAULT. THE CATALOG CUTS SHALL BE APPROVED BY DPU-E PRIOR TO PURCHASING.
- THE CT/METER CABINET SHALL 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 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.

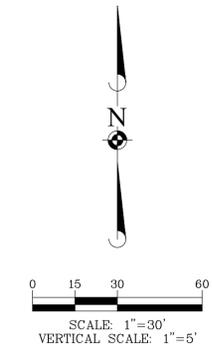
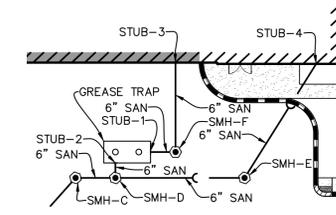
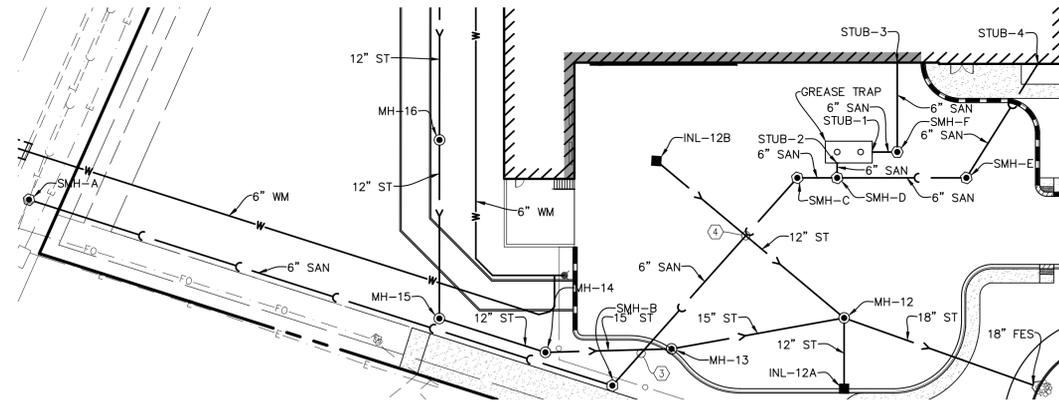
- DPU-E REQUIRES A MINIMUM 5' OF SEPARATION BETWEEN ITS ELECTRIC FACILITIES AND ANY FIRE HYDRANTS, STORM DRAINS, STORM SEWERS, WATER MAINS, GAS MAINS, ETC. THAT RUN PARALLEL TO ITS FACILITIES.
- TO HAVE AN EXISTING SERVICE DISCONNECTED, CALL THE CITY DISPATCH OFFICE AT 630-420-6187. PLEASE ALLOW AT LEAST 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.
- DUE TO SUPPLY CHAIN ISSUES DPU-E IS EXPERIENCING LONG LEAD TIMES (+400 DAYS) ON TRANSFORMERS. PLEASE TAKE THIS INTO CONSIDERATION WHEN PLANNING CONSTRUCTION. THE TRANSFORMER MUST BE SHOWN ON THE SITE PLAN AND SHOULD BE LOCATED BETWEEN 8' AND 50' FROM COMMERCIAL BUILDINGS. METERS, INSTRUMENTAL TRANSFORMERS, AND MAIN DISCONNECT SHALL BE LOCATED WITHIN 50' OF THE TRANSFORMER AND SHALL BE INSTALLED ON THE EXTERIOR OF THE BUILDING. IF THE TRANSFORMER WILL BE LOCATED AT A DISTANCE GREATER THAN 50', THEN THE METERING CABINET AND MAIN DISCONNECT MUST BE FREE STANDING AND LOCATED BETWEEN 10' AND 15' OF THE TRANSFORMER. THE INSTRUMENT TRANSFORMERS AND MAIN DISCONNECT MAY BE INSTALLED INSIDE THE BUILDING IF THE SERVICE ENTRANCE CAPACITY IS 1200 AMPS OR GREATER. METERS SHALL BE INSTALLED ON THE BUILDING EXTERIOR.
- THE DEVELOPER IS RESPONSIBLE FOR THE CONSTRUCTION AND INSTALLATION OF A TRANSFORMER PAD AND VAULT. THE DPU-E ENGINEER MUST BE INFORMED PRIOR TO THE INSTALLATION OF THE AND VAULT. A MAIN DISCONNECT OR CIRCUIT BREAKER IS REQUIRED FOR DPU-E ACCESS IN CASE OF A NEED FOR SERVICE OR IN AN EMERGENCY. DPU-E SHALL MAKE THE FINAL CONNECTIONS OF THE CUSTOMER'S SERVICE TO THE TRANSFORMER TERMINALS. A MINIMUM OF EIGHT FEET OF ADDITIONAL CONDUCTOR LENGTH MUST BE LEFT ON THE CUSTOMER'S SERVICE CABLES.

UTILITY NOTES:

- ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
- BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT 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 EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT J.U.L.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.
- ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES IF SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
- 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.
- THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
- CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
- AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
- ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.
- ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
- ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
- THE UNDERGROUND UTILITY INFORMATION AS SHOWN HERE ON 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.
- ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO FES.
- 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.

