RWG ENGINEERING, LLC
CIVIL ENGINEERING – REAL ESTATE CONSULTING – PROJECT MANAGEMENT
ILLINOIS PROFESSIONAL DESIGN FIRM #184–006370

LIMITATION OF WARRANTY OF ENGINEER'S INSTRUMENTS OF SERVICE

THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

LEGEND

	EXISTING	PROPOSED
SANITARY MANHOLE	◎	◉
STORM MANHOLE	◎	◉
CATCH BASIN	○	●
INLET	□	■
PRECAST FLARED END SECTION	▷	▶
CONCRETE HEADWALL	⊃	⊃
VALVE VAULT	⊗	⊗
VALVE BOX	⊞	⊞
FIRE HYDRANT	⊃	⊃
BUFFALO BOX	⊕	●
CLEANOUT	⊡	⊡
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
WATER MAIN		
CONSTRUCT WATER MAIN UNDER SEWER		
GRANULAR TRENCH BACKFILL		
STREET LIGHT		
ELECTRICAL CABLE	E	E
2" CONDUIT ENCASEMENT		
ELECTRICAL TRANSFORMER OR PEDESTAL	E	
POWER POLE		
STREET SIGN		
GAS MAIN	G	G
TELEPHONE LINE	T	T
CONTOUR	749	749
SPOT ELEVATION	×(750.00)	×750.00
WETLANDS		
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		
DITCH OR SWALE		
OVERFLOW RELIEF ROUTING		
SLOPE BANK		
TREE WITH TRUNK SIZE	6" 6"	
SOIL BORING	B-0	B-1
TOPSOIL PROBE	P-0	P-1
FENCE LINE, WIRE OR SILT		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		

ABBREVIATIONS

BL	BASE LINE	NWL	NORMAL WATER LEVEL
C	LONG CHORD OF CURVE	PC	POINT OF CURVATURE
C & G	CURB AND GUTTER	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTERLINE	R	RADIUS
D	DEGREE OF CURVE	ROW	RIGHT-OF-WAY
EP	EDGE OF PAVEMENT	SAN	SANITARY SEWER
FF	FINISHED FLOOR	ST	STORM SEWER
FG	FINISHED GRADE	T	TANGENCY OF CURVE
FL	FLOW LINE	TB	TOP OF BANK
FP	FLOODPLAIN	TC	TOP OF CURB
FR	FRAME	TF	TOP OF FOUNDATION
FW	FLOODWAY	TP	TOP OF PIPE
HWL	HIGH WATER LEVEL	TS	TOP OF SIDEWALK
INV	INVERT	TW	TOP OF WALK
L	LENGTH OF CURVE	WM	WATER MAIN
MH	MANHOLE	△	INTERSECTION ANGLE

811 Know what's below. Call before you dig.

Formerly JULIE 1–800–892–0123

CONTACTS

CITY OF DESPLAINES

Northern Illinois Gas (NICOR)
Mr. David Surina
1844 West Ferry Road, Naperville, IL 60563
630–629–3500 (x335), Dsurina@aglresources.com

AT&T (Formerly SBC or Illinois Bell Telephone Company)
Ms. Sue Manshum
2004 Dempster/Miner Street, Des Plaines, IL 60016
847–759–5603, sm9231@att.com

Commonwealth Edison (Excelon)
Mr. Jack O'Brien
3 Lincoln Centre, Oak Brook Terrace, IL 60181
630–437–2463, john.obrien@comed.com

Wide Open West (WOW) (Cable Television)
Mr. Brian Hurd
1030 National Parkway, Schaumburg, IL 60173
630–699–5227

Comcast (Cable Television)
Mr. Frank Gautier, Right–of–way Engineer
688 Industrial Drive, Elmhurst IL
630–600–6348, Frank_Gautier@cable.comcast.com

City of Des Plaines
Community & Economic Development: 847–391–5380
1420 Miner Street
Des Plaines, IL 60016

Public Works Department: 847–391–5464
1111 Joseph J Schwab Rd
Des Plaines, IL 60016

J.U.L.I.E.
Underground Utility Locations
1–800–892–0123
811

"TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THIS PROJECT, OR, THAT IF DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS APPROVED FOR USE BY THE CITY, AND THAT SUCH SURFACE WATERS ARE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO ADJOINING PROPERTIES BECAUSE OF THE CONSTRUCTION OF THIS PROJECT." △1

MAUREEN R. MULLIGAN 062-054535 REGISTERED PROFESSIONAL ENGINEER STATE OF ILLINOIS

Maureen R. Mulligan

REGISTERED PROFESSIONAL ENGINEER

EXPIRATION DATE: 11/30/23

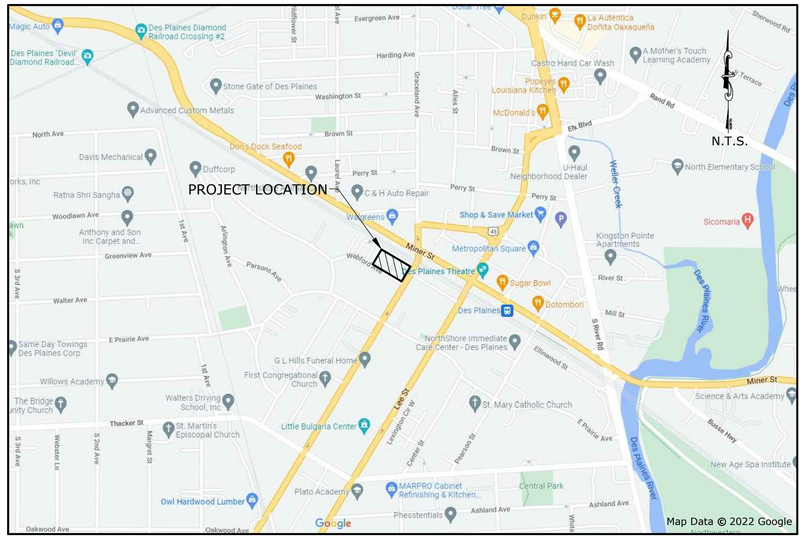
FINAL ENGINEERING PLANS

FOR

622 GRACELAND AVE. APARTMENTS

DESPLAINES, ILLINOIS

LOCATION MAP



INDEX OF SHEETS

GENERAL NOTES

1. The contractor shall notify the following governmental agencies at least two working days prior to commencement of construction:
   - City of Des Plaines Public Works Department (847–391–5464)
   - MWRD Local Sewer System Sections Field Office (708–588–4055)
2. The contractor shall notify all utility companies and arrange for their facilities to be located prior to work in any easement, right–of–way, or suspected utility location. Repair of any damage to existing facilities shall be the responsibility of the contractor. Utility locations shown herein are for graphic illustration only and are not to be relied upon.
3. Prior to commencement of any offsite construction, the contractor shall secure written authorization that all offsite easements have been secured, and that permission has been granted to enter onto private property.
4. Elevations shown herein reflect NAVD 1988 datum.
5. The boundary and topographic survey data for this project is based on a field survey prepared by Gentile and Assiciates, Inc, dated September 19, 2022. The contractor shall verify existing conditions prior to commencing construction and shall immediately notify the engineer in writing of any differing conditions.
6. RWG Engineering, LLC, it's employees and agents are 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 entity performing work at the site. Neither the owner nor the engineer assumes any responsibility for job site safety or for the means, methods or sequences of construction.
7. Except where modified by the contract documents, all work proposed hereon shall be in accordance with the following specifications, which are hereby made a part hereof:
   A. "Standard Specifications for Road and Bridge Construction in Illinois," as prepared by I.D.O.T. latest edition.
   B. "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition.
   C. "Illinois Recommended Standards for Sewage Works," as published by the I.E.P.A., latest edition.
   D. The subdivision and development codes and standards of the City of Des Plaines, as published by the Municipality.
   E. "Illinois Accessibility Code" as published by the State of Illinois Capital Development Board, effective October 23, 2018.
   F. The National Electric Code.
   G. "Illinois Urban Manual" as prepared by the U.S. Dept. of Agriculture latest edition.
8. The City of Des Plaines Development Ordinance shall take precedence if a conflict in project specifications occurs. City details to supercede all others. △1
9. City requires 48 hour notice for inspections. △3

BENCHMARKS

BASIS OF BEARINGS:

ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE

BENCHMARK:

CITY OF DES PLAINES BENCHMARK NO. 61. MONUMENT SET IN CONCRETE AT THE NORTHEAST CORNER OF PRAIRIE & FIRST AVENUE, 75' EAST OF THE RAILROAD TRACKS AND 12' NORTH OF THE EDGE OF PAVEMENT OF PRAIRIE. ELEVATION 640.05 (NAVD 88 DATUM), MEASURED ELEVATION 640.12

SITE BENCHMARKS:

NO. 1

CROSS NOTCH 2' SOUTH OF THE SOUTHWEST CORNER OF LOT 34
ELEVATION 637.45 (NAVD 88 DATUM)

NO 2.

CROSS NOTCH 2' SOUTH AND 3' EAST OF THE SOUTHEAST CORNER OF LOT 37
ELEVATION 637.57 (NAVD 88 DATUM)

TITLE POLICY PROVIDED FOR PARCEL 3 MAKES NOTE OF AN EXCEPTION TO COVERAGE THAT INCLUDES AN EASEMENT FOR SEVERAL UTILITIES PER DOC. NO. LR1429065. SURVEYOR WAS NOT PROVIDED DOCUMENT BY TITLE COMPANY AND WAS NOT ABLE TO OBTAIN DOCUMENT FROM COOK COUNTY RECORDER'S OFFICE. BEFORE EXCAVATION, BUILDING OR ANY DISTURBANCE WITHIN SUBJECT PROPERTY OBTAIN DOCUMENT FOR PARTICULARS AND LOCATION OF SAID EASEMENT.

MAUREEN R. MULLIGAN 062-054535 REGISTERED PROFESSIONAL ENGINEER STATE OF ILLINOIS

Maureen R. Mulligan

EXPIRATION DATE: 11/30/23

PLANS PREPARED FOR

COMPASSPOINT DEVELOPMENT, LLC
2020 S. COOK STREET, SUITE 210
BARRINGTON, ILLINOIS
(630) 577-5203

REVISIONS	DATE		DRAWN BY
1	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2	02/17/23	ARCHITECT REVISIONS	TLM
3	02/27/23	PER CITY REVIEW	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
TITLE SHEET

975 E. 22nd St. Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com
RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management

PROJECT NO. 63912021
DATE 12/09/22
SCALE NONE
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET 1 OF 20

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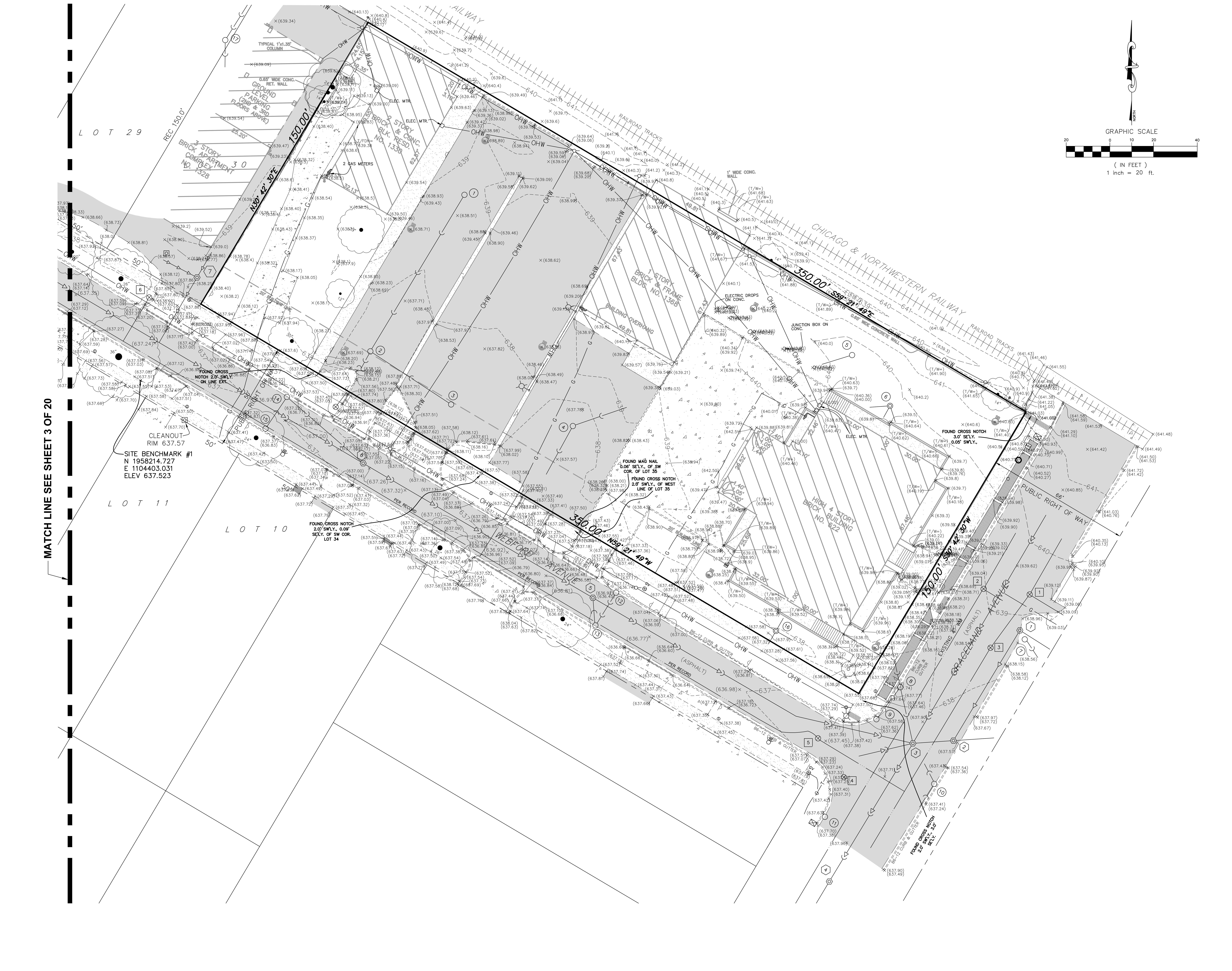

SURVEY NOTE

THE INFORMATION SHOWN HEREON IS BASED ON A BOUNDARY AND TOPOGRAPHIC SURVEY GENTILE AND ASSOCIATES, INC. PLAT OF SURVEY DATED SEPTEMBER 19, 2022.

ABBREVIATIONS LEGEND
(IN ADDITION TO TITLE SHEET LEGEND)

EX	=	EXISTING
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R	=	RADIUS
(TYP)	=	TYPICAL

EXISTING UTILITY STRUCTURE SCHEDULE – EAST

SANITARY SEWER STRUCTURES

1 EX SAN M.H. RIM=638.77 INV=632.47 (15" VCP E) INV=633.12 (10" VCP SE) INV=632.42 (15" VCP S)	2 EX SAN M.H. RIM=637.57 INV=632.37 (15" VCP N) INV=632.67 (10" NE) INV=632.07 (15" SW)
3 EX SAN COMBINATION M.H. RIM=637.83 INV=631.39 (N) (RECORDS SHOW A M.H. IN THE STREET NEAR NORTH END OF PROPERTY, NONE WAS FOUND AND NO INDICATION OF ONE WAS FOUND) INV=632.33 (15" VCP NE) INV=632.35 (24" S) INV=632.34± (10" SE) INV=631.43 (24" W) (CONNECTING M.H. TO THE WEST SHOWS A 12" INVERT TO THE EAST, NO INFO. AS TO WHERE SIZE CHANGES AVAILABLE) INV=632.83 (10" NW)	4 EX SAN COMBINATION M.H. RIM=638.61 INV=630.61 (24" N) INV=630.71 (24" S) 5 EX SAN COMBINATION M.H. RIM=636.78 INV=631.33 (12" E) INV=631.38 (12" W) INV=631.60 (SE) 6 EX SAN COMBINATION M.H. RIM=637.17 INV=631.42 (12" E) INV=632.87 (12" NW) INV=631.57 (12" W) 7 EX SAN M.H. RIM=638.29 INV=632.96 (8" VCP NE) INV=633.19 (6" VCP NW) INV=632.88 (8" VCP SW)

STORM SEWER STRUCTURES

1 EX STM C.B. RIM=638.65 INV=634.23 (6" VCP S)	2 EX STM C.B. RIM=637.06 INV=632.46 (6" VCP N) INV=632.46 (6" VCP ±S) INV=633.66 (10" RCP E)
3 EX STM C.B. RIM=637.21 INV=634.26 (10" RCP W)	4 EX STM C.B. RIM=637.28 INV=635.98 (4" CIP NE) INV=634.73 (6" CIP S)
5 EX STM INLET RIM=639.01 INV=635.51 (L" SW)	6 EX STM M.H. RIM=640.10 TOP OF 8"± PIPE=630.63 (S) INV=631.20 (SW) INV=630.80 (SE)
7 EX STM C.B. RIM=638.58 INV=636.53 (12" RCP SE)	8 EX STM C.B. RIM=637.45 INV=634.90 (6" VCP NW) INV=633.00 (10" SE) INV=634.20 (6" PVC S)
9 EX STM INLET RIM=637.41 INV=635.01 (6" PVC N)	10 EX STM C.B. RIM=637.20 INV=632.70 (6" VCP NW) INV=632.80 (8" VCP S)
11 EX STM INLET RIM= 637.04 FILLED WITH DEBRIS	12 EX STM CURB C.B. RIM=636.40 TOP OF PIPE TO SOUTH=634.40
13 EX STM CURB C.B. RIM=636.46 TOP OF PIPE TO NORTH=634.16 INV=632.86 (NW)	14 EX STM CURB C.B. RIM=636.72 TOP OF 12" PIPE TO EAST=634.37 INV=633.47 (12" S)
15 EX STM CURB C.B. RIM=636.74 TOP OF PIPE TO NORTH=634.69 (PVC INSIDE RCP) 17 EX STM C.B. RIM=638.62 INV=635.67 (6" DIP N) INV=635.52 (6" DIP SE)	16 EX STM M.H. RIM=638.82 INV=632.22 (N,S) INV=632.27 (E) INV=632.42 (W) ALL PIPES ARE ±8"

WATERMAIN STRUCTURES

1 EX VALVE VAULT (NEW) RIM=639.28 T/P=632.28 PER RECORDS THE NEW MAIN GOING EAST IS 10" D.I.P. AND THE SOUTH IS 8" – RECORD SHOWS NO MAIN HEADING NORTH, BUT IS VISIBLE IN FIELD. RECORDS SHOW IT CONNECTING TO OLD MAIN COMING FROM VAULT NO. 2 BUT NOT VISIBLE IN FIELD	2 EX VALVE VAULT RIM=638.95 T/P=633.45 RECORDS SAY IT IS 8" 3 EX VALVE VAULT RIM=638.55 T/P=633.75 THIS IS A NEW MAIN ALSO RECORDS SHOW NO VAULT HERE BUT FOUND IN FIELD
4 EX VALVE VAULT RIM=637.46 FULL OF SILT AT ELEV.=634.76 MOST LIKELY HAVING BEEN PART OF THE OLD MAIN CONNECTING TO VAULT NO. 2, RECORDS SHOW NO VAULT HERE WHERE FOUND IN FIELD	5 EX VALVE VAULT RIM=637.42 T/P=628.12 RECORDS SAY THIS IS 8" AND GENERALLY AGREE WITH FIELD MARKINGS AND CONNECTION TO NEW MAIN IN THE EASTERLY SIDE OF THE RIGHT OF WAY
6 EX VALVE VAULT RIM=638.02 UNABLE TO OPEN	

2	SANITARY STRUCTURE NUMBER
11	STORM STRUCTURE NUMBER
5	WATERMAIN STRUCTURE NUMBER

	DATE	REVISIONS	DRAWN BY
1	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2	02/17/23	ARCHITECT REVISIONS	TLM
3	02/27/23	PER CITY REVIEW	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
EXISTING CONDITIONS PLAN - EAST

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St, Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

PROJECT NO.	63912021
DATE	12/09/22
SCALE	1"=20'
PROJ. MGR.	MRM
PROJ. ASSOC.	MKR
DRAWN BY	TLM

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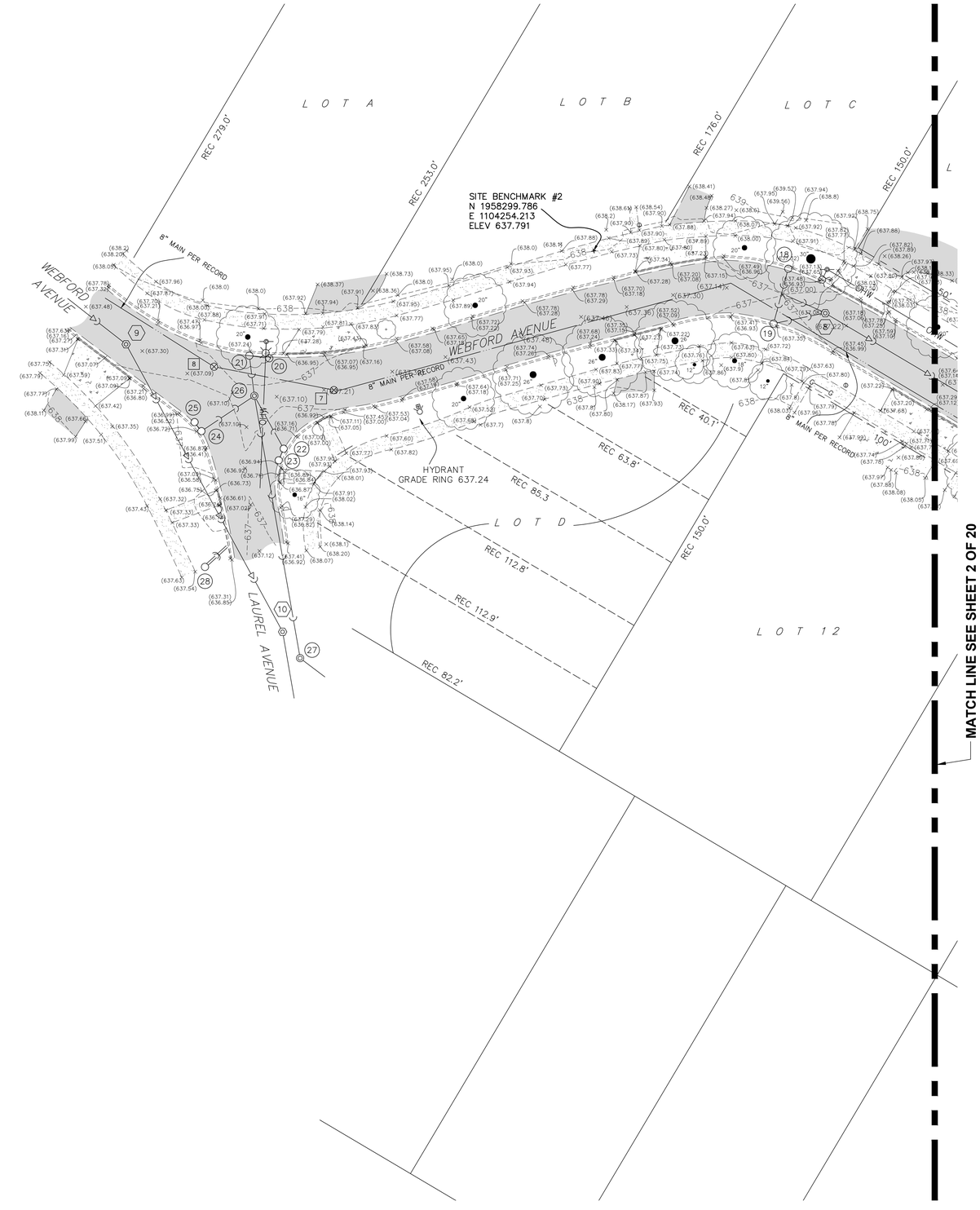

NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

SURVEY NOTE

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(TYP)	=	TYPICAL

EXISTING UTILITY STRUCTURE SCHEDULE – WEST

SANITARY SEWER STRUCTURES

(8) EX SAN COMBINATION M.H. RIM=637.20 INV=632.54 (8" DIP NW) INV=631.75 (12" RCP SE) INV=633.21 (12" RCP SW)	(9) EX SAN COMBINATION M.H. RIM=637.25 INV=631.33 (24" RCP NW) INV=631.25 (24" RCP SE)
(10) EX SAN COMBINATION M.H. RIM=637.39 INV=631.39 (24" RCP NW) INV=631.29 (24" RCP SE)	

STORM SEWER STRUCTURES

(18) EX STM C.B. RIM=636.76 TOP OF 8" PVC SW 634.76 (IN 12" RCP)	(19) EX STM C.B. RIM=636.83 INV=633.73 (12" RCP NNE) TOP OF 8" PVC NE 634.83 (IN 12" RCP)
(20) EX STM C.B. RIM=636.66 INV=633.73 (12" RCP NW)	(21) EX STM C.B. RIM=636.66 INV=633.56 (12" RCP E) INV=633.46 (12" RCP SE)
(22) EX STM C.B. RIM=636.66 INV=631.26 (12" RCP NW) INV=633.59 (12" RCP SW)	(23) EX STM C.B. RIM=636.72 INV=633.52 (12" RCP NE)
(24) EX STM C.B. RIM=636.28 INV=631.68 (12" RCP NE) INV=633.48 (12" RCP NW)	(25) EX STM C.B. RIM=636.30 INV=633.66 (12" RCP SE)
(26) EX STORM M.H. RIM=637.06 INV=631.81 (12" DIP NW) INV=628.31 (12" RCP SW) INV=627.06 (27" RCP SSE) INV=628.86 (12" RCP SE)	(27) EX STORM M.H. RIM=637.35 INV=627.35 (27" RCP NW) INV=627.28 (27" RCP SE)
(28) EX STM C.B. (BEEHIVE COVER) FLOW LINE=637.36 INV=633.86 (10" DIP (N)NE) INV=632.86 (10" DIP (S)NE) (NO OTHER PIPES VISIBLE-LONG BARREL, HARD TO SEE)	

WATERMAIN STRUCTURES

[6] EX VALVE VAULT RIM=638.02 UNABLE TO OPEN	[7] EX VALVE VAULT RIM=637.24 TOP OF 8" PIPE=630.39 FULL OF WATER
[8] EX VALVE VAULT RIM=637.11 TOP OF 8" PIPE=629.91	

(2) SANITARY STRUCTURE NUMBER
(11) STORM STRUCTURE NUMBER
[5] WATERMAIN STRUCTURE NUMBER

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1. 01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
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SHEET
3 OF 20

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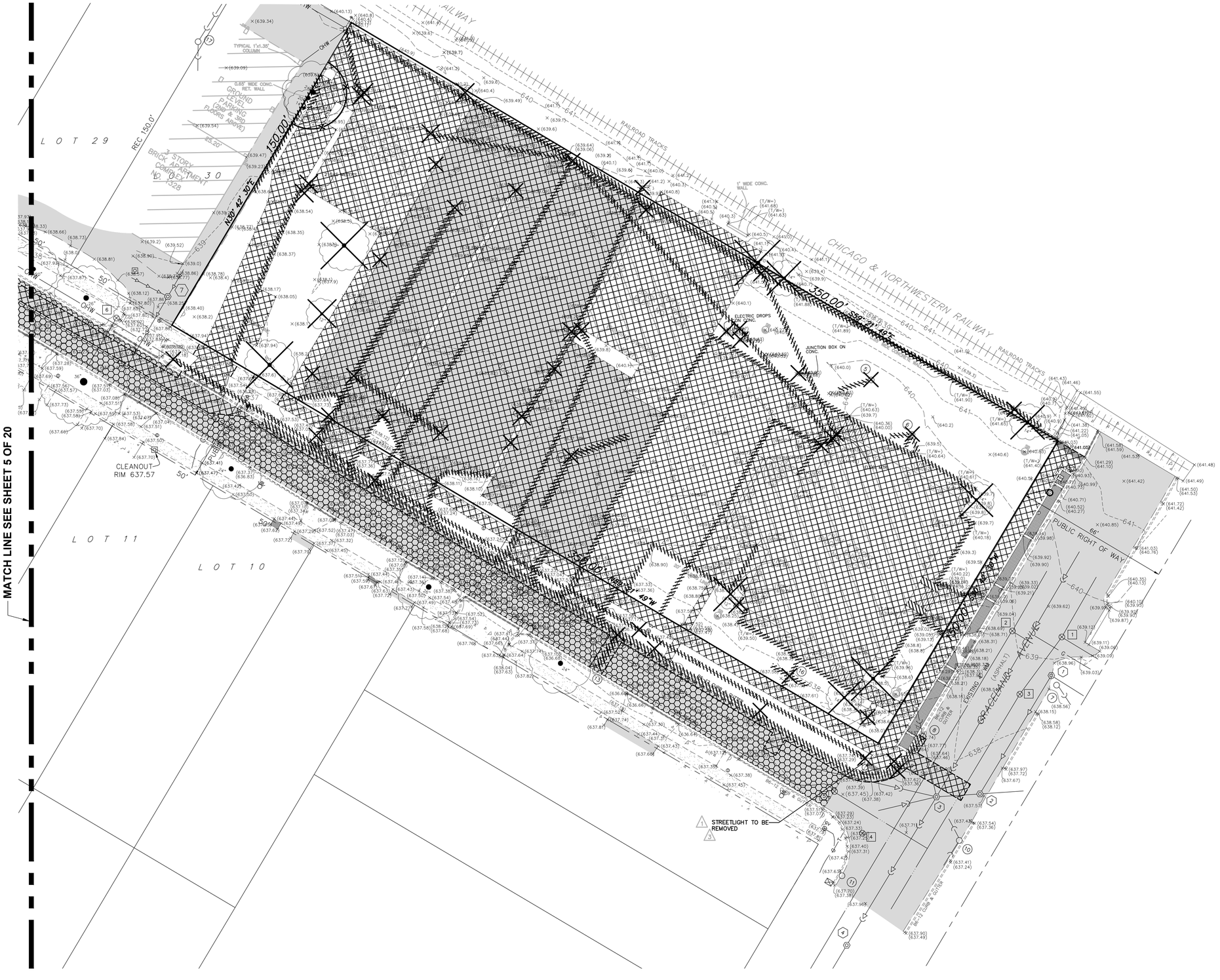

DEMOLITION LEGEND

- REMOVE EXISTING PAVEMENT/SIDEWALK/STRUCTURE/C&G (INCL SAWCUT)
- MILL AND RESURFACE
- TREE/BUSH/STRUCTURE REMOVAL
- TREE PROTECTION FENCE
- REMOVE EXISTING UTILITY LINE
- REMOVE EXISTING CURB AND GUTTER

DEMOLITION NOTES:

1. EROSION CONTROL INSTALLATION SHALL BE DONE PRIOR TO COMMENCEMENT OF ANY DEMOLITION ACTIVITY
2. EXISTING ELECTRICAL AND PHONE CABLES MAY BE LOCATED WITHIN THE PROPOSED IMPROVEMENT AREA. APPROXIMATE KNOWN LOCATIONS ARE SHOWN HEREON. THE CONTRACTOR SHALL ARRANGE FOR PRECISE LOCATION OF EXISTING CABLE SERVICES AND EXERCISE EXTREME CARE WHEN WORKING AROUND THE SAME.
3. ALL STRUCTURAL PAVEMENT MATERIALS (ASPHALT, CONCRETE SIDEWALK, CURB/GUTTER) THAT CANNOT BE CRUSHED TO AN APPROVED IDOT SPECIFICATION FOR USE AS STRUCTURAL FILL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN OFFSITE LOCATION. RE-USE OF MILLED ASPHALT AND PROPERLY CRUSHED CONCRETE AS STRUCTURAL FILL IS ACCEPTABLE AND ENCOURAGED.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO EXISTING AMENITIES SCHEDULED TO REMAIN. PROPER SAWCUTTING SHALL BE ACCOMPLISHED AT ALL POINTS OF CONNECTION OR INTERFACE BETWEEN EXISTING AND PROPOSED IMPROVEMENTS.
5. CONTRACTOR SHALL BE RESPONSIBLE TO HAVE ALL UNDERGROUND UTILITIES (EVEN IF NOT SHOWN ON THESE PLANS) LOCATED PRIOR TO DEMOLITION WORK. SANITARY SERVICE, WATERMAIN SERVICE, GAS, ELECTRIC, ETC SHALL BE CUT-OFF. CONTRACTOR TO COORDINATE WITH RESPECTIVE MUNICIPAL AGENCY TO ARRANGE FOR DISCONNECT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES, STREET LIGHTS, SIGNS, ETC. THAT ARE NOT INTENDED TO BE PERMANENTLY REMOVED.
7. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT, ALL UTILITY COMPANIES, AND THE FIRE DEPARTMENT PRIOR TO START UP.
8. ONSITE DISTURBED AREAS TO REMAIN AS GREENSPACE SHALL BE RESTORED WITH MINIMUM 4" TOPSOIL AND SEED, OR RESTORED IN ACCORDANCE WITH THE LANDSCAPE PLAN (SEE BY OTHERS).
9. DISTURBED AREAS OF PUBLIC PARKWAYS SHALL BE RESTORED WITH MINIMUM 4" TOPSOIL AND SEED.
10. ALL EXISTING DRIVEWAY APRONS SHALL BE SAWCUT ALONG WITH REMOVAL OF ANY EXISTING DEPRESSED CURB AND GUTTER, AND NEW BARRIER CURB AND GUTTER (SIZED TO MEET EXISTING ADJACENT CONDITIONS) SHALL BE INSTALLED AND DOWELED INTO THE EXISTING ADJOINING CURB AND GUTTER.
11. UTILITY LINES SCHEDULED FOR REMOVAL SHALL BE PROPERLY DISCONNECTED FROM FACILITIES THAT ARE TO REMAIN, SECURELY PLUGGED AT ALL CONNECTION POINTS, AND EITHER REMOVED OR FILLED WITH FLOWABLE FILL (LEAN CONCRETE MIXTURE) AND ABANDONED IN PLACE (REMOVE IF LOCATED UNDER NEW BUILDING PAD AREAS). IN THE CASE OF STRUCTURE ABANDONMENT, CASTINGS AND TOP SLABS AND CONE SECTIONS SHALL BE REMOVED PRIOR TO FILLING THE STRUCTURE (UNLESS THE STRUCTURE IS EASIER TO COMPLETELY REMOVE).
12. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAL PLUG.
13. ALL EXISTING STORM SEWER ONSITE TO BE REMOVED, AND STUBBED AND PLUGGED AT PROPERTY LINE.
14. IF CITY OLD STREETSCAPE BRICKS ARE DISTURBED, THEY SHALL BE RE-USED OR SAVED AND GIVEN BACK TO THE CITY.