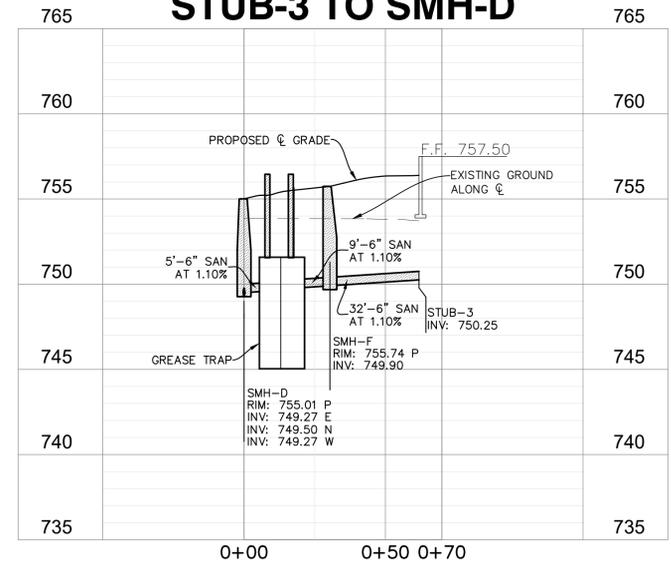
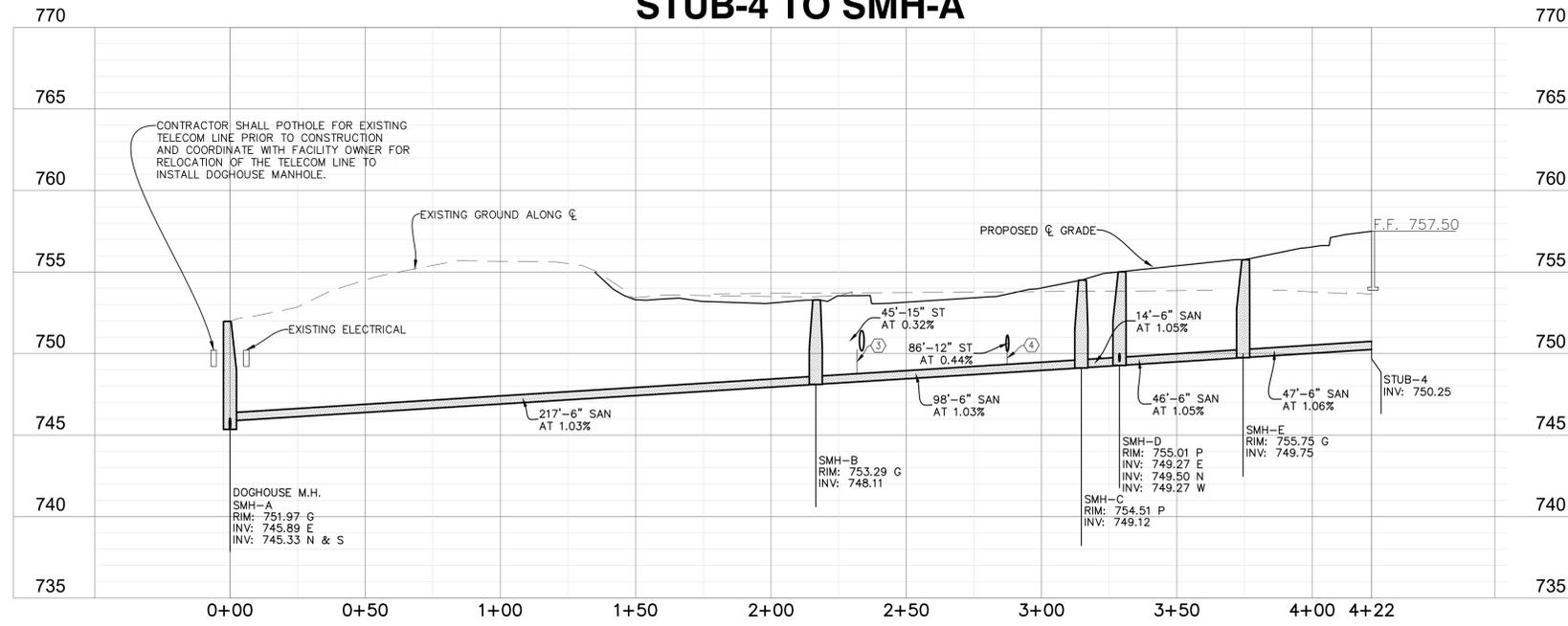
UTILITY CROSSINGS			
1) EX. SAN OVER WM B/P SAN = 745.37 T/P WM = 743.87 *LOWER WM*	4) ST OVER SAN B/P ST = 749.96 T/P SAN = 749.35 **CRITICAL CROSSING**	2) ST OVER WM B/P ST = 750.35 T/P WM = 748.85 *LOWER WM*	5) ST OVER EX. SAN B/P ST = 749.35 T/P SAN = 745.04
3) ST OVER SAN B/P ST = 749.97 T/P SAN = 748.80 **CRITICAL CROSSING**	6) ST OVER EX. SAN B/P ST = 749.33 T/P SAN = 745.22	NOTE: WATER AND SEWER CROSSINGS SHALL MEET STATE EPA SEPARATION AND PIPE MATERIAL REQUIREMENTS. (SEE DETAIL SHEET)	