ABBREVIATIONS LEGEND (IN ADDITION TO TITLE SHEET LEGEND)

EX	=	EXISTING
PR	=	PROPOSED
BC	=	BACK OF CURB
FC	=	FACE OF CURB
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PL	=	PROPERTY LINE
FB	=	FACE OF BUILDING
EC	=	EDGE OF CONCRETE
RW	=	RETAINING WALL
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BC/BC=		BACK OF CURB TO BACK OF CURB
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622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
DEMOLITION PLAN - EAST

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St. Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

PROJECT NO. 63912021
DATE 12/09/22
SCALE 1"=20'
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
4 OF 20

February 26, 2023 3:59:17 p.m. AcadVer:22.0s (LMS Tech)
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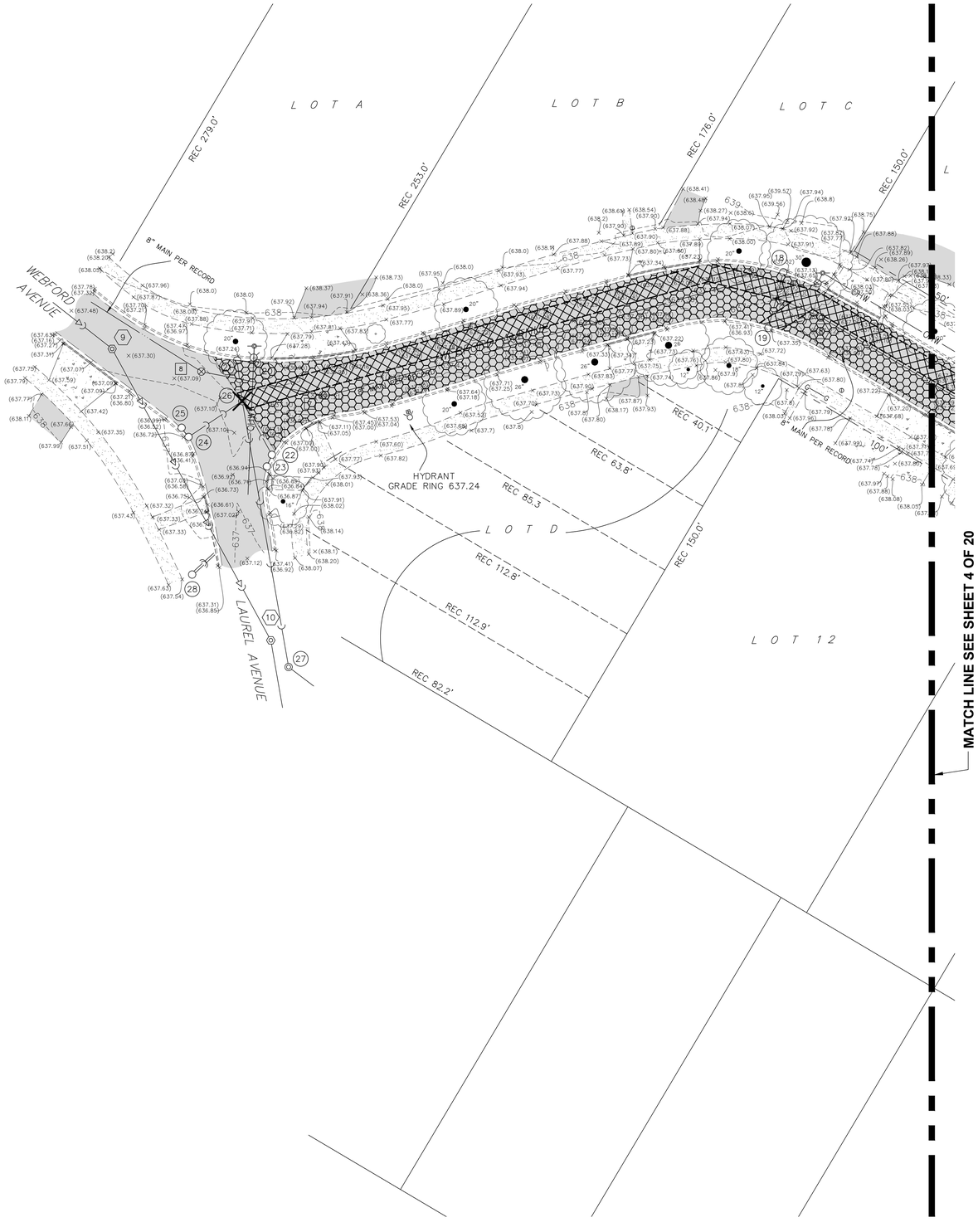

DEMOLITION LEGEND

- – REMOVE EXISTING PAVEMENT/SIDEWALK/STRUCTURE/C&G (INCL SAWCUT)
- – MILL AND RESURFACE
- – TREE/BUSH/STRUCTURE REMOVAL
- – TREE PROTECTION FENCE
- – REMOVE EXISTING UTILITY LINE
- – REMOVE EXISTING CURB AND GUTTER

DEMOLITION NOTES:

1. EROSION CONTROL INSTALLATION SHALL BE DONE PRIOR TO COMMENCEMENT OF ANY DEMOLITION ACTIVITY
2. EXISTING ELECTRICAL AND PHONE CABLES MAY BE LOCATED WITHIN THE PROPOSED IMPROVEMENT AREA. APPROXIMATE KNOWN LOCATIONS ARE SHOWN HEREON. THE CONTRACTOR SHALL ARRANGE FOR PRECISE LOCATION OF EXISTING CABLE SERVICES AND EXERCISE EXTREME CARE WHEN WORKING AROUND THE SAME.
3. ALL STRUCTURAL PAVEMENT MATERIALS (ASPHALT, CONCRETE SIDEWALK, CURB/GUTTER) THAT CANNOT BE CRUSHED TO AN APPROVED IDOT SPECIFICATION FOR USE AS STRUCTURAL FILL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN OFFSITE LOCATION. RE-USE OF MILLED ASPHALT AND PROPERLY CRUSHED CONCRETE AS STRUCTURAL FILL IS ACCEPTABLE AND ENCOURAGED.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO EXISTING AMENITIES SCHEDULED TO REMAIN. PROPER SAWCUTTING SHALL BE ACCOMPLISHED AT ALL POINTS OF CONNECTION OR INTERFACE BETWEEN EXISTING AND PROPOSED IMPROVEMENTS.
5. CONTRACTOR SHALL BE RESPONSIBLE TO HAVE ALL UNDERGROUND UTILITIES (EVEN IF NOT SHOWN ON THESE PLANS) LOCATED PRIOR TO DEMOLITION WORK. SANITARY SERVICE, WATERMAIN SERVICE, GAS, ELECTRIC, ETC SHALL BE CUT-OFF. CONTRACTOR TO COORDINATE WITH RESPECTIVE MUNICIPAL AGENCY TO ARRANGE FOR DISCONNECT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES, STREET LIGHTS, SIGNS, ETC. THAT ARE NOT INTENDED TO BE PERMANENTLY REMOVED.
7. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT, ALL UTILITY COMPANIES, AND THE FIRE DEPARTMENT PRIOR TO START UP.
8. ONSITE DISTURBED AREAS TO REMAIN AS GREENSPACE SHALL BE RESTORED WITH MINIMUM 4" TOPSOIL AND SEED, OR RESTORED IN ACCORDANCE WITH THE LANDSCAPE PLAN (SEE BY OTHERS).
9. DISTURBED AREAS OF PUBLIC PARKWAYS SHALL BE RESTORED WITH MINIMUM 4" TOPSOIL AND SEED.
10. ALL EXISTING DRIVEWAY APRONS SHALL BE SAWCUT ALONG WITH REMOVAL OF ANY EXISTING DEPRESSED CURB AND GUTTER, AND NEW BARRIER CURB AND GUTTER (SIZED TO MEET EXISTING ADJACENT CONDITIONS) SHALL BE INSTALLED AND DOWELED INTO THE EXISTING ADJOINING CURB AND GUTTER.
11. UTILITY LINES SCHEDULED FOR REMOVAL SHALL BE PROPERLY DISCONNECTED FROM FACILITIES THAT ARE TO REMAIN, SECURELY PLUGGED AT ALL CONNECTION POINTS, AND EITHER REMOVED OR FILLED WITH FLOWABLE FILL (LEAN CONCRETE MIXTURE) AND ABANDONED IN PLACE (REMOVE IF LOCATED UNDER NEW BUILDING PAD AREAS). IN THE CASE OF STRUCTURE ABANDONMENT, CASTINGS AND TOP SLABS AND CONE SECTIONS SHALL BE REMOVED PRIOR TO FILLING THE STRUCTURE (UNLESS THE STRUCTURE IS EASIER TO COMPLETELY REMOVE).
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13. ALL EXISTING STORM SEWER ONSITE TO BE REMOVED, AND STUBBED AND PLUGGED AT PROPERTY LINE.
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(IN ADDITION TO TITLE SHEET LEGEND)

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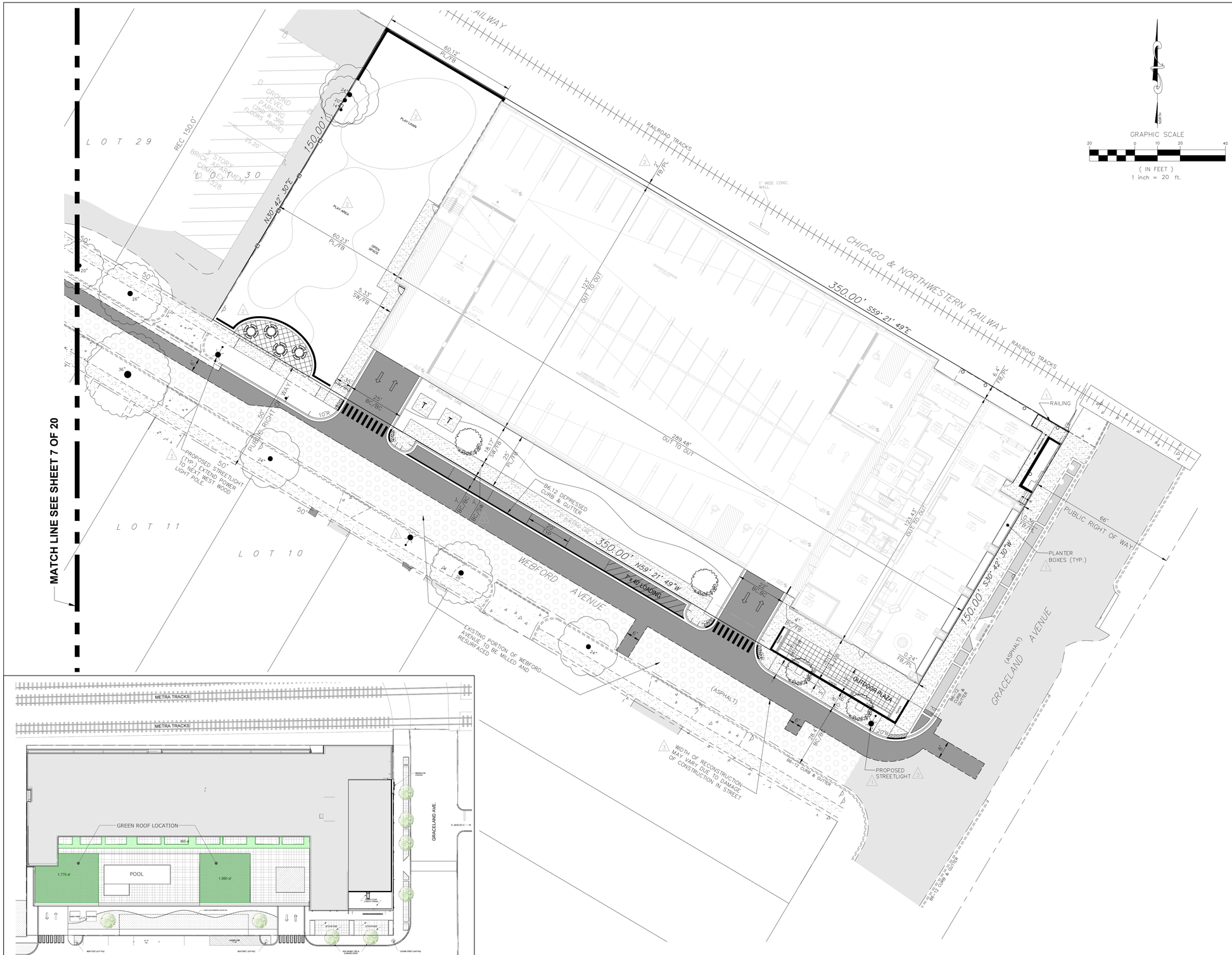

GREEN ROOF LOCATION EXHIBIT – THIRD FLOOR

SITE GEOMETRIC AND PAVING NOTES:

1. SIDEWALK RAMPS WITH DETECTABLE WARNINGS AND DEPRESSED CURBS SHALL BE INSTALLED AT ALL SIDEWALK CROSSINGS. SEE CONSTRUCTION STANDARDS FOR SPECIFIC DETAILS.
2. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO THE BACK OF CURB, FACE OF BUILDING, OR PROPERTY LINES.
3. UNLESS OTHERWISE NOTED, ALL CURB AND GUTTER SHALL BE B6.12 CONCRETE CURB AND GUTTER. (SEE CONSTRUCTION STANDARDS FOR SPECIFIC DETAILS.)
4. UNLESS OTHERWISE NOTED, ALL CURB RADII ARE 4' TO BACK OF CURB.
5. ALL BOUNDARY AND LOT DIMENSIONS ARE SHOWN PER THE SUBDIVISION (OR SITE) PLAT PREPARED BY GENTILE AND ASSOCIATES, INC. AND DATED SEPTEMBER 19, 2022.
6. BUILDING DIMENSIONS HAVE BEEN INDICATED HEREON BASED UPON ARCHITECTURAL INFORMATION CURRENT AS OF THE BASE DATE OF THIS PLAN PREPARATION. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND ADVISE THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
7. IMPROVEMENTS ADJACENT TO BUILDINGS, IF SHOWN (SUCH AS TRUCK DOCKS, RETAINING WALLS, SIDEWALKS, CURBING, FENCING, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, TRANSFORMERS, BOLLARDS, ETC) HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY– REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
8. THE LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAYS. CONTRACTOR TO VERIFY ACTUAL DOORWAY LOCATION WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTING SIDEWALKS.
9. ALL STRUCTURAL AND ARCHITECTURAL DESIGN DATA FOR THE MASONRY WALLED TRASH ENCLOSURES ARE THE RESPONSIBILITY OF THE PROJECT ARCHITECT. REFER TO THE ARCHITECTURAL PLANS FOR ALL DETAILS PERTAINING TO SAME.
10. UPON COMPLETION OF PAVING OPERATIONS, THE CONTRACTOR SHALL INSTALL THE PAVEMENT MARKINGS AND STRIPES AND ALL DIRECTIONAL SIGNAGE, ETC AS SHOWN HEREON. PARKING STALL (EXCEPT FOR HC) MARKING COLOR IS WHITE. ALL ONSITE PAVEMENT MARKINGS AND STRIPES SHALL BE PAINTED WITH IDOT SPECIFICATION PAVEMENT PAINT. PARKING STALL STRIPES SHALL BE 4" WIDE. HANDICAP STALLS SHALL BE PAINTED YELLOW AND SIGNED PER FEDERAL, STATE AND LOCAL REQUIREMENTS.
11. PRIOR TO OPENING TO THE PUBLIC, ALL TRAFFIC CONTROL SIGNAGE SHALL BE INSTALLED AS INDICATED. SIGNS SHALL BE INSTALL WITH 3" SQUARE ALUMINUM POSTS WITH A BAKED ON ENAMEL FINISH, SET 1' INTO CONCRETE PIER AND SHALL INCLUDE A POST CAP.
12. ALL STREETSCAPE BRICKS THAT ARE REMOVED & NOT RE–USED, SHALL BE RETURNED TO THE CITY.
13. PEDESTRIAN WARNING DEVICES SHALL BE PLACED AT BOTH ENTRANCES TO PARKING GARAGE.

SITE DATA:

TOTAL SITE SIZE	= 52,500 S.F. (1.205 AC)	
EXISTING SITE CONDITIONS:		
EXISTING BUILDING/PAVT/SW	= 39,641	S.F.
EXISTING GREENSPACE	= 12,859	S.F.
1 EXISTING CONDITION IMPERVIOUS AREA	= 39,641	S.F.
2 PROPOSED SITE CONDITIONS:		
PROPOSED BUILDING/PAVT/SW	= 36,591	S.F.
PROPOSED GREENSPACE	= 12,579	S.F.
PROPOSED GREEN ROOF	= 3,330	S.F.
PROPOSED CONDITION IMPERVIOUS AREA	= 36,591	S.F.

VOLUME CONTROL STORAGE SUMMARY

VOLUME CONTROL STORAGE REQUIRED= 0.0700 AC–FT
VOLUME CONTROL STORAGE PROVIDED= 0.0783 AC–FT 2

1 STORM TECH SYSTEM= 2922.0 CF

VV Total STORM TECH= 0.0671 AC–FT

GREEN ROOF 7" DEPTH: 0.25 VOID POROSITY
1 GREEN ROOF = 3,330 SF = 485.6 CF (0.0112 AC–FT)

TOTAL VOLUME= 0.0783 AC–FT

SEASONAL HIGH GROUND WATER LEVEL= (±) 10' DEEP ON TSC SOIL BORINGS DATED DECEMBER 2021.