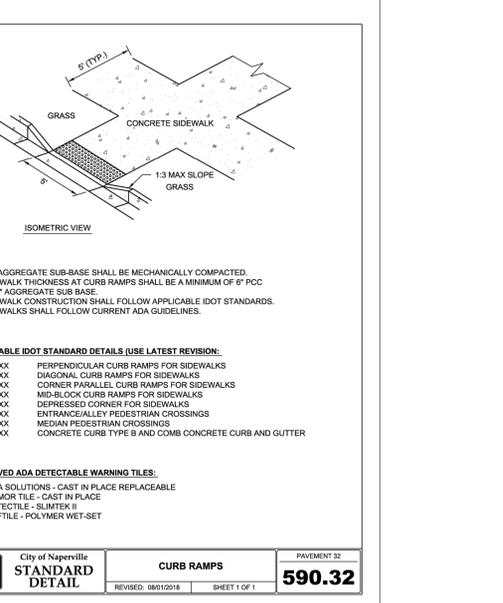
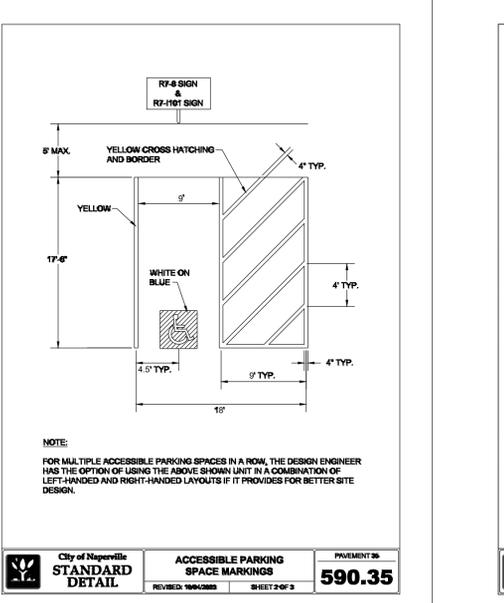
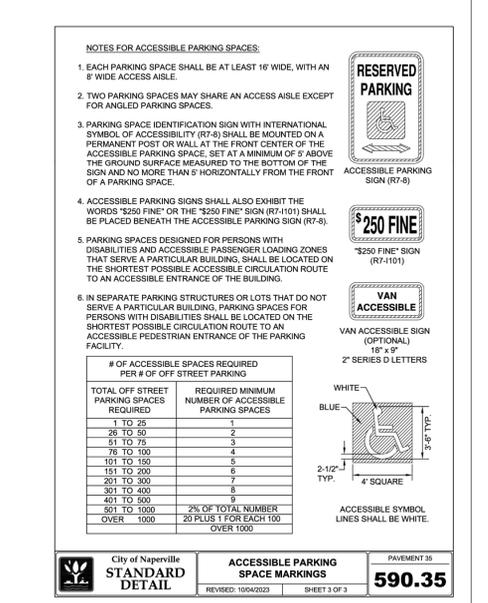
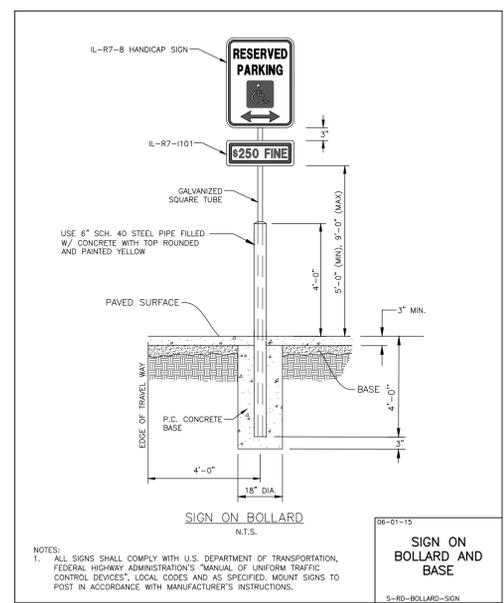
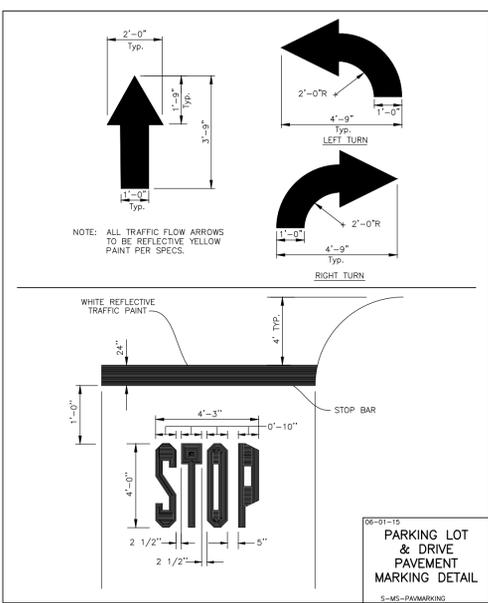
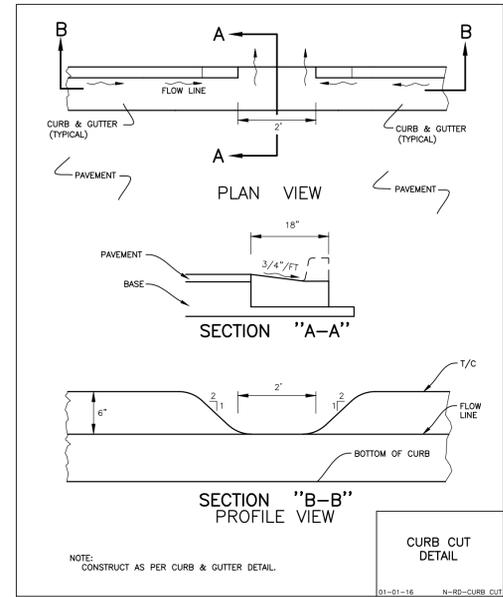
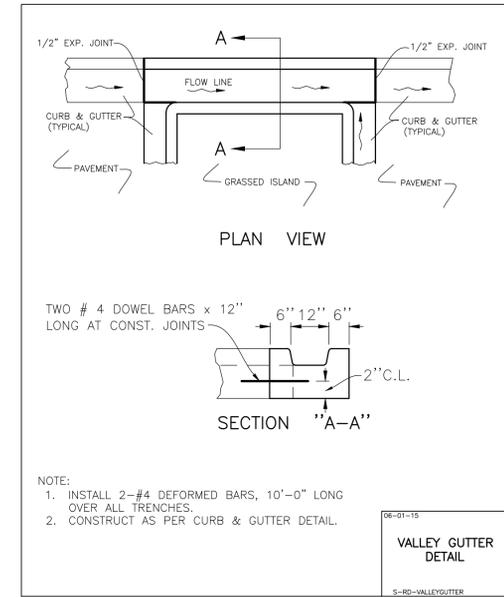
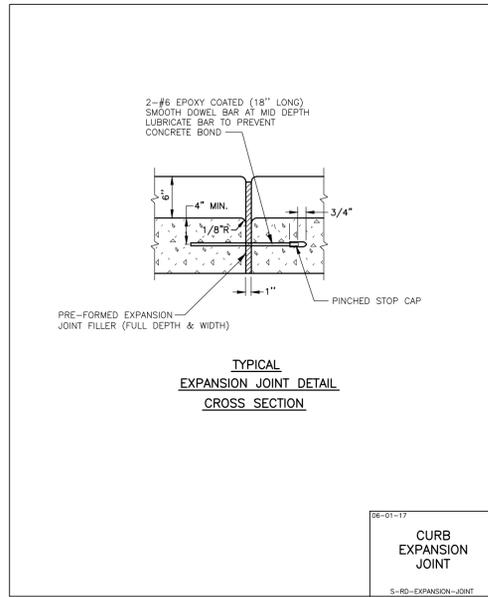
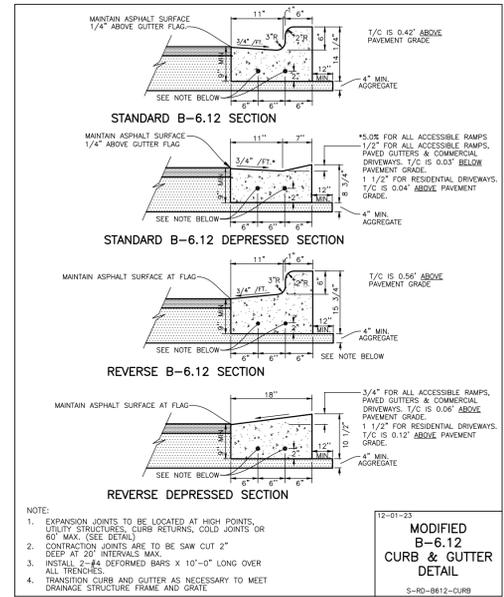
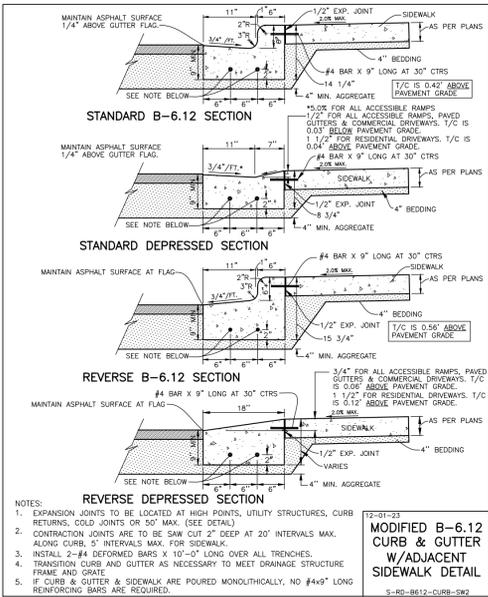
STUB-4 TO SMH-A

STUB-3 TO SMH-D



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MANHARD CONSULTING	CONSULTING	MANHARD CONSULTING	MANHARD CONSULTING	MANHARD CONSULTING	MANHARD CONSULTING
PROPOSED HEINEN'S GROCERY STORE CITY OF NAPERVILLE, ILLINOIS PLAN AND PROFILE - SANITARY SEWER					
FINAL ENGINEERING - NOT FOR CONSTRUCTION					
PROJECT NO: 08-30-23 SCALE: H: 1"=30' V: 1"=5' SHEET: 13 OF 19 ADK.NVIL01					



Manhard CONSULTING

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 Phone: 630-330-1100
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 Email: info@manhard.com

PROJ. MGR.: MDE
 PROJ. ASSOC.: JRM
 DRAWN BY: JAW
 DATE: 08-30-23
 SCALE: N.T.S.
 SHEET: 14 OF 19
 ADK.NVIL01

REVISIONS:
 08-16-24 REVISED PER CITY OF NAPERVILLE REVIEW #3/4
 03-09-24 REVISED PER IDOT REVIEW
 03-09-24 REVISED PER CITY OF NAPERVILLE REVIEW #2
 02-09-24 REVISED PER CITY OF NAPERVILLE REVIEW

PROPOSED HEINEN'S GROCERY STORE

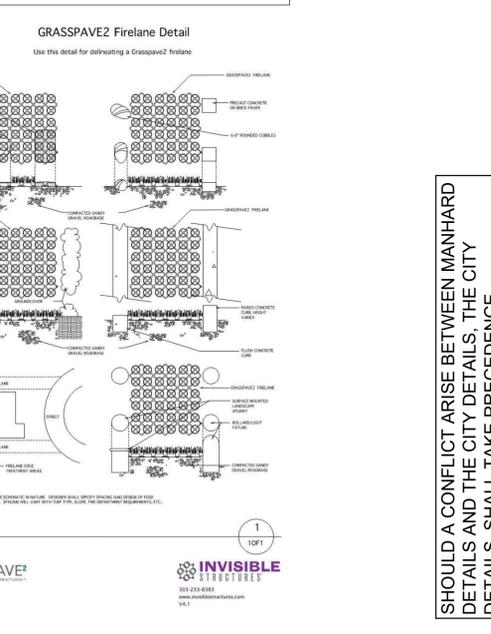
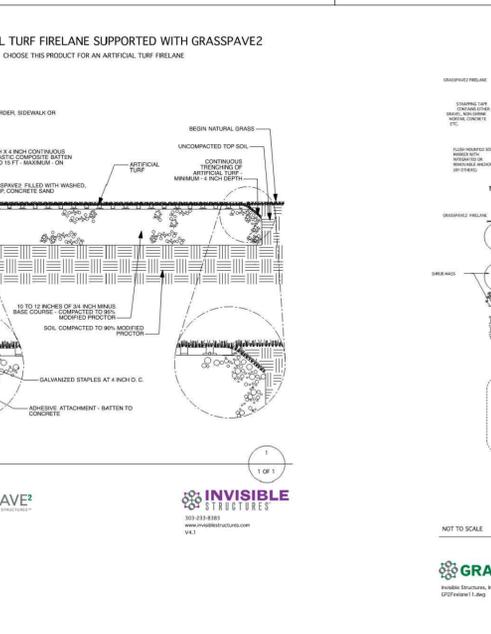
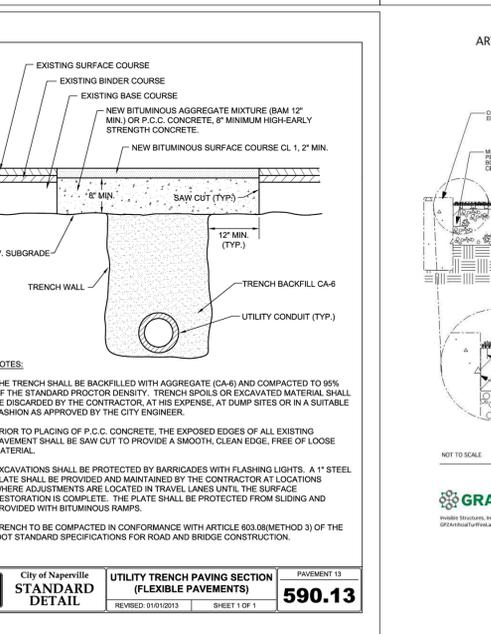
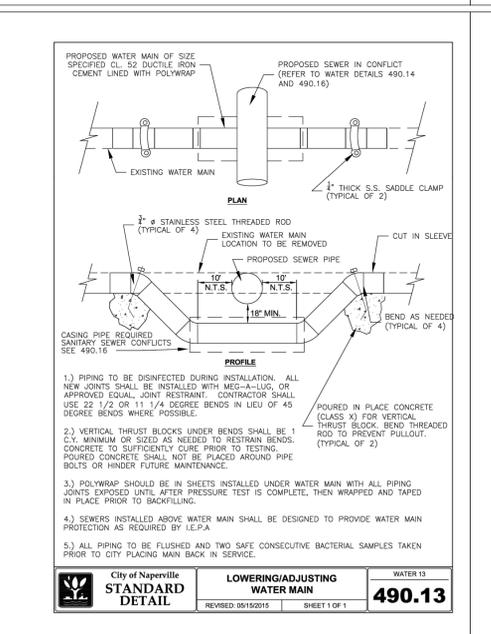
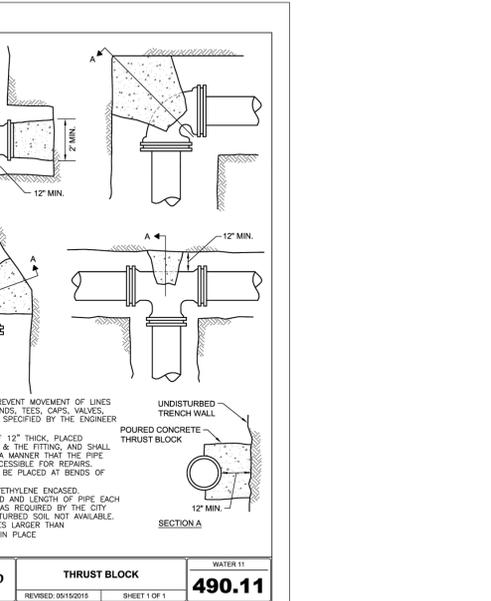
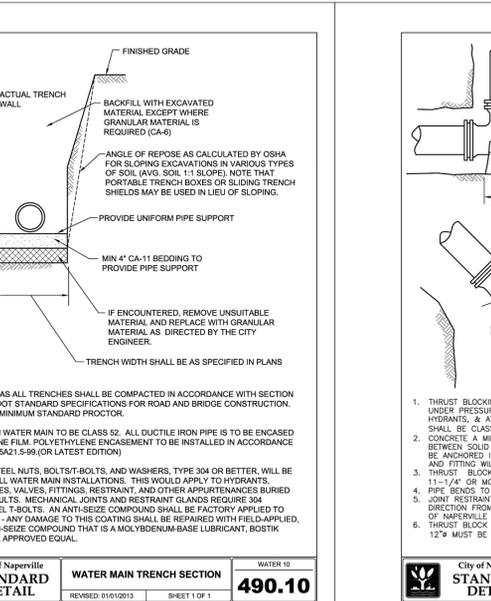
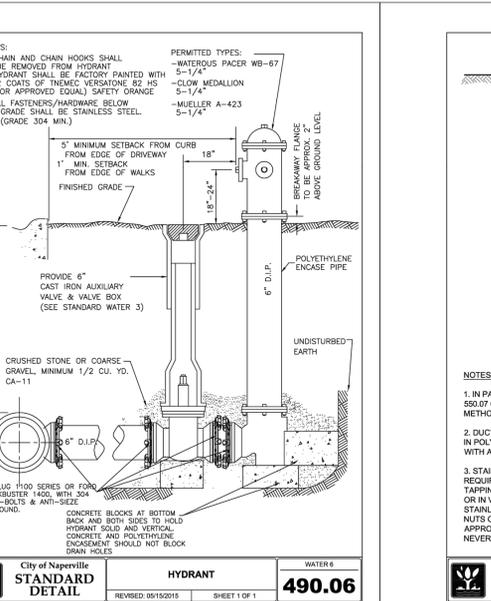