SURFACE IMPROVEMENT LEGEND:

- EXISTING SIDEWALK
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- NEW ASPHALT PAVEMENT *
  1.5"– HOT MIX ASPHALT SURFACE COURSE, MIX "C", N50
  BITUMINOUS TACK COAT (0.05 GAL/SY)
  3.5" HOT–MIX ASPHALT BINDER COURSE, IL–19, N50
  BITUMINOUS PRIME COAT MC–30 (0.30 GAL/SY)
  10" AGGREGATE BASE COURSE CA–6, TYPE B
  * FOR PAVEMENT PATCHING CROSS SECTION, SEE CITY DETAILS
- ASPHALT MILLING & RESURFACING
  1.5"– SURFACE COURSE MILL AND RESURFACE WITH HOT–MIX ASPHALT SURFACE COURSE, MIX "C", N50
- CONCRETE SIDEWALKS
  4"– PCC SIDEWALK (4,000 PSI)
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- PROPOSED B6.12 CONCRETE CURB AND GUTTER
- PROPOSED REVERSE PITCH B6.12 CURB AND GUTTER
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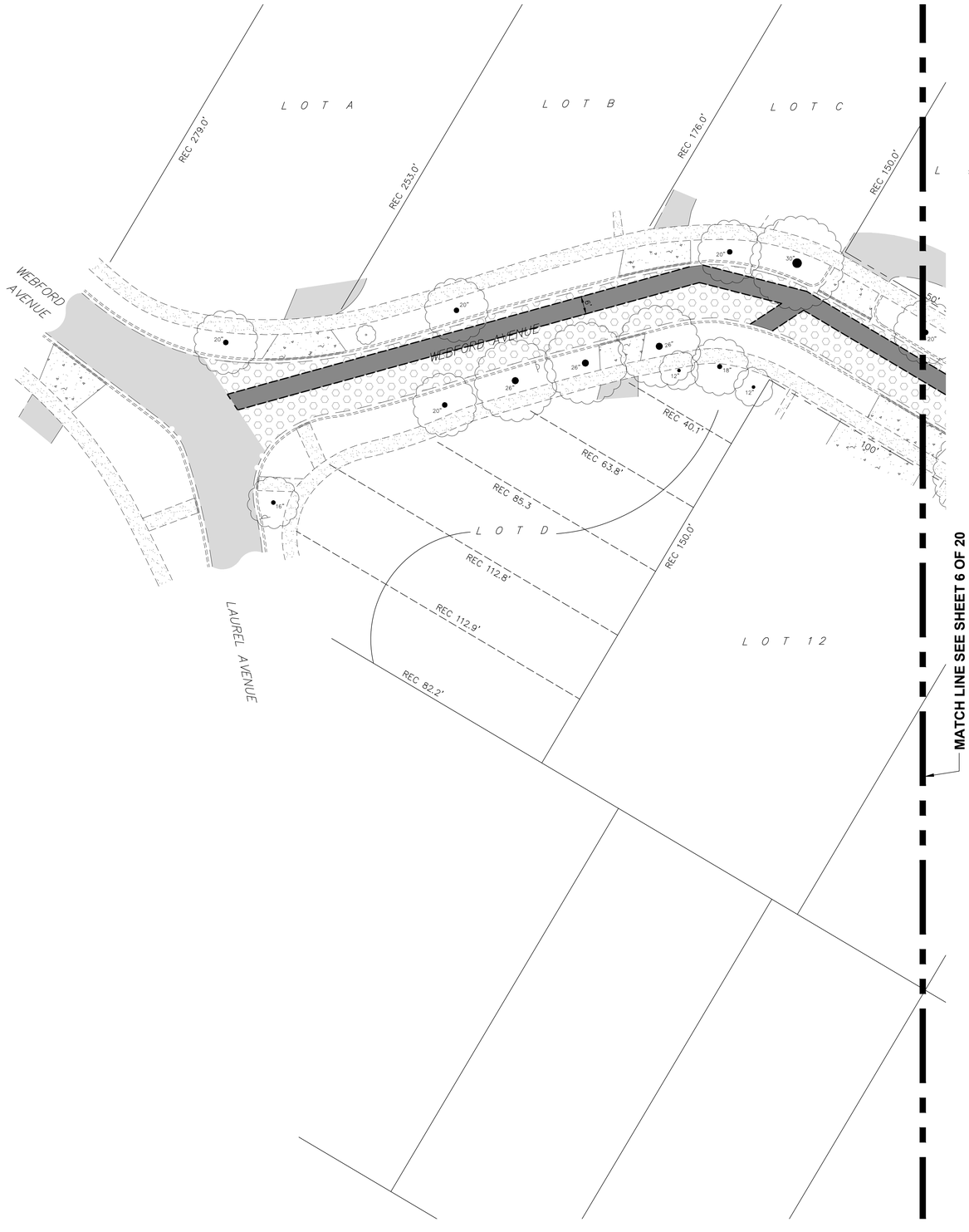

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

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  10" AGGREGATE BASE COURSE CA–6, TYPE B
  * FOR PAVEMENT PATCHING CROSS SECTION, SEE CITY DETAILS
- ASPHALT MILLING & RESURFACING
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  4"– PCC SIDEWALK (4,000 PSI)
  4"– AGGREGATE BASE COURSE TYPE B, CA–6
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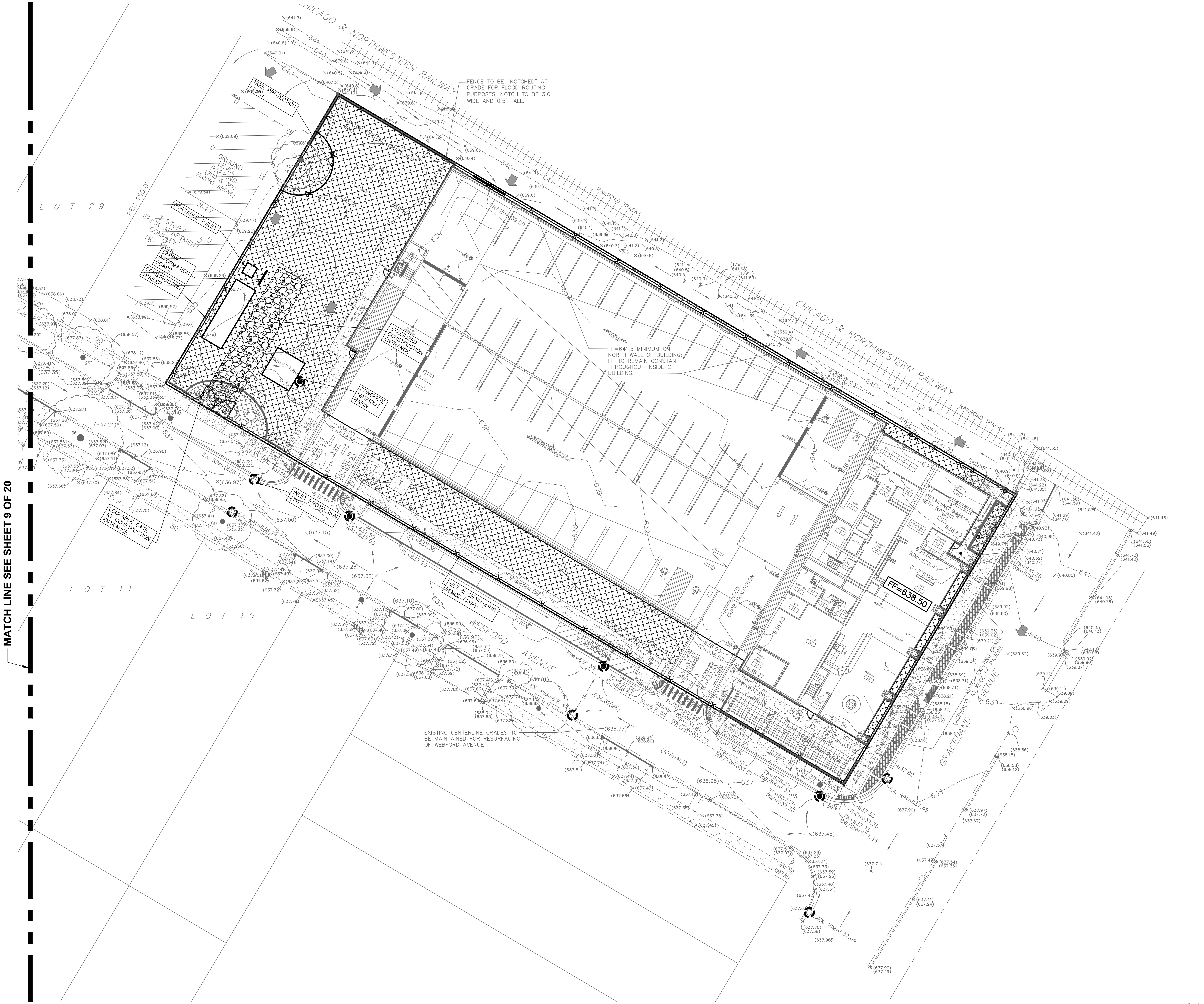

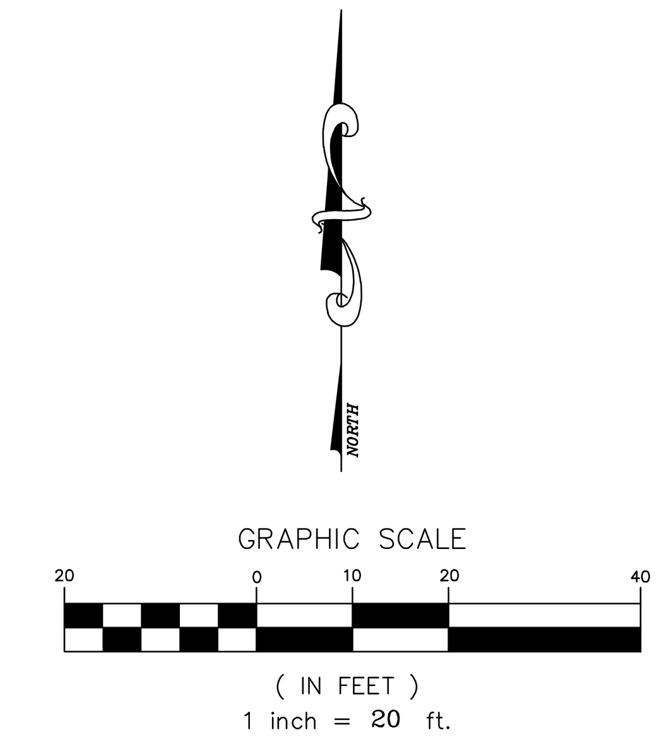

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SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR AND OWNER/DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF NPDES PERMIT ILR10. A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE KEPT ONSITE AND MAINTAINED CURRENT.
2. VEGETATIVE AND STRUCTURAL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SPECIFICATIONS AS OUTLINED IN THE "ILLINOIS URBAN MANUAL."
3. EROSION CONTROL MEASURES SHALL BE MAINTAINED AND FUNCTIONAL THROUGHOUT THE CONSTRUCTION PROJECT (MAINTENANCE AND/OR REPLACEMENT COST IS INCIDENTAL).
4. PERIMETER SILT FENCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CLEARING, OR GRADING OPERATIONS.
5. EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT COMPLIANCE WITH CONSTRUCTION SEQUENCE (SEE SCHEDULE).
6. ALL STORM WATER RUNOFF SHALL BE DIVERTED INTO SEDIMENT BASINS AND/OR DRAINAGE DITCHES WHICH SHALL BE CONSTRUCTED AT THE ONSET OF GRADING OPERATIONS. ALL SITE RUNOFF SHALL BE ROUTED THROUGH SAID TRAPS AND SILTATION CONTROL DEVICES PRIOR TO DISCHARGE DOWNSTREAM/OFFSITE.
7. DISTURBED AREAS SHALL BE STABILIZED VIA SEEDING WITHIN SEVEN (7) DAYS OF COMPLETION OF DISTURBANCE UNLESS THE DISTURBANCE WILL COMMENCE AGAIN WITHIN FOURTEEN (14) DAYS. THE TEMPORARY SEED MIXTURE SHALL BE APPLIED AT A RATE OF 64 LB/AC.
8. TOPSOIL STOCKPILES SHALL BE SEEDED WITHIN SEVEN (7) DAYS OF COMPLETION AND SURROUNDED WITH SILT FENCE FOR EROSION CONTROL.
9. FILTER FABRIC OR INLET PROTECTION FILTER BASKETS SHALL BE INSTALLED UNDER THE GRATING OF EACH DRAINAGE STRUCTURE. FABRIC SHALL BE CUT LARGE ENOUGH TO PROVIDE A 24" SAG TO COLLECT SEDIMENT.
10. ALL DEWATERING OPERATIONS SHALL BE DISCHARGED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DISCHARGE DIRECTLY INTO FIELD TILE OR STORM SEWER IS PROHIBITED.
11. DUST CONTROL SHALL BE PERFORMED ON A DAILY BASIS USING EQUIPMENT SPECIFICALLY DESIGNED FOR THAT PURPOSE.
12. GRAVEL CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN OPERATING CONDITION THROUGHOUT CONSTRUCTION TO PREVENT SEDIMENT AND DEBRIS FROM BEING TRACKED ONTO PUBLIC ROADWAYS. SEDIMENT REACHING A PUBLIC ROAD SHALL BE REMOVED ON A DAILY BASIS.
13. LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF ANY GUTTER OR DRAINAGE DITCH SHALL BE REMOVED ON A DAILY BASIS.
14. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 0.5 INCHES OR GREATER (OR THE EQUIVALENT SNOWFALL). REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF SAID MEASURES SHALL BE IMMEDIATE.
15. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH JURISDICTIONAL GOVERNMENTAL AGENCY REQUIREMENTS WITHIN THIRTY (30) DAYS OF FINAL SITE STABILIZATION.

PLAN ABBREVIATION LEGEND
(IN ADDITION TO TITLE SHEET)

P = PAVEMENT
R = RIM (OR RADIUS)
TC = TOP OF CURB
SW = WALK (OR TOP OF WALK)
FF = FINISHED FLOOR
EP = EDGE OF PAVEMENT
FL = FLOW LINE
TW = TOP OF WALL ELEV
BW = BOTTOM OF WALL (GRADE) ELEV
TDC = TOP OF DEPRESSED CURB

NOTE:
SEE SHEET #9 FOR DETAILS

EROSION CONTROL LEGEND

●	STORM DRAINAGE STRUCTURE
◌	INLET PROTECTION
○	TREE PROTECTION FENCE
—×—	SILT FENCE & CHAIN-LINK FENCE
▨	TEMPORARY SEEDING AND EROSION CONTROL BLANKET (LANDSCAPING/SOD TO FOLLOW)