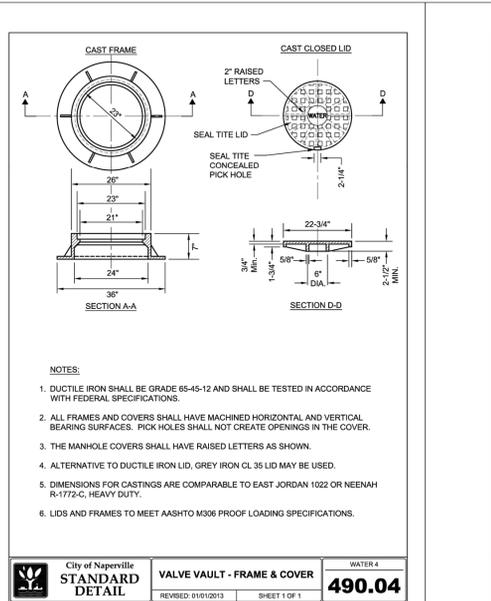
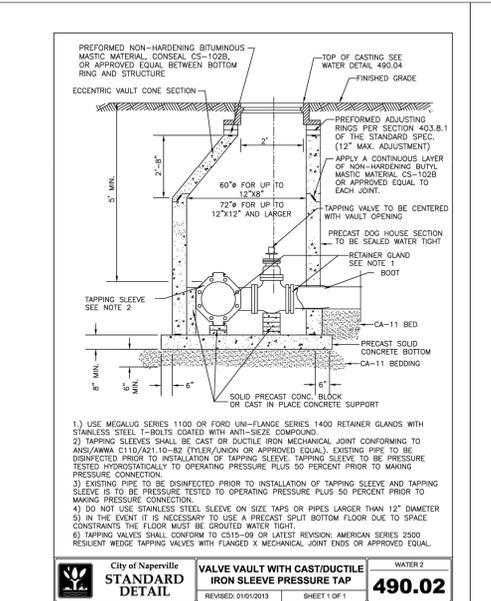
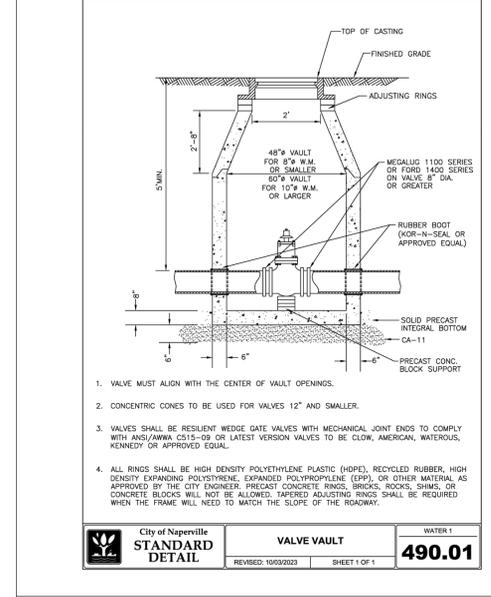
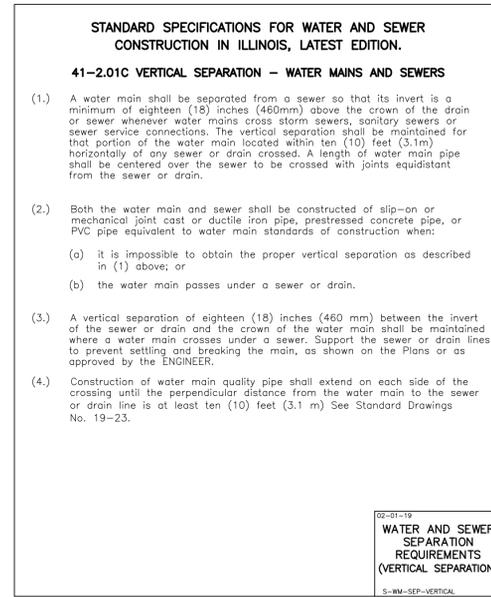
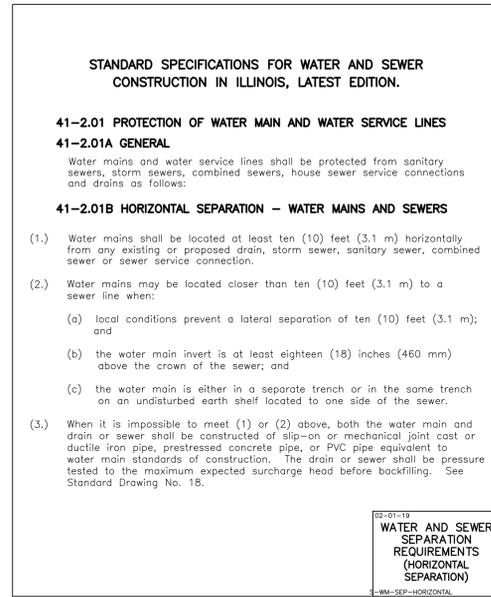
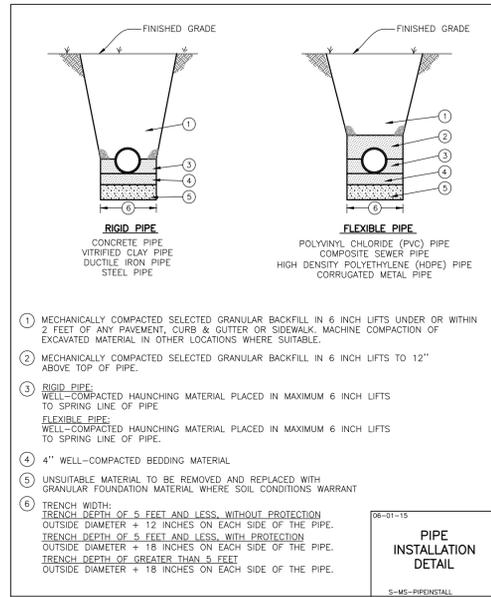
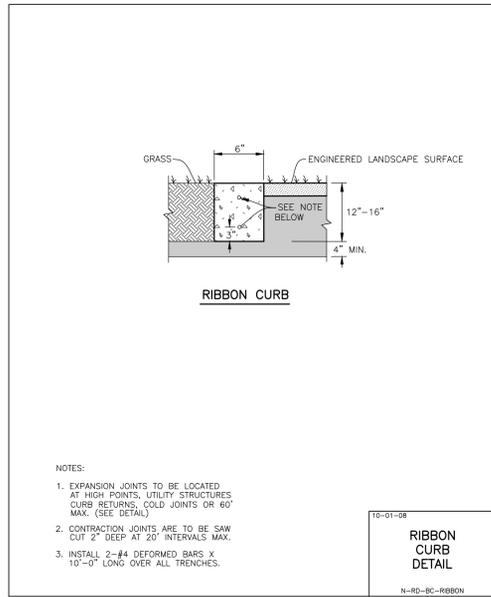
CITY OF NAPERVILLE, ILLINOIS

CONSTRUCTION DETAILS

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

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May 16, 2024 - 10:29 Doc Name: P:\naperville\01\04\03\Final Drawings\Plan_S&M\DETAILS.dwg Updated By: ajdlr



Manhard CONSULTING

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Cell: 630.331.1111 | Fax: 630.331.1112 | Email: info@manhard.com

Professional Engineers • Professional Surveyors • Professional Landscapers • Professional Planners • Professional Environmental Scientists • Professional Construction Managers

PROPOSED HEINENS GROCERY STORE

CITY OF NAPERVILLE, ILLINOIS

CONSTRUCTION DETAILS

PROJ. MGR.: MDE

PROJ. ASSOC.: JRM

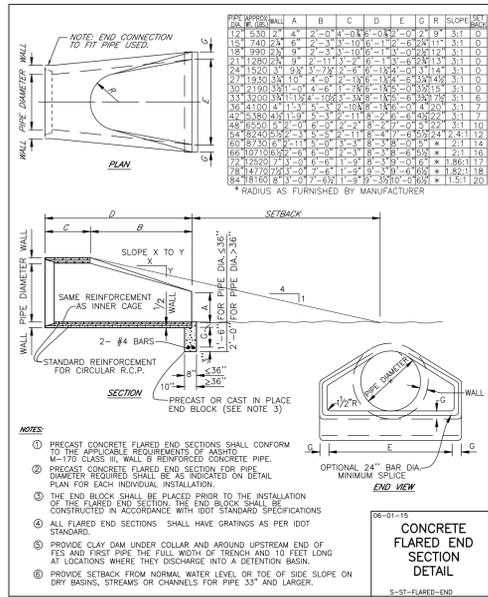
DRAWN BY: JRM

DATE: 08-30-23

SHEET: 15 OF 19

ADK.NVIL01

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RIP-RAP

PIPE DIAMETER (IN.)	STONE RIP-RAP				BEDDING			
	QUALITY DESIGNATION	GRADATION NUMBER	MINIMUM THICKNESS (IN.)	MINIMUM WEIGHT RANGE (LB)	WEIGHT AVERAGE (LB)	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