622 GRACELAND AVE. APARTMENTS

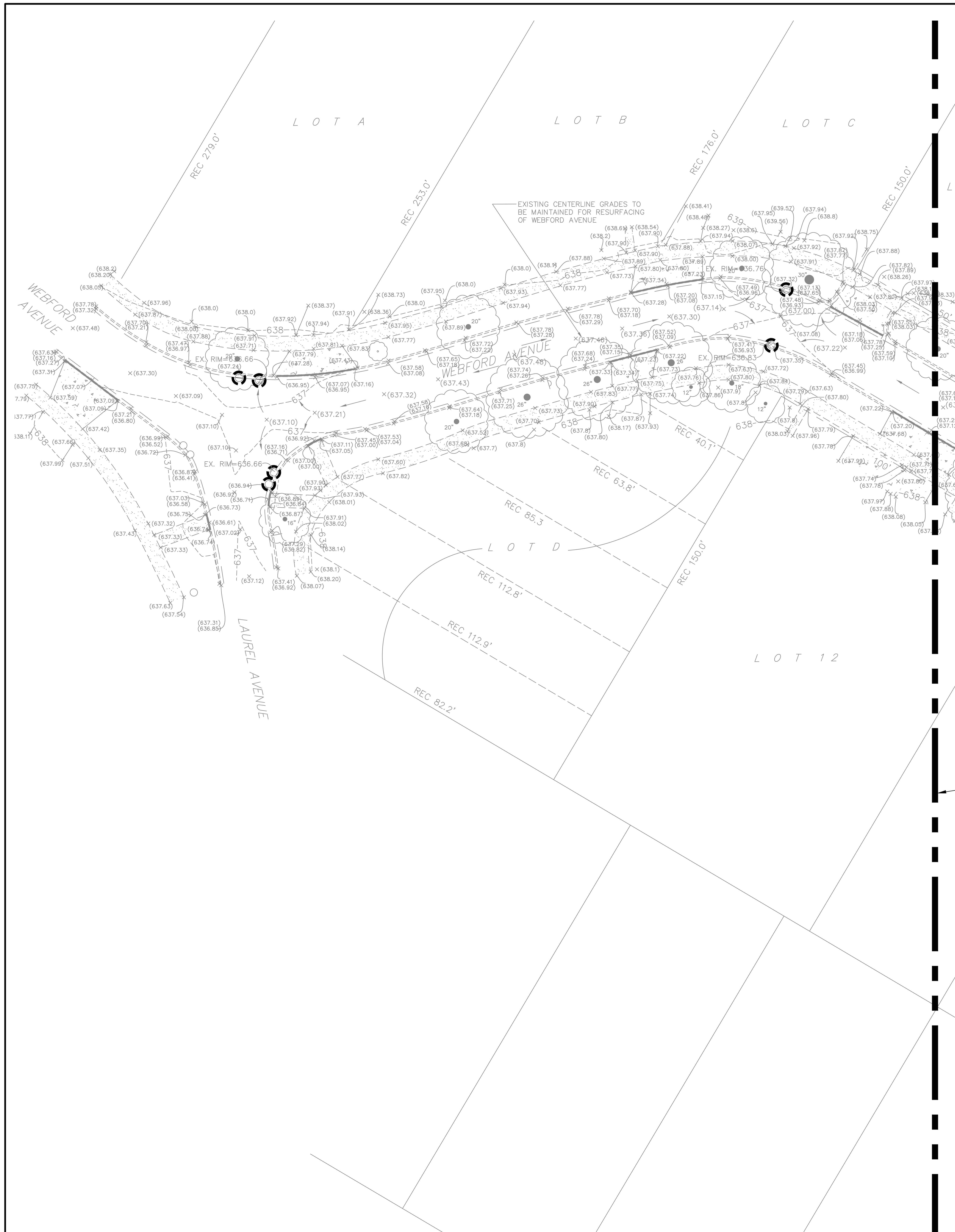
DESPLAINES, ILLINOIS

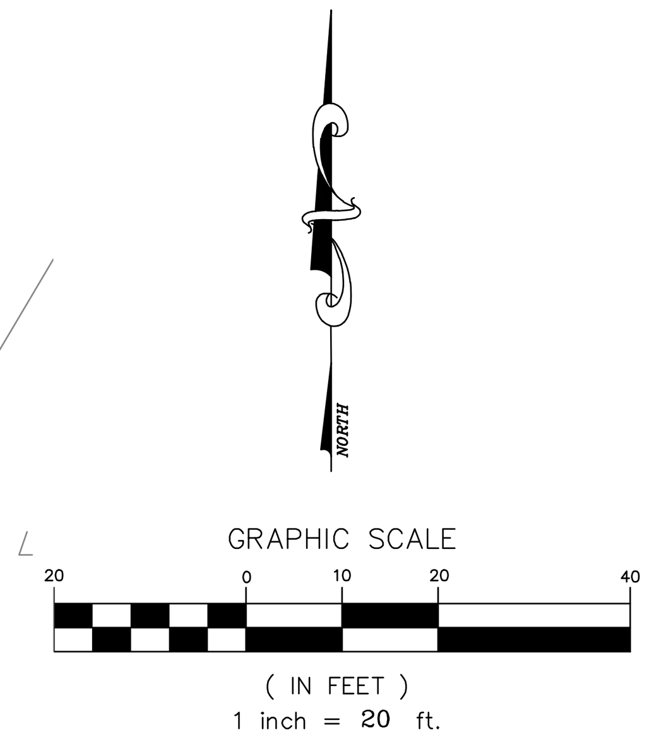
SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN - EAST

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St, Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

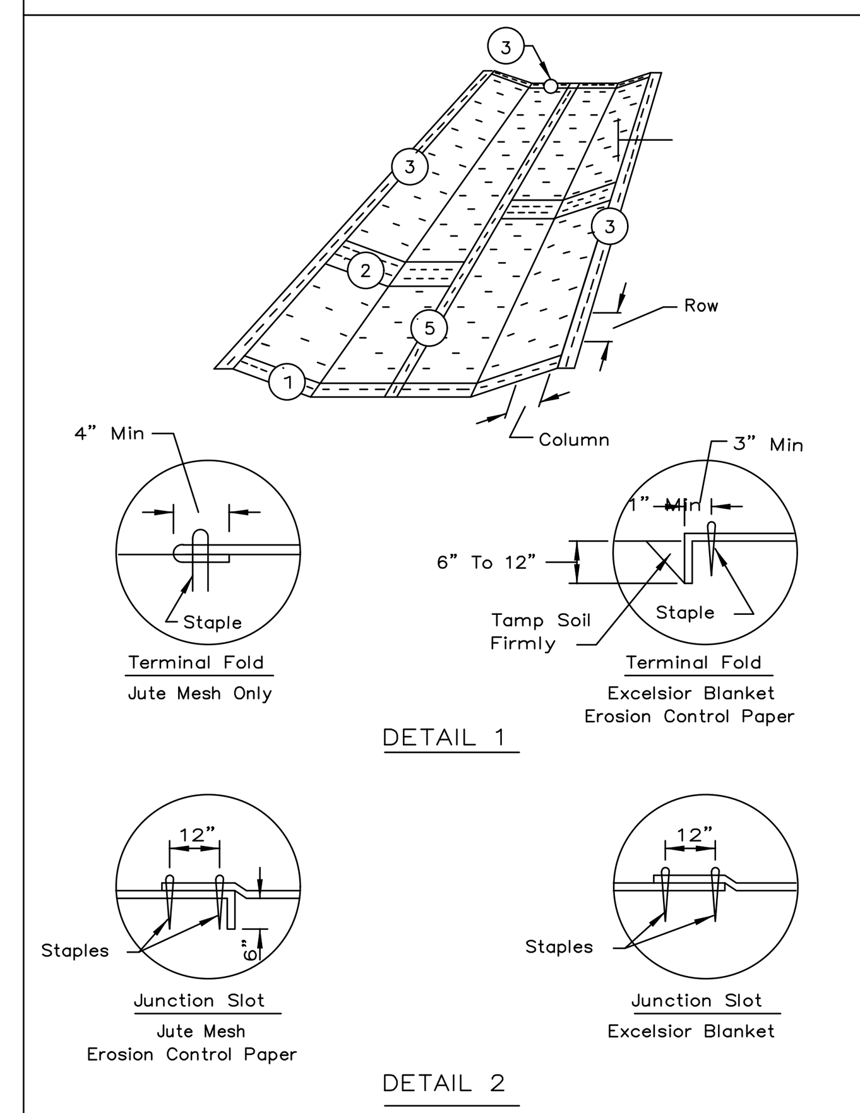
PROJECT NO. 63912021
DATE 12/09/22
SCALE 1"=20'
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

March 04, 2023 8:54:47 a.m. AcadVer:22.0s (LMS Tech)
Drawing: S:\63912021 – 622 GRACELAND AVE APTS\300_ENGINEERING\310_CADD\FINAL\639_BASE_CITY.DWG


LOT A
LOT B
LOT C
LOT D
LOT 12
WEBFORD AVENUE
LAUREL AVENUE
REC 279.0'
REC 253.0'
REC 176.0'
REC 150.0'
REC 40.1'
REC 63.8'
REC 85.3
REC 112.8'
REC 112.9'
REC 82.2'
EXISTING CENTERLINE GRADES TO BE MAINTAINED FOR RESURFACING OF WEBFORD AVENUE
EX. RIM=636.66
EX. RIM=636.76
EX. RIM=636.83
MATCH LINE SEE SHEET 8 OF 20

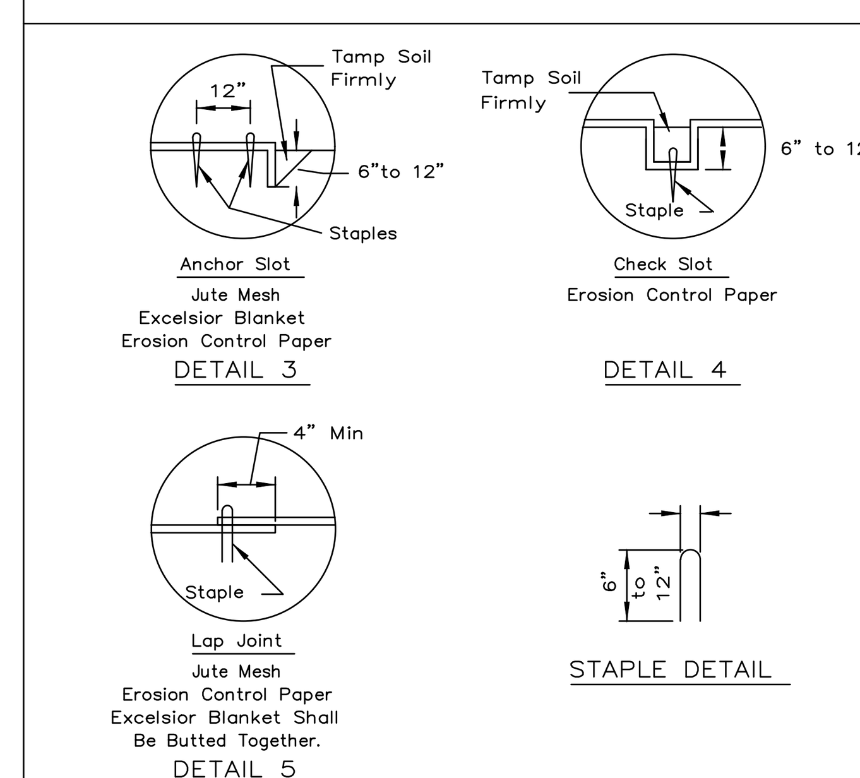


EROSION BLANKET PLAN


Row
Column
4" Min
3" Min
1" Min
6" To 12"
Staple
Tamp Soil Firmly
Terminal Fold
Jute Mesh Only
Terminal Fold
Excelsior Blanket
Erosion Control Paper
DETAIL 1
12"
Staples
Junction Slot
Jute Mesh
Erosion Control Paper
Junction Slot
Excelsior Blanket
DETAIL 2

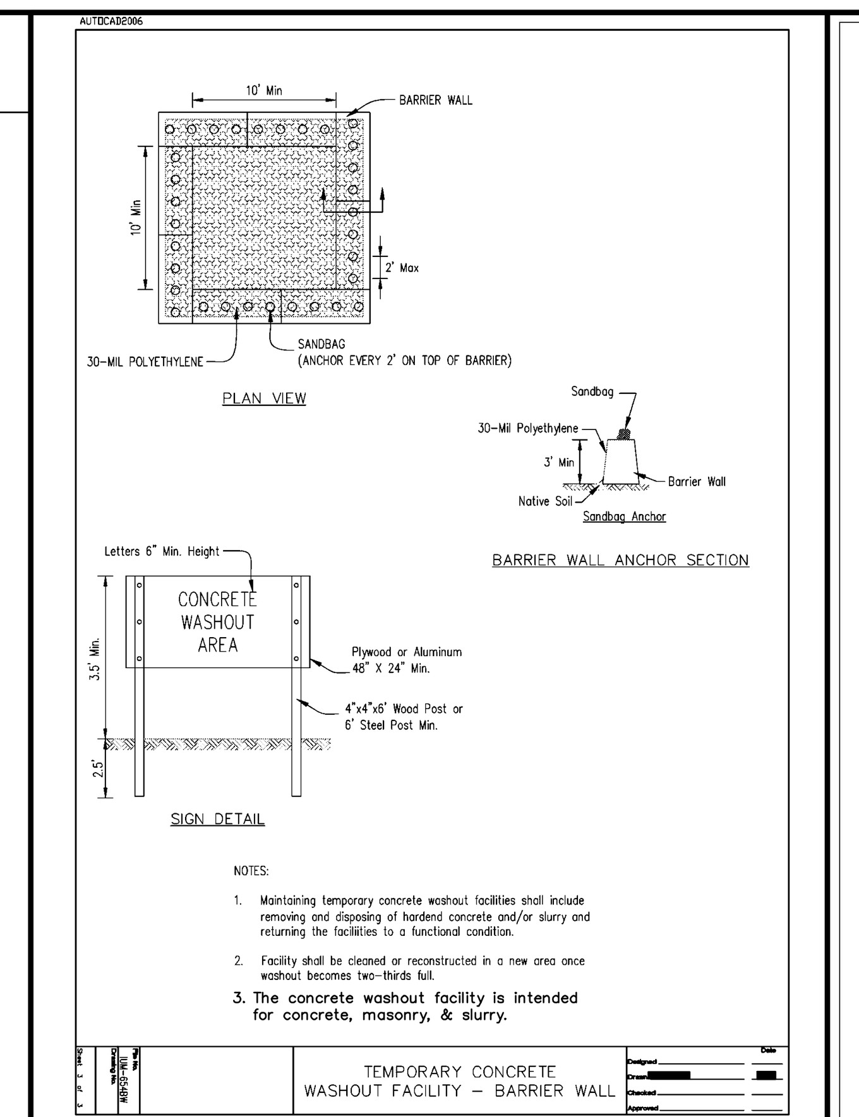
REFFERENCE	NRCS Natural Resources Conservation Service	STANDARD DWG. NO.
Project ______		IL-530
Designed ______ Date ______		SEEET 1 OF 2
Checked ______ Date ______		DATE 5-24-94
Approved ______ Date ______		

EROSION BLANKET PLAN


Tamp Soil Firmly
12"
6"to 12"
Staples
Anchor Slot
Jute Mesh
Excelsior Blanket
Erosion Control Paper
DETAIL 3
Tamp Soil Firmly
6" to 12"
Staple
Check Slot
Erosion Control Paper
DETAIL 4
4" Min
Staple
Lap Joint
Jute Mesh
Erosion Control Paper
Excelsior Blanket Shall
Be Butted Together.
DETAIL 5
6" to 12"
STAPLE DETAIL

NOTES:
1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

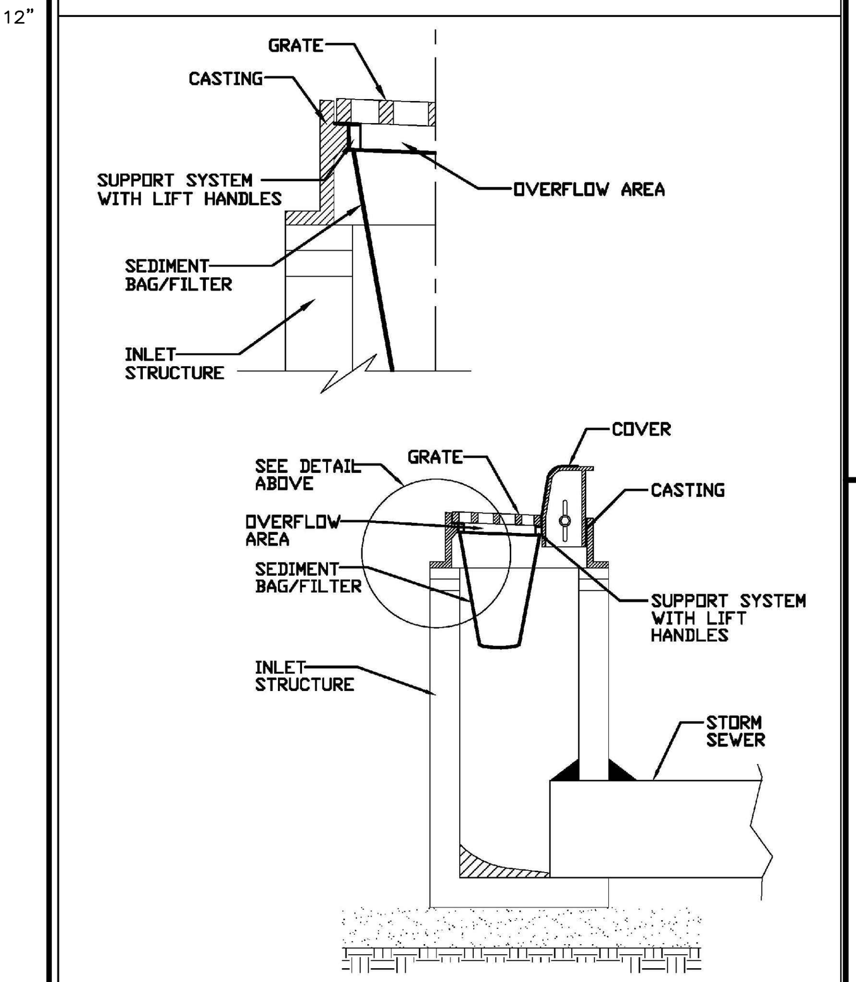
REFFERENCE	NRCS Natural Resources Conservation Service	STANDARD DWG. NO.
Project ______		IL-530
Designed ______ Date ______		SHEET 2 OF 2
Checked ______ Date ______		DATE 3-1-95
Approved ______ Date ______		


10' Min
BARRIER WALL
10' Min
2' Max
30-MIL POLYETHYLENE
SANDBAG
(ANCHOR EVERY 2' ON TOP OF BARRIER)
PLAN VIEW
Sandbag
30-Mil Polyethylene
3' Min
Barrier Wall
Native Soil
Sandbag Anchor
BARRIER WALL ANCHOR SECTION
Letters 6" Min. Height
CONCRETE WASHOUT AREA
Plywood or Aluminum 48" X 24" Min.
4"x4"x6' Wood Post or 6' Steel Post Min.
3.5' Min.
2.5'
SIGN DETAIL
NOTES:
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardend concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.
3. The concrete washout facility is intended for concrete, masonry, & slurry.
TEMPORARY CONCRETE WASHOUT FACILITY – BARRIER WALL

SPECIAL CONCRETE WASHOUT NOTE:

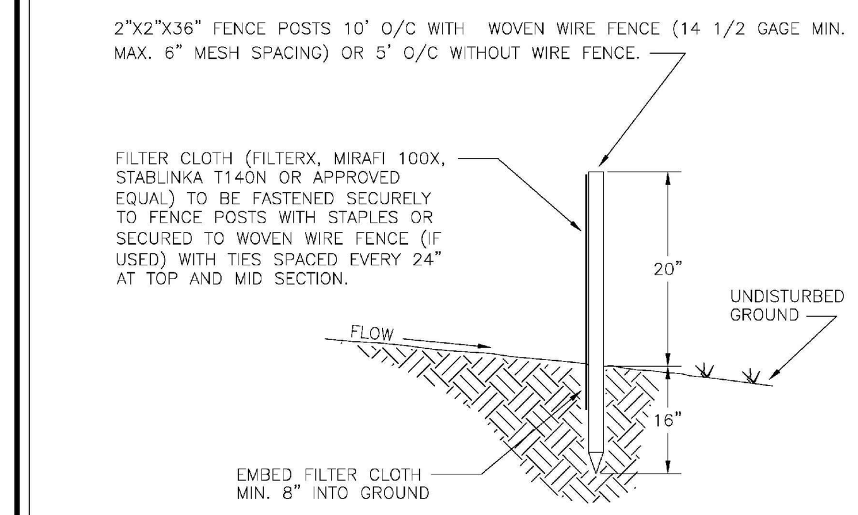
CONCRETE WASHOUT SHALL BE CONTAINED AT ALL TIMES. WASHOUT MATERIAL SHALL NOT BE ALLOWED TO ENTER STORM SEWERS OR LEACH INTO THE SOIL UNDER ANY CIRCUMSTANCES. ALL WASTE SHALL BE DISPOSED OF PROPERLY AND THE LOCATION OF THE WASHOUT SHALL BE DESIGNATED WITH PROPER SIGNAGE (SEE PLAN).