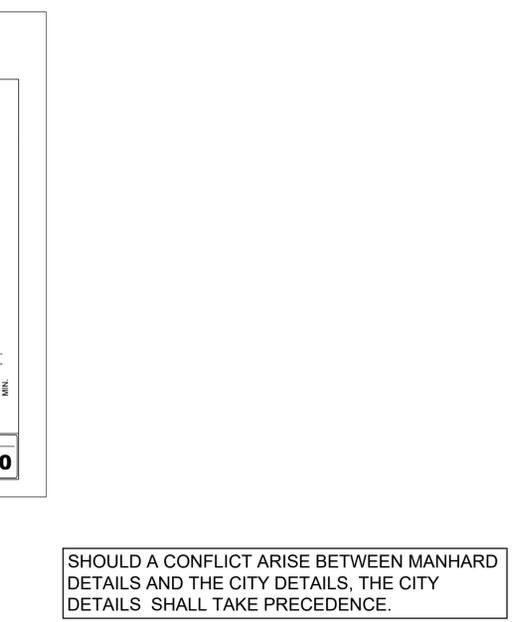
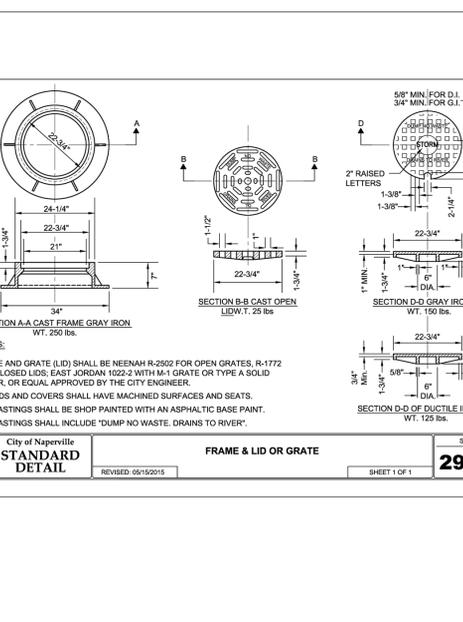
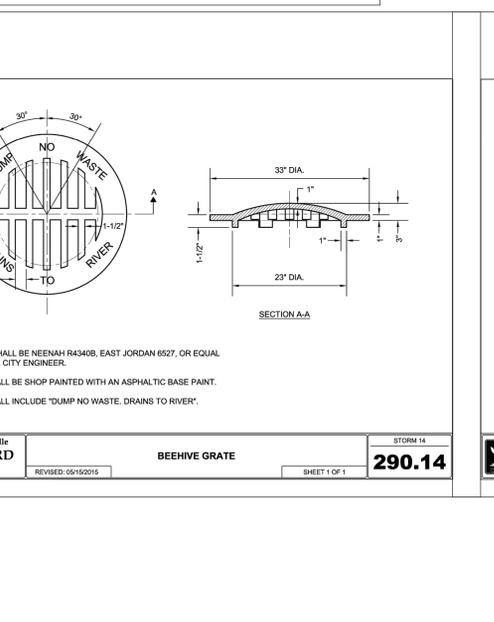
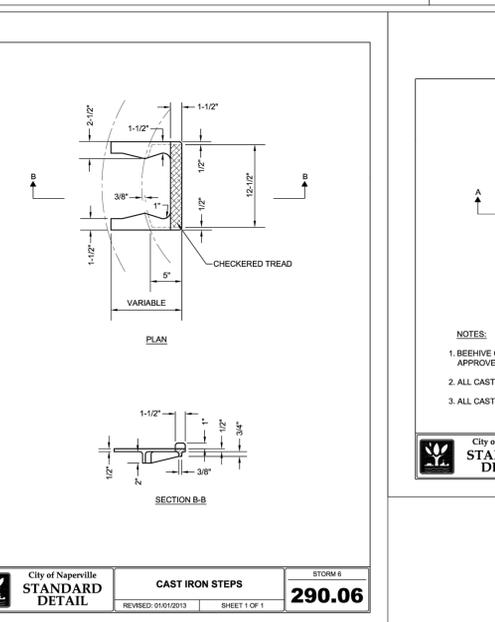
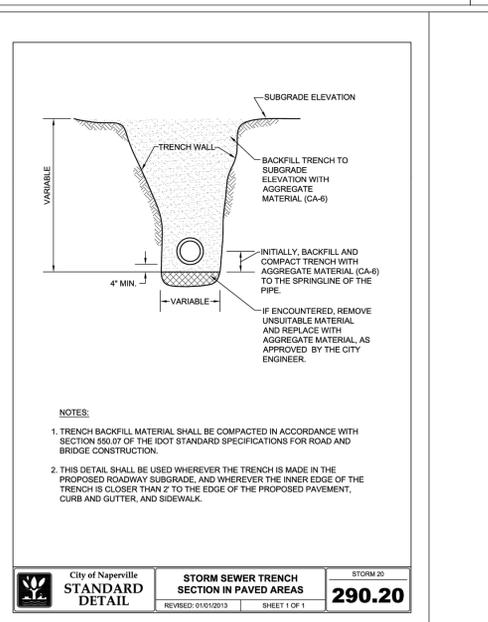
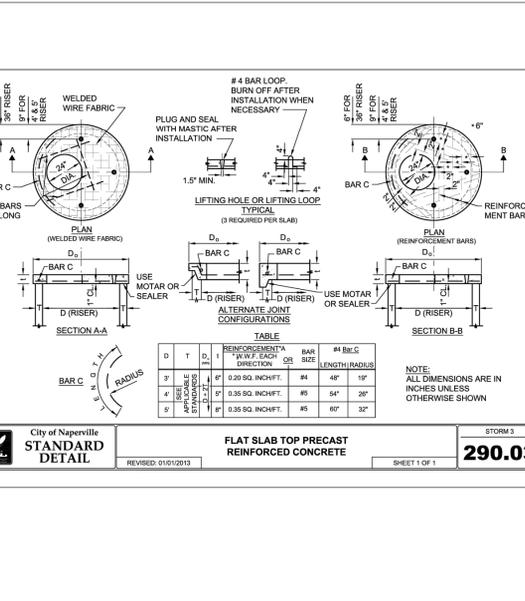
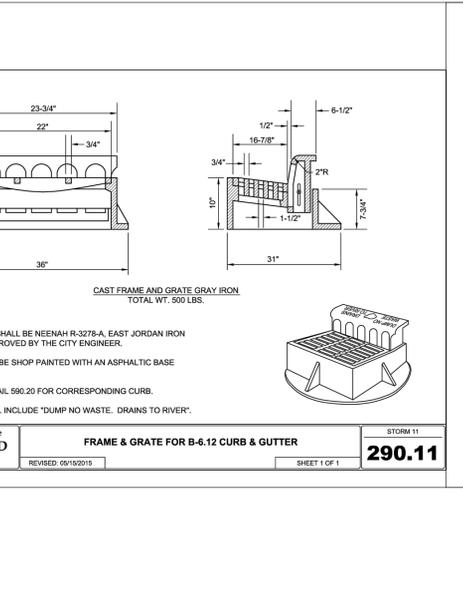
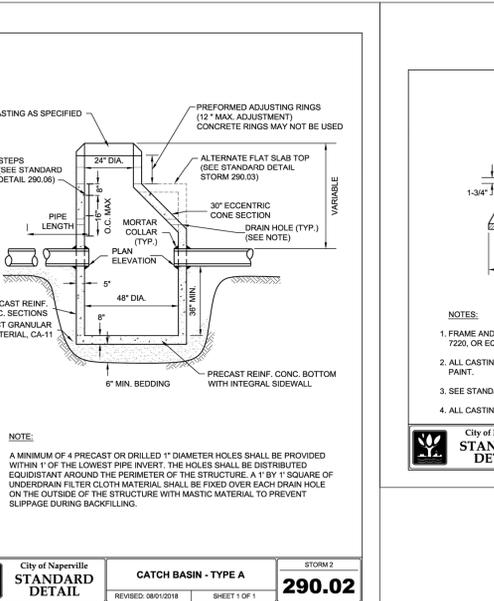
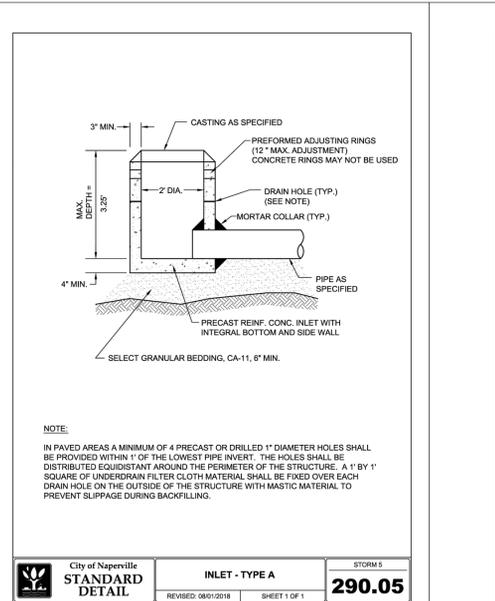
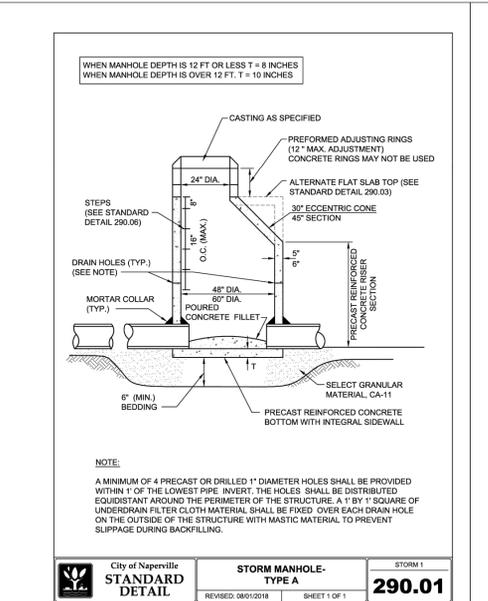
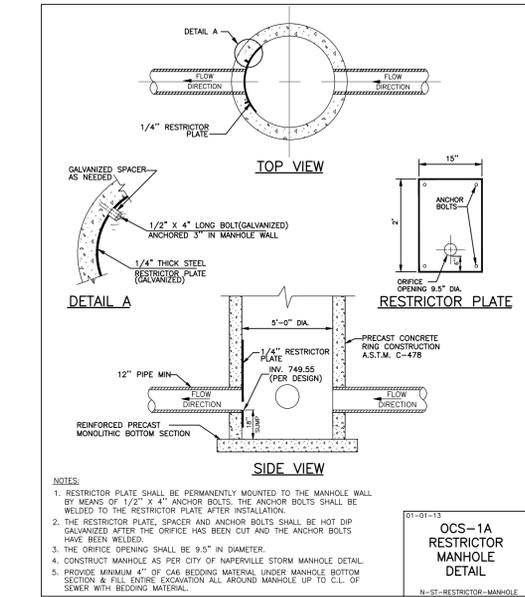
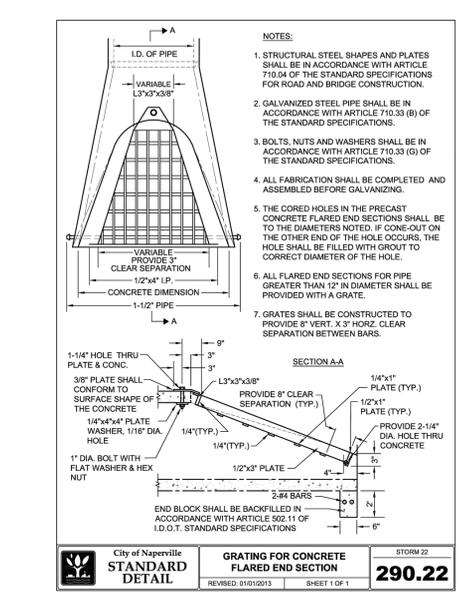
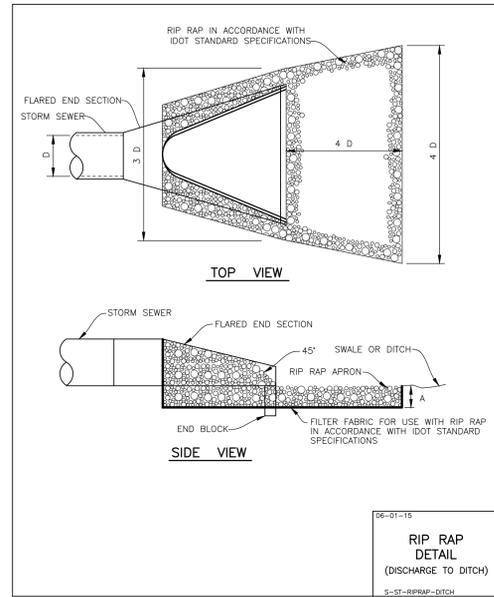
STORM 11

STANDARD DETAIL

REVISED: 05/15/2015

SHEET 1 OF 1

290.12



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 review 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 applied have a well-known technical or trade meaning, shall be held to refer to such materialized standards.

INTERPRETATION OF PLANS AND SPECIFICATIONS

- The 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 hereto.
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 indicate underground 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.

UNSUITABLE 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.

DETECTION 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 the location and elevation, i.e., water, sewer, electric, telephone, gas and cable TV prior to beginning any construction so that said entity or company can establish the utility location and level 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 these or other circumstances wherever 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 CLIENT. 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 Project, and when so directed by the CLIENT. Areas will be 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, drains, 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 and/or leaving the project, 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 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 the responsibility 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, attorney's 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 misuse of any hoist, rigging, blocking, scaffolding or any and all other kinds of items of equipment, whether or not the same is owned, furnished or loaned by any part or entity, including any contractor; (2) all attorney's 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 other party 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 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 must 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 damage 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 landscape 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 GOVERNMENT ENTITIES) of all structures, pads, walls, furnaces, 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 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 of 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 facility and site throughout 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 to minimize disturbance and inconvenience to facility operations.

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 the CONTRACTOR.

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 County State Rules and Regulations for the proper handling and disposal of asbestos.

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 performed.

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 locations 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 all 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, available 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.

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.

SODDING

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 culverts necessary to complete the excavation and embankment.

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

The CONTRACTOR shall be responsible for the excavation of all swales and ditches and for the excavation or filling 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 in the table below for all embankments unless more stringent values are listed in the soils report or are approved by the CLIENT, and to use any method approved by the CLIENT necessary to obtain this compaction (i.e., soil fabric or any underdraining that may be required).

Table with 5 columns: Percent Compaction, Standard, Pavement & Floor Slabs, Grass Areas, Sanry Soils, Modified Proctor, 95%, 90%, Clayey Soils, Standard Proctor, 95%, 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.

Upon completion of excavation and shaping of the water retention areas intended to maintain a permanent pool of water, all silt seams and granular or sandy soils shall be removed to a minimum depth of three feet below the substrate and replaced with an impermeable clay liner, including adjoan to and under the water table inlets and catch basins that the CONTRACTOR shall prepare the lake bottoms, side slopes, and compaction thereof so that the lakes will maintain the proposed normal water level and that leakage does not exceed 3" inch per week.

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 this condition necessitates the installation of perforated drain tile bedded in washed gravel or open storm sewer joints wrapped 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 balance.

It is the intent of these PLANS that storm waters falling on the site be diverted into sedimentation / lake / detention basins during construction. The CONTRACTOR shall construct and maintain any temporary ditches or swales that are necessary to accomplish this prior to beginning mass excavation.

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 dicing 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

A. GENERAL

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

Precast 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 where noted on PLANS. All material placed in such trenches shall be in accordance with the above standards.

MANHOLES, CATCH BASIN, INLETS & VALVE VAULTS

All Manholes, Catch Basins, Inlets, and Valve Vaults shall be constructed of reinforced precast concrete ring construction with long and groove joints in conformance with the latest revision of ASTM designation #78. All joints between sections and frames (except sanitary manholes, see Section IIB; Manholes, below) shall be sealed with mastic type bituminous jointing compound. CONTRACTOR shall remove all excess mastic on inside of structure and buried joints with mortar. Manholes are to be on 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 conentric cones. Only concrete adjustment rings will be permitted where necessary and shall be limited to two adjustment rings totaling not more than 6" in height. All manholes and catch basin steps shall be copolymer polypropylene with continuous 3/8" steel reinforcement as manufactured by MA Industries, or approved equal.

AUGER/BORE AND CASING

Casing pipe shall be welded steel pipe, installed where shown on the PLANS. The carrier pipe shall be securely blocked 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.

AUGER (OPEN BORE)

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 412-2.01A and 412-01B 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 15-inch) or ASTM F679 (18-inch thru 48-inch) minimum SDR 26 with flexible elastic/seal gasket gasketed joints conforming to ASTM D3212 and F477.
(2) Ductile Iron Sewer Pipe shall conform with ANSI/AWWA C151/A21.51 Class 50, cement lined with push on type joints conforming to ANSI/AWWA C111/A21.11.

Sanitary sewers shall include bedding and backfilling.

MANHOLES

Manholes shall be constructed in conformance with Section IIA 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 frame and lids shall be Neenah R-1772 or approved equal, with cast-in-place "SANITARY" with recessed pick holes. Manhole joints between adjacent 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 (chimey 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 31-1.12 "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 leaktested 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 C969 "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines"; or ASTM C124 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test".

SERVICES

A vye branch or "tee" and sanitary service line, properly plugged and sealed shall be constructed as shown on the PLANS. The ends of all vyes or tees 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.

RISERS

Risers 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 requirements, except that butterfly valves conforming to ANSI/AWWA C504 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, 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 (S) AND LARGER"

Water main pipe shall conform to the following:

- (1) Ductile iron pipe shall be per ANSI/AWWA C151/A21.51, Thickness Class 52, minimum 150 psi working pressure, cement lined in accordance with ANSI/AWWA C104/A21.4, with "push on" type joints (2)

Installation shall be in accordance with ANSI/AWWA C800 (Ductile Iron). All water main shall have mechanical joint cast iron or ductile iron fittings in accordance with ANSI/AWWA C110/A21.10 or compact ductile iron fittings in accordance with ANSI/AWWA C153/A21.53 with 500 psi working pressure.

Poured or monolithic concrete thrust blocks are required to brace all tees, plugs, caps, and bends of 11/4 degree deflection or greater. Minimum cover for all water mains, including services, shall be 5'-0" from the finished grade. Water main shall include bedding and backfilling.

WATER VALVES

All valves shall be resilient wedge gate valves conforming to the latest revision of ANSI/AWWA C515, with a rated working pressure of 200 psi in accordance with JURISDICTIONAL