INLET PROTECTION – PAVED AREAS DROP-IN PROTECTION



REFERENCE		STANDARD DWG. NO.
Project ______		IUM-561D
Designed ______ Date ______		SHEET 1 OF 1
Checked ______ Date ______		DATE 01-11-11
Approved ______ Date ______		

SILT FENCE


2"X2"X36" FENCE POSTS 10' O/C WITH WOVEN WIRE FENCE (14 1/2 GAGE MIN. MAX. 6" MESH SPACING) OR 5' O/C WITHOUT WIRE FENCE.
FILTER CLOTH (FILTERX, MIRAFI 100X, STABLINKA T140N OR APPROVED EQUAL) TO BE FASTENED SECURELY TO FENCE POSTS WITH STAPLES OR SECURED TO WOVEN WIRE FENCE (IF USED) WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
20"
UNDISTURBED GROUND
FLOW
16"
EMBED FILTER CLOTH MIN. 8" INTO GROUND

SILT FENCE SHALL BE INSTALLED AND INSPECTED BY HANOVER PARK ENGINEERING DEPARTMENT PERSONNEL PRIOR TO ANY OTHER CONSTRUCTION

WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.

TOPSOIL STOCKPILES SHALL HAVE DIVERSION DITCHES PLACED AROUND THEM WITH A SILT TRAP BUILT AT THE LOW POINT OF THE DITCHES

SILT FENCE TO BE PROVIDED AROUND ENTIRE PERIMETER OF ALL WETLAND AREAS PRIOR TO MASS EARTHWORK START.

MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE.

Z:\acaddata\dwg\Standard details\Std Silt Fence.dwg

SOIL EROSION CONTROL CONSTRUCTION SCHEDULE:

1. INSTALL SEDIMENT CONTROL MEASURES
   INLET BASKETS/BARIER FILTERS
2. SITE DEMOLITION WORK
   SAWCUT/REMOVE PAVEMENT/SIDEWALKS/CURBS/CONCRETE SLABS
3. SITE CONSTRUCTION WORK
   INSTALL BUILDING EXPANSION FOUNDATION/WALLS
   INSTALL CANOPY UNDERDRAIN SYSTEM & OUTFALL SEWER
   PREPARE SUBGRADE FOR BLDG FLOOR SLAB & PAVT AREAS
   INSTALL BASE COURSE MATERIALS
   INSTALL NEW CURB/SIDEWALK/CANOPY CONCRETE SLABS
   INSTALL NEW ASPHALT PAVEMENT
   REPAIR & SEALCOAT EXISTING ASPHALT PAVEMENT & RE-STRIPE
4. PERMANENT VEGETATIVE STABILIZATION OF DISTURBED GREENSPACE
   SPREAD TOPSOIL IN NEW ISLAND
   MULCH/SEED AS SPECIFIED
5. CLEANUP/RESTORATION
   REMOVE INLET BASKETS/BARRIER FILTERS

SESC INSPECTION SCHEDULE:

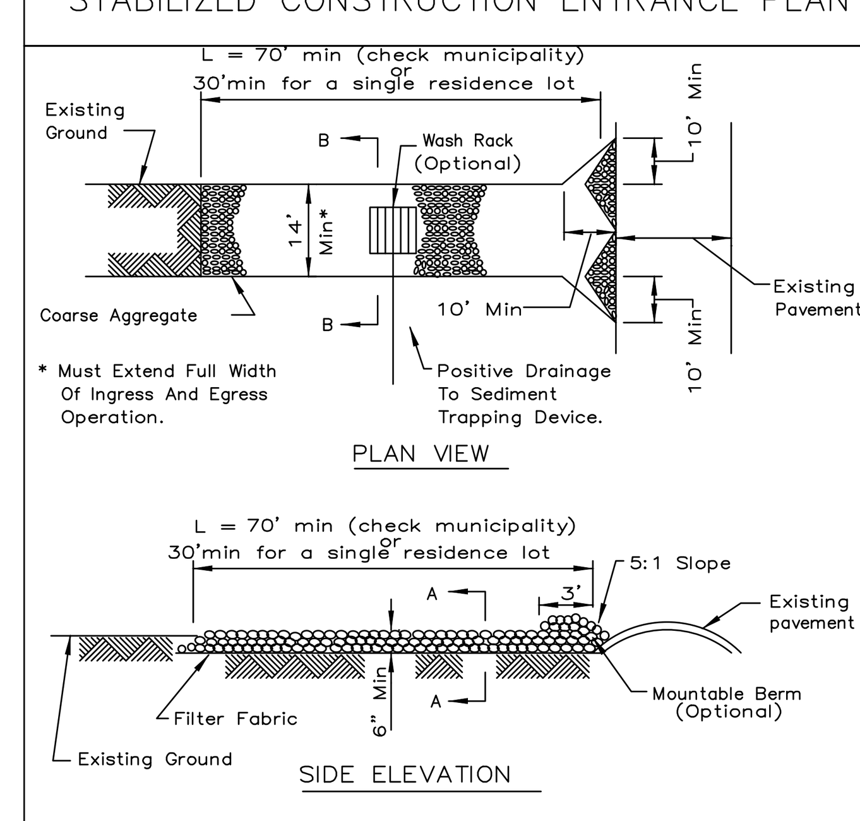
1. DIVERSION AND STRUCTURAL MEASURES – WILL BE INSPECTED AT 7 DAY INTERVALS AND AFTER EVERY 1/2" RAIN.
2. SEDIMENT BASINS AND PONDS – WILL BE CHECKED AFTER EACH MAJOR PHASE OF THE DEVELOPMENT FOR SEDIMENT ACCUMULATION.
3. VEGETATIVE PLANTINGS – SPRING PLANTINGS WILL BE CHECKED DURING SUMMER OR EARLY FALL.
4. REPAIRS – ANY EROSION CONTROL MEASURES, STRUCTURAL MEASURES OR OTHER RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN 15 DAYS. OR EARLIER IF POSSIBLE BASE ON FIELD CONDITIONS.
5. MOWING – DRAINAGEWAYS, DITCHES AND OTHER AREAS THAT SUPPORT A DESIGNATED FLOW OF WATER WILL BE MOWED REGULARLY TO MAINTAIN THAT FLOW.
6. FERTILIZATION – SEEDED AREAS WHERE THE SEED HAS NOT PRODUCED A GOOD COVER WILL BE INSPECTED AND FERTILIZED IF NECESSARY.

EROMS-02

SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR AND OWNER/DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF NPDES PERMIT ILR10. A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE KEPT ONSITE AND MAINTAINED CURRENT.
2. VEGETATIVE AND STRUCTURAL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SPECIFICATIONS AS OUTLINED IN THE "ILLINOIS URBAN MANUAL."
3. EROSION CONTROL MEASURES SHALL BE MAINTAINED AND FUNCTIONAL THROUGHOUT THE CONSTRUCTION PROJECT (MAINTENANCE AND/OR REPLACEMENT COST IS INCIDENTAL).
4. PERIMETER SILT FENCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CLEARING, OR GRADING OPERATIONS.
5. EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT COMPLIANCE WITH CONSTRUCTION SEQUENCE (SEE SCHEDULE).
6. ALL STORM WATER RUNOFF SHALL BE DIVERTED INTO SEDIMENT BASINS AND/OR DRAINAGE DITCHES WHICH SHALL BE CONSTRUCTED AT THE ONSET OF GRADING OPERATIONS. ALL SITE RUNOFF SHALL BE ROUTED THROUGH SAID TRAPS AND SILTATION CONTROL DEVICES PRIOR TO DISCHARGE DOWNSTREAM/OFFSITE.
7. DISTURBED AREAS SHALL BE STABILIZED VIA SEEDING WITHIN SEVEN (7) DAYS OF COMPLETION OF DISTURBANCE UNLESS THE DISTURBANCE WILL COMMENCE AGAIN WITHIN FOURTEEN (14) DAYS. THE TEMPORARY SEED MIXTURE SHALL BE APPLIED AT A RATE OF 64 LB/AC.
8. TOPSOIL STOCKPILES SHALL BE SEEDED WITHIN SEVEN (7) DAYS OF COMPLETION AND SURROUNDED WITH SILT FENCE FOR EROSION CONTROL.
9. FILTER FABRIC OR INLET PROTECTION FILTER BASKETS SHALL BE INSTALLED UNDER THE GRATING OF EACH DRAINAGE STRUCTURE. FABRIC SHALL BE CUT LARGE ENOUGH TO PROVIDE A 24" SAG TO COLLECT SEDIMENT.
10. ALL DEWATERING OPERATIONS SHALL BE DISCHARGED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DISCHARGE DIRECTLY INTO FIELD TILE OR STORM SEWER IS PROHIBITED.
11. DUST CONTROL SHALL BE PERFORMED ON A DAILY BASIS USING EQUIPMENT SPECIFICALLY DESIGNED FOR THAT PURPOSE.
12. GRAVEL CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN OPERATING CONDITION THROUGHOUT CONSTRUCTION TO PREVENT SEDIMENT AND DEBRIS FROM BEING TRACKED ONTO PUBLIC ROADWAYS. SEDIMENT REACHING A PUBLIC ROAD SHALL BE REMOVED ON A DAILY BASIS.
13. LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF ANY GUTTER OR DRAINAGE DITCH SHALL BE REMOVED ON A DAILY BASIS.
14. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 0.5 INCHES OR GREATER (OR THE EQUIVALENT SNOWFALL). REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF SAID MEASURES SHALL BE IMMEDIATE.
15. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH JURISDICTIONAL GOVERNMENTAL AGENCY REQUIREMENTS WITHIN THIRTY (30) DAYS OF FINAL SITE STABILIZATION.

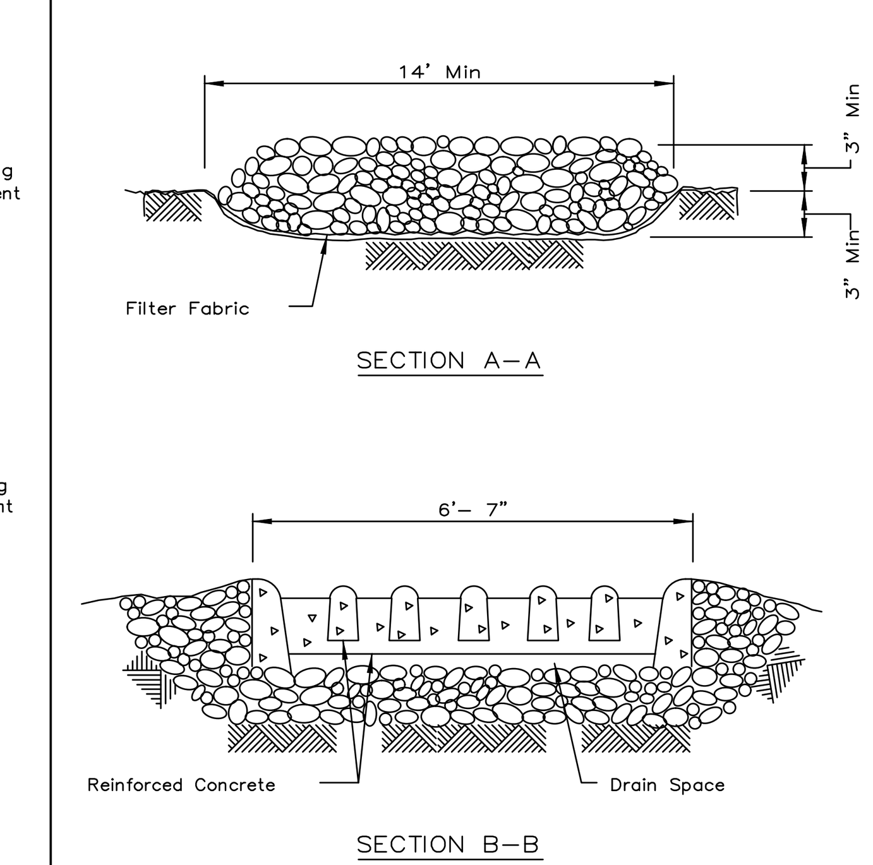
STABILIZED CONSTRUCTION ENTRANCE PLAN


L = 70' min (check municipality)
or
30'min for a single residence lot
Existing Ground
B
Wash Rack (Optional)
14' Min*
10' Min
Existing Pavement
Coarse Aggregate
10' Min
* Must Extend Full Width Of Ingress And Egress Operation.
Positive Drainage To Sediment Trapping Device.
PLAN VIEW
5:1 Slope
3'
A
Existing pavement
Mountable Berm (Optional)
Filter Fabric
6" Min
Existing Ground
SIDE ELEVATION

NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class , I or II and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE	NRCS Natural Resources Conservation Service	STANDARD DWG. NO.
Project ______		IL-630A
Designed ______ Date ______		SHEET 1 OF 2
Checked ______ Date ______		DATE 8-18-94
Approved ______ Date ______		

STABILIZED CONSTRUCTION ENTRANCE PLAN



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Project ______		IL-630B
Designed ______ Date ______		SHEET 2 OF 2
Checked ______ Date ______		DATE 8-18-94
Approved ______ Date ______		

EROSION CONTROL LEGEND

●	STORM DRAINAGE STRUCTURE
◌	INLET PROTECTION
◯	TREE PROTECTION FENCE
—×—	SILT FENCE & CHAIN-LINK FENCE
▨	TEMPORARY SEEDING AND EROSION CONTROL BLANKET (LANDSCAPING/SOD TO FOLLOW)

PLAN ABBREVIATION LEGEND
(IN ADDITION TO TITLE SHEET)

P	=	PAVEMENT
R	=	RIM (OR RADIUS)
TC	=	TOP OF CURB
SW	=	WALK (OR TOP OF WALK)
FF	=	FINISHED FLOOR
EP	=	EDGE OF PAVEMENT
FL	=	FLOW LINE
TW	=	TOP OF WALL ELEV
BW	=	BOTTOM OF WALL (GRADE) ELEV
TDC	=	TOP OF DEPRESSED CURB

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1	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2	02/17/23	ARCHITECT REVISIONS	TLM
3	02/27/23	PER CITY REVIEW	TLM

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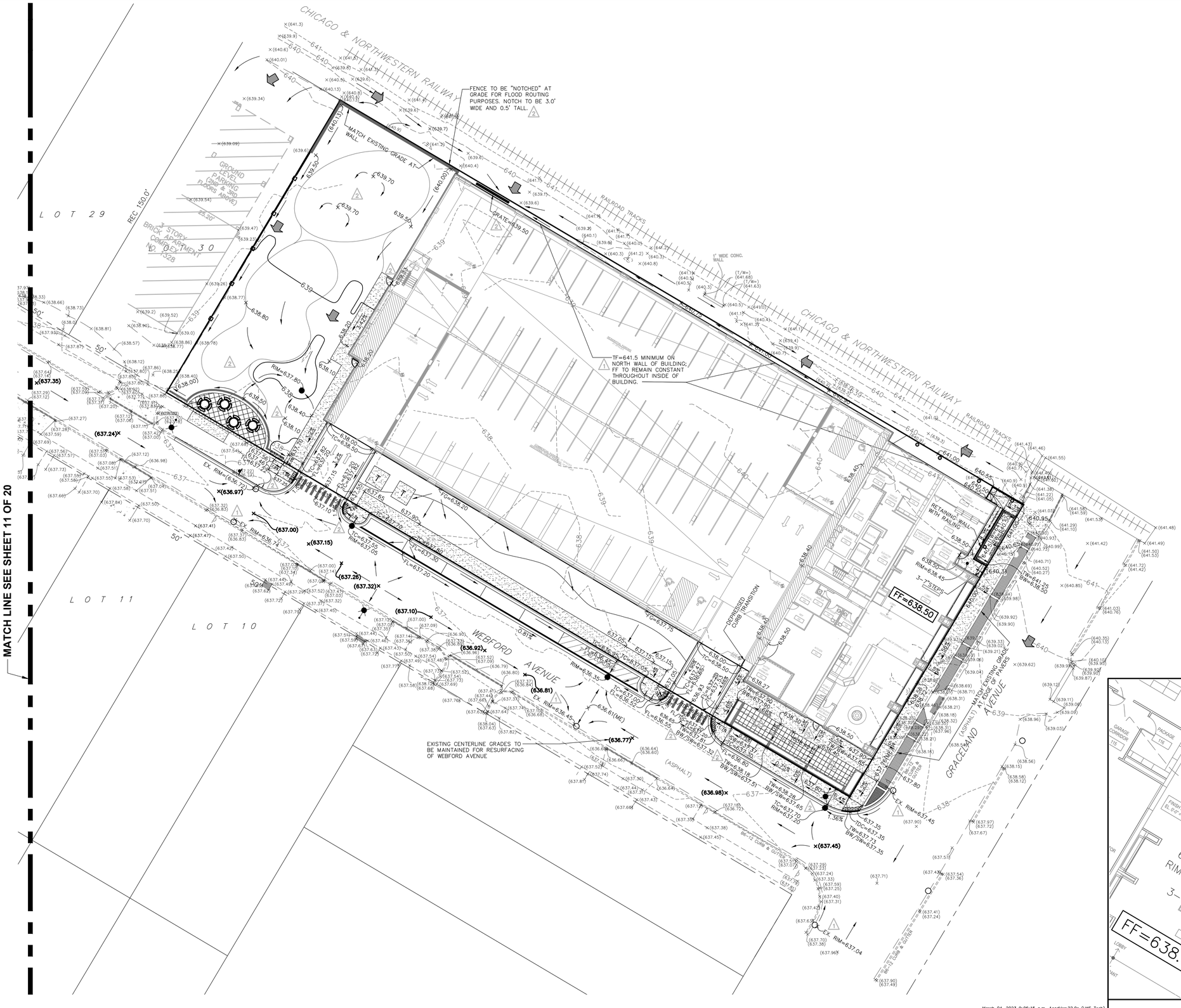

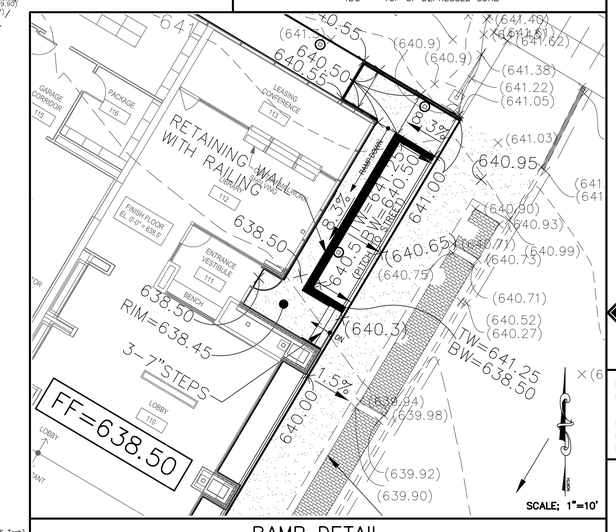

RAMP DETAIL

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1	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
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GRADING LEGEND

	EXISTING	PROPOSED
CONCRETE HEADWALL	⊃	⊃
PRECAST FLARED END SECTION	▷	▶
STORM DRAINAGE STRUCTURE	○	●
RETAINING WALL		
CONTOUR	--749--	749
5' CONTOUR	--750--	750
SPOT ELEVATION	×(750.00)	×750.00
DIRECTION OF SURFACE FLOW		
DITCH OR SWALE		
OVERFLOW RELIEF ROUTING		
SLOPE BANK		
RR-3 ROCK RIP-RAP		

GRADING NOTES:

1. PAVEMENT SLOPES WITHIN HANDICAP ACCESSIBLE PARKING AREAS SHALL NOT EXCEED 2.00% IN ANY DIRECTION.
2. HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A CROSS SLOPE NOT TO EXCEED 2.00%
3. UNLESS SPECIFICALLY INDICATED OTHERWISE, EXISTING GRADES ARE TO BE MET AT PROJECT PERIMETER PROPERTY LINES.
4. THE CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLANS AND DETAILS (AND SWPPP DOCUMENTS IF APPLICABLE) FOR THE INSTALLATION OF EROSION CONTROL MEASURES PRIOR TO BEGINNING GRADING OPERATIONS.
5. UNLESS OTHERWISE NOTED, SPOT ELEVATIONS AND PROPOSED CONTOURS REFLECT THE FINISHED PAVEMENT SURFACE GRADE, TOP OF CURB GRADE, OR FINISHED GROUND ELEVATION AS APPLICABLE.
6. RIM GRADES FOR DRAINAGE STRUCTURES REFLECT THE FLOW LINE ELEVATION OF THE GUTTER, PAVEMENT OR DRAINAGE SWALE (AS APPLICABLE).
7. WHEREVER THE DESIGN FOR SURFACE FLOW OF DRAINAGE IS DIRECTED AWAY FROM A CURB, THE CONTRACTOR SHALL INSTALL REVERSE GUTTER PITCH.
8. SLOPES ACROSS OPEN SPACE AREAS SHALL NOT EXCEED 3:1
9. PAVEMENT SLOPES SHALL NOT EXCEED 8%.
10. ALL ROAD DRAINAGE ALONG WEBFORD AVE. TO BE DISCONNECTED FROM COMBINED SEWER & CONNECTED TO STORM SEWER.

⚠1 ⚠2

PLAN ABBREVIATION LEGEND
(IN ADDITION TO TITLE SHEET)

P = PAVEMENT
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SHEET
10 OF 20

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GRADING LEGEND

	EXISTING	PROPOSED
CONCRETE HEADWALL	⊃	⊃
PRECAST FLARED END SECTION	▷	▶
STORM DRAINAGE STRUCTURE	○	●
RETAINING WALL		
CONTOUR	749	749
5' CONTOUR	750	750
SPOT ELEVATION	×(750.00)	×750.00
DIRECTION OF SURFACE FLOW		
DITCH OR SWALE		
OVERFLOW RELIEF ROUTING		
SLOPE BANK		
RR-3 ROCK RIP-RAP		

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1

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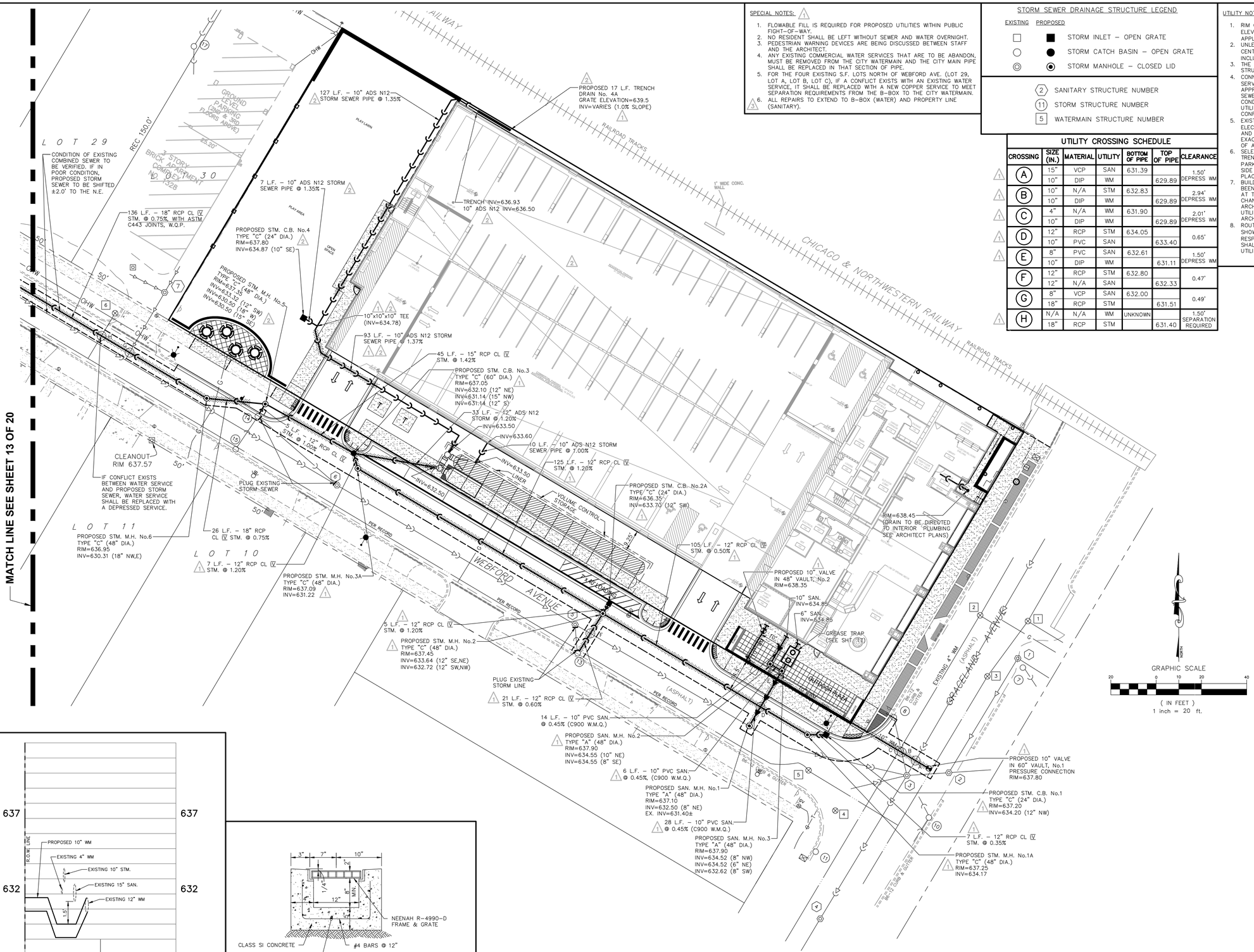

SPECIAL NOTES:

1. FLOWABLE FILL IS REQUIRED FOR PROPOSED UTILITIES WITHIN PUBLIC RIGHT-OF-WAY.
2. NO RESIDENT SHALL BE LEFT WITHOUT SEWER AND WATER OVERNIGHT.
3. PEDESTRIAN WARNING DEVICES ARE BEING DISCUSSED BETWEEN STAFF AND THE ARCHITECT.
4. ANY EXISTING COMMERCIAL WATER SERVICES THAT ARE TO BE ABANDON, MUST BE REMOVED FROM THE CITY WATERMAIN AND THE CITY MAIN PIPE SHALL BE REPLACED IN THAT SECTION OF PIPE.
5. FOR THE FOUR EXISTING S.F. LOTS NORTH OF WEBFORD AVE. (LOT 29, LOT A, LOT B, LOT C), IF A CONFLICT EXISTS WITH AN EXISTING WATER SERVICE, IT SHALL BE REPLACED WITH A NEW COPPER SERVICE TO MEET SEPARATION REQUIREMENTS FROM THE B-BOX TO THE CITY WATERMAIN.
6. ALL REPAIRS TO EXTEND TO B-BOX (WATER) AND PROPERTY LINE (SANITARY).

STORM SEWER DRAINAGE STRUCTURE LEGEND

EXISTING	PROPOSED	
□	■	STORM INLET – OPEN GRATE
○	●	STORM CATCH BASIN – OPEN GRATE
◎	⊙	STORM MANHOLE – CLOSED LID

(2) SANITARY STRUCTURE NUMBER
(11) STORM STRUCTURE NUMBER
[5] WATERMAIN STRUCTURE NUMBER

UTILITY CROSSING SCHEDULE

CROSSING	SIZE (IN.)	MATERIAL	UTILITY	BOTTOM OF PIPE	TOP OF PIPE	CLEARANCE
A	15"	VCP	SAN	631.39		1.50' DEPRESS WM
	10"	DIP	WM		629.89	
B	10"	N/A	STM	632.83		2.94' DEPRESS WM
	10"	DIP	WM		629.89	
C	4"	N/A	WM	631.90		2.01' DEPRESS WM
	10"	DIP	WM		629.89	
D	12"	RCP	STM	634.05		0.65'
	10"	PVC	SAN		633.40	
E	8"	PVC	SAN	632.61		1.50' DEPRESS WM
	10"	DIP	WM		631.11	
F	12"	RCP	STM	632.80		0.47'
	12"	N/A	SAN		632.33	
G	8"	VCP	SAN	632.00		0.49'
	18"	RCP	STM		631.51	
H	N/A	N/A	WM	UNKNOWN		1.50' SEPARATION REQUIRED
	18"	RCP	STM		631.40	

UTILITY NOTES:

1. RIM GRADES FOR DRAINAGE STRUCTURES REFLECT THE FLOW LINE ELEVATIONS OF THE GUTTER, PAVEMENT, OR DRAINAGE SWALE (AS APPLICABLE)
2. UNLESS OTHERWISE NOTED, ALL UTILITY DIMENSIONS ARE CENTER TO CENTER OF STRUCTURES (OR TO END OF FLARED END SECTION – IE INCLUDING LENGTH OF FLARED END SECTION)
3. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO THE PROPOSED GRADES AS INDICATED ON THE PLANS.
4. CONNECTIONS TO EXISTING SEWERS OR WATERMAINS (OR EXISTING SERVICE STUBS) AT POINTS OTHER THAN VISIBLE STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL EXCAVATE AND VERIFY EXISTING SEWER OR WATERMAIN LOCATIONS, SIZES, ELEVATIONS, AND PIPE CONDITIONS AT PROPOSED CONNECTION POINTS PRIOR TO CONSTRUCTING UTILITY EXTENSIONS, AND NOTIFY THE ENGINEER AND OWNER OF ANY CONFLICT OR DISCREPANCIES.
5. EXISTING UNDERGROUND PIPE, CONDUIT AND/OR CABLES (LIGHTING, ELECTRIC, GAS, CABLE, ETC) ARE SHOWN FROM RECORD INFORMATION AND ARE APPROXIMATE IN NATURE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION IN THE FIELD AND NOTIFY THE ENGINEER AND OWNER OF ANY CONFLICT.
6. SELECT GRANULAR TRENCH BACKFILL IS REQUIRED FOR ALL UTILITY TRENCHES UNDER EXISTING OR PROPOSED PAVEMENT, DRIVEWAYS, PARKING LOTS, AND SIDEWALKS, AND EXTENDED A MINIMUM OF 2' EACH SIDE OF SAME. GRANULAR TRENCH BACKFILL SHALL BE COMPACTED IN PLACE IN ACCORDANCE WITH THE SPECIFICATIONS.
7. BUILDING DIMENSIONS AND ADJACENT UTILITY SERVICE LOCATIONS HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE TIME OF DRAWING PREPARATION. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THE CONTRACTOR SHALL REFER TO THE CURRENT ARCHITECTURAL PLANS FIRST, FOR PRECISE BUILDING DIMENSIONS AND UTILITY SERVICE CONNECTION LOCATIONS AND NOTIFY THE ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
8. ROUTING OF GAS, ELECTRIC, TELEPHONE AND OTHER CABLE SERVICES (IF SHOWN) ARE APPROXIMATE AND SUBJECT TO MODIFICATION BY THE RESPECTIVE UTILITY COMPANY AND/OR DEVELOPER. THE CONTRACTOR SHALL COORDINATE THE FINAL UTILITY SERVICE LOCATION WITH EACH UTILITY COMPANY PRIOR TO CONSTRUCTION.

EXISTING UTILITY STRUCTURE SCHEDULE – EAST

SANITARY SEWER STRUCTURES

(1) EX SAN M.H. RIM=638.77 INV=632.47 (15" VCP E) INV=633.12 (10" VCP SE) INV=632.42 (15" VCP S)	(2) EX SAN M.H. RIM=637.57 INV=632.37 (15" VCP N) INV=632.67 (10" NE) INV=632.07 (15" SW)
(3) EX SAN COMBINATION M.H. RIM=637.83 INV=631.39 (N) (RECORDS SHOW A M.H. IN THE STREET NEAR NORTH END OF PROPERTY, NONE WAS FOUND AND NO INDICATION OF ONE WAS FOUND) INV=632.33 (15" VCP NE) INV=632.35 (24" S) INV=632.34± (10" SE) INV=631.43 (24" W) (CONNECTING M.H. TO THE WEST SHOWS A 12" INVERT TO THE EAST, NO INFO. AS TO WHERE SIZE CHANGES AVAILABLE) INV=632.83 (10" NW)	(4) EX SAN COMBINATION M.H. RIM=638.61 INV=630.61 (24" N) INV=630.71 (24" S) (5) EX SAN COMBINATION M.H. RIM=636.78 INV=631.33 (12" E) INV=631.38 (12" W) INV=631.60 (SE) (6) EX SAN COMBINATION M.H. RIM=637.17 INV=631.42 (12" E) INV=632.87 (12" NW) INV=631.57 (12" W) (7) EX SAN M.H. RIM=638.29 INV=632.96 (8" VCP NE) INV=633.19 (6" VCP NW) INV=632.88 (8" VCP SW)

STORM SEWER STRUCTURES

(1) EX STM C.B. RIM=638.65 INV=634.23 (6" VCP S)	(2) EX STM C.B. RIM=637.06 INV=632.46 (6" VCP N) INV=632.46 (6" VCP ±S) INV=633.66 (10" RCP E)
(3) EX STM C.B. RIM=637.21 INV=634.26 (10" RCP W)	(4) EX STM C.B. RIM=637.28 INV=635.98 (4" CIP NE) INV=634.73 (6" CIP S)
(5) EX STM INLET RIM=639.01 INV=635.51 (L" SW)	(6) EX STM M.H. RIM=640.10 TOP OF 8"± PIPE=630.63 (S) INV=631.20 (SW) INV=630.80 (SE)
(7) EX STM C.B. RIM=638.58 INV=636.53 (12" RCP SE)	(8) EX STM C.B. RIM=637.45 INV=634.90 (6" VCP NW) INV=633.00 (10" SE) INV=634.20 (6" PVC S) **(STUB & PLUG)**
(9) EX STM INLET RIM=637.41 INV=635.01 (6" PVC N)	(10) EX STM C.B. RIM=637.20 INV=632.70 (6" VCP NW) INV=632.80 (8" VCP S)
(11) EX STM INLET RIM= 637.04 FILLED WITH DEBRIS	(12) EX STM CURB C.B. RIM=636.40 TOP OF PIPE TO SOUTH=634.40
(13) EX STM CURB C.B. RIM=636.46 TOP OF PIPE TO NORTH=634.16 INV=632.86 (NW)	(14) EX STM CURB C.B. RIM=636.72 TOP OF 12" PIPE TO EAST=634.37 INV=633.47 (12" S)
(15) EX STM CURB C.B. RIM=636.74 TOP OF PIPE TO NORTH=634.69 (PVC INSIDE RCP)	(16) EX STM M.H. RIM=638.82 INV=632.22 (N,S) INV=632.27 (E) INV=632.42 (W) ALL PIPES ARE ±8"
(17) EX STM C.B. RIM=638.62 INV=635.67 (6" DIP N) INV=635.52 (6" DIP SE)	

WATERMAIN STRUCTURES

[1] EX VALVE VAULT (NEW) RIM=639.28 T/P=632.28 PER RECORDS THE NEW MAIN GOING EAST IS 10" D.I.P. AND THE SOUTH IS 8" – RECORD SHOWS NO MAIN HEADING NORTH, BUT IS VISIBLE IN FIELD. RECORDS SHOW IT CONNECTING TO OLD MAIN COMING FROM VAULT NO. 2 BUT NOT VISIBLE IN FIELD	[2] EX VALVE VAULT RIM=638.95 T/P=633.45 RECORDS SAY IT IS 8"
	[3] EX VALVE VAULT RIM=638.55 T/P=633.75 THIS IS A NEW MAIN ALSO RECORDS SHOW NO VAULT HERE BUT FOUND IN FIELD
[4] EX VALVE VAULT RIM=637.46 FULL OF SILT AT ELEV.=634.76 MOST LIKELY HAVING BEEN PART OF THE OLD MAIN CONNECTING TO VAULT NO. 2, RECORDS SHOW NO VAULT HERE WHERE FOUND IN FIELD	[5] EX VALVE VAULT RIM=637.42 T/P=628.12 RECORDS SAY THIS IS 8" AND GENERALLY AGREE WITH FIELD MARKINGS AND CONNECTION TO NEW MAIN IN THE EASTERLY SIDE OF THE RIGHT OF WAY
[6] EX VALVE VAULT RIM=638.02 UNABLE TO OPEN	

GRACELAND AVE. WATERMAIN PROFILE (1)
SCALE: 1"=30' H, 1"=3' V

TRENCH DRAIN (2)

DATE	REVISIONS	DRAWN BY
1 01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2 02/17/23	ARCHITECT REVISIONS	TLM
3 02/27/23	PER CITY REVIEW	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
UTILITY PLAN - EAST

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St. Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

PROJECT NO. 63912021
DATE 12/09/22
SCALE 1"=20'
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
12 OF 20

March. 04, 2023 9:10:05 a.m. AcadVer:22.0s (LMS Tech)
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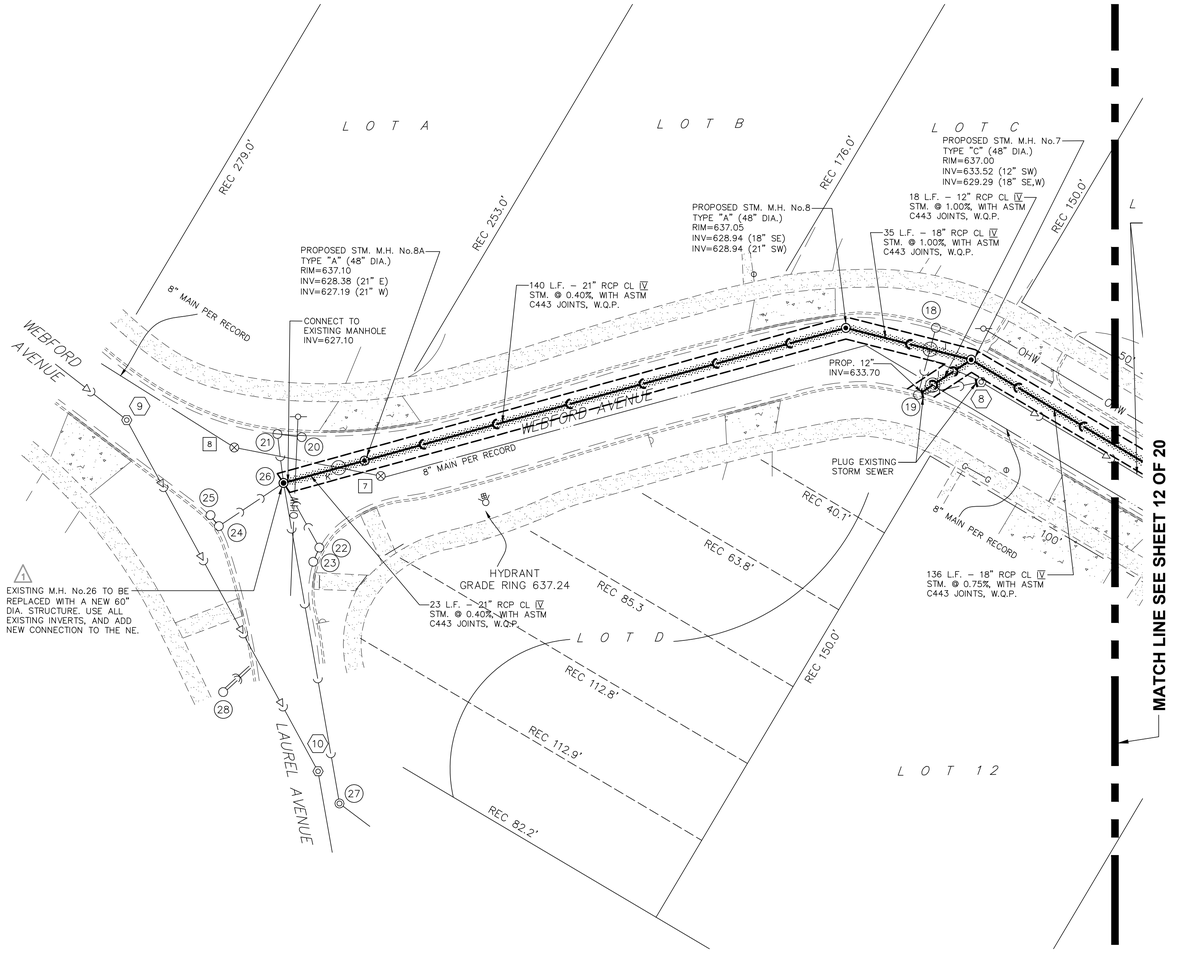

SPECIAL NOTES: (1)

1. FLOWABLE FILL IS REQUIRED FOR PROPOSED UTILITIES WITHIN PUBLIC FIGHT-OF-WAY.
2. NO RESIDENT SHALL BE LEFT WITHOUT SEWER AND WATER OVERNIGHT.
3. PEDESTRIAN WARNING DEVICES ARE BEING DISCUSSED BETWEEN STAFF AND THE ARCHITECT.
4. ANY EXISTING COMMERCIAL WATER SERVICES THAT ARE TO BE ABANDON, MUST BE REMOVED FROM THE CITY WATERMAIN AND THE CITY MAIN PIPE SHALL BE REPLACED IN THAT SECTION OF PIPE.
5. FOR THE FOUR EXISTING S.F. LOTS NORTH OF WEBFORD AVE. (LOT 29, LOT A, LOT B, LOT C), IF A CONFLICT EXISTS WITH AN EXISTING WATER SERVICE, IT SHALL BE REPLACED WITH A NEW COPPER SERVICE TO MEET SEPARATION REQUIREMENTS FROM THE B-BOX TO THE CITY WATERMAIN.

UTILITY NOTES:

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NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

STORM SEWER DRAINAGE STRUCTURE LEGEND

EXISTING	PROPOSED	
□	■	STORM INLET – OPEN GRATE
○	●	STORM CATCH BASIN – OPEN GRATE
◎	◉	STORM MANHOLE – CLOSED LID

(2) SANITARY STRUCTURE NUMBER
(11) STORM STRUCTURE NUMBER
[5] WATERMAIN STRUCTURE NUMBER

EXISTING UTILITY STRUCTURE SCHEDULE – WEST

SANITARY SEWER STRUCTURES

(8) EX SAN COMBINATION M.H. RIM=637.20 INV=632.54 (8" DIP NW) INV=631.75 (12" RCP SE) INV=633.21 (12" RCP SW)	(9) EX SAN COMBINATION M.H. RIM=637.25 INV=631.33 (24" RCP NW) INV=631.25 (24" RCP SE)
(10) EX SAN COMBINATION M.H. RIM=637.39 INV=631.39 (24" RCP NW) INV=631.29 (24" RCP SE)	

STORM SEWER STRUCTURES

(18) EX STM C.B. RIM=636.76 TOP OF 8" PVC SW 634.76 (IN 12" RCP)	(19) EX STM C.B. RIM=636.83 INV=633.73 (12" RCP NNE) TOP OF 8" PVC NE 634.83 (IN 12" RCP) **PROP.12" INV=633.70**
(20) EX STM C.B. RIM=636.66 INV=633.73 (12" RCP NW)	(21) EX STM C.B. RIM=636.66 INV=633.56 (12" RCP E) INV=633.46 (12" RCP SE)
(22) EX STM C.B. RIM=636.66 INV=631.26 (12" RCP NW) INV=633.59 (12" RCP SW)	(23) EX STM C.B. RIM=636.72 INV=633.52 (12" RCP NE)
(24) EX STM C.B. RIM=636.28 INV=631.68 (12" RCP NE) INV=633.48 (12" RCP NW)	(25) EX STM C.B. RIM=636.30 INV=633.66 (12" RCP SE)
(26) EX STORM M.H. **(TO BE REPLACED)** RIM=637.06 INV=631.81 (12" DIP NW) INV=628.31 (12" RCP SW) INV=627.06 (27" RCP SSE) INV=628.86 (12" RCP SE) **PROP. 21" INV=627.10**	(27) EX STORM M.H. RIM=637.35 INV=627.35 (27" RCP NW) INV=627.28 (27" RCP SE)
(28) EX STM C.B. (BEEHIVE COVER) FLOW LINE=637.36 INV=633.86 (10" DIP (N)NE) INV=632.86 (10" DIP (S)NE) (NO OTHER PIPES VISIBLE-LONG BARREL, HARD TO SEE)	

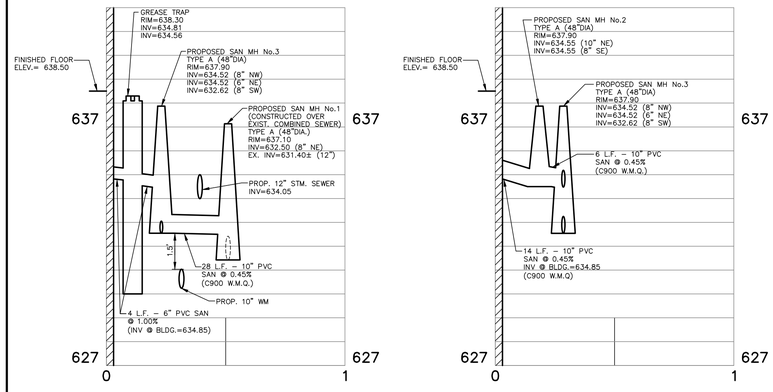
WATERMAIN STRUCTURES

[6] EX VALVE VAULT RIM=638.02 UNABLE TO OPEN	[7] EX VALVE VAULT RIM=637.24 TOP OF 8" PIPE=630.39 FULL OF WATER
[8] EX VALVE VAULT RIM=637.11 TOP OF 8" PIPE=629.91	

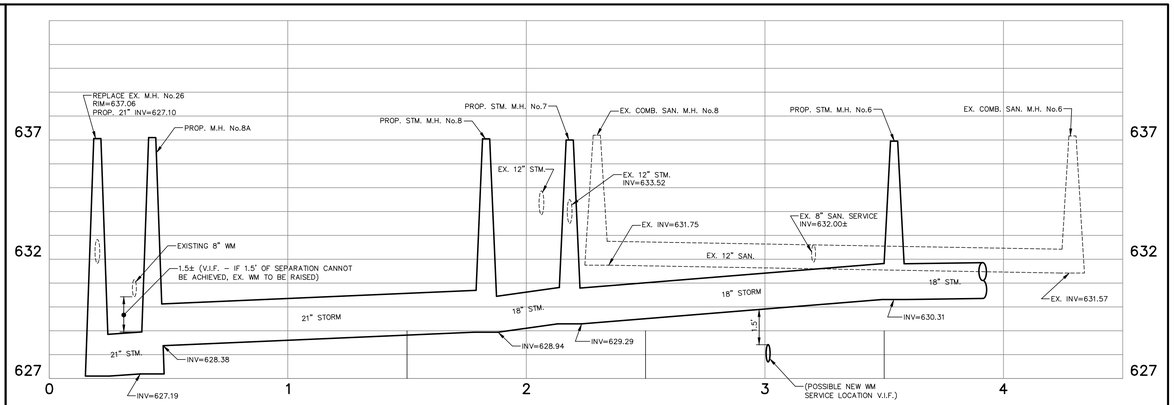
(2) SANITARY STRUCTURE NUMBER
(11) STORM STRUCTURE NUMBER
[5] WATERMAIN STRUCTURE NUMBER

UTILITY CROSSING SCHEDULE

CROSSING	SIZE (IN.)	MATERIAL	UTILITY	BOTTOM OF PIPE	TOP OF PIPE	CLEARANCE
(I)	12"	RCP	STM	633.65		2.15'
	8"	DIP	WM		631.50	
(J)	12"	RCP	STM	633.76		4.59'
	18"	RCP	STM		629.17	
(K)	8"	N/A	WM	±630.41		±1.50'
	21"	RCP	STM		628.91	



SANITARY SERVICE PROFILES (1)
SCALE: 1"=30' H, 1"=3' V



WEBFORD AVENUE STORM SEWER PROFILE (1)
SCALE: 1"=30' H, 1"=3' V

REVISIONS	DATE	DRAWN BY
1 CITY REVIEW #1 & ARCHITECT REVISIONS	01/17/23	TLM
2 ARCHITECT REVISIONS	02/17/23	TLM
3 PER CITY REVIEW	02/27/23	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
UTILITY PLAN - WEST

975 E. 22nd St. Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com
RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management

PROJECT NO. 63912021
DATE 12/09/22
SCALE 1"=20'
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
13 OF 20

February 22, 2023 11:15:25 a.m. AcadVer: 22.0s (LMS Tech)
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RWG ENGINEERING, LLC
PROJECT SPECIFICATIONS

GENERAL CONDITIONS

CONTRACT DOCUMENTS
The Standard Specifications listed on the title sheet, these Improvement Plans, the Special Provisions, General Conditions, and Subsequent Details are all part of the Contract Documents. Incidental items or accessories necessary to complete the work may not be specifically noted, but are to be considered a part of the contract.

USE OF IMPROVEMENT PLANS
No Improvement Plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. If there are discrepancies from what is shown on the construction plans, the contractor shall immediately report same to the engineer before doing any work, otherwise the contractor assumes full responsibility. In the event of disagreement between the construction plans, standard specifications, and/or special details, the contractor shall secure written instructions from the engineer prior to proceeding with any part of the work impacted by omissions or discrepancies. Failing to secure such instruction, the contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or question with respect to the true meaning of the construction plans or specifications, the decision of the engineer shall be final and conclusive.

WORKMANSHIP GUARANTEE
All work performed under this contract shall be guaranteed against all defects in material and workmanship of whatever nature by the contractor and his surety for a period of one year from the date of final acceptance of the work by the applicable governmental agencies and the owner.

FINAL PAYMENT
Prior to acceptance by the owner and final payment, all work shall be inspected and approved by the owner or his representative. Final payment will be made after all of the contractors' work has been approved and accepted, and in accordance with the contract documents.

HIGHWAY/ROADWAY CONSTRUCTION PERMITS
The contractor shall be responsible for obtaining all required permits for construction along or across existing streets or highways, including the use and access to existing streets. The contractor shall make arrangements for proper bracing, shoring, and other required protection of all roadways before construction begins. The contractor shall be responsible for any damage to streets or roadways and associated structures, and shall make repairs as necessary to the satisfaction of the engineer and applicable governmental agency.

EXISTING UTILITIES
Easements for existing utilities within public right-of-way are shown on the plans according to available records. The contractor shall be responsible for determining the exact location in the field of such utility lines and their protection from damage during construction. If existing utility lines of any nature are encountered which conflict in location or elevation with new construction, the contractor shall notify the engineer immediately so that the conflict may be resolved.

PROJECT IMPROVEMENTS AND QUANTITIES
The contractor shall review the construction documents and determine all required improvements and verify all quantities as may be provided by the engineer or owner for bidding purposes, and report any discrepancies to the engineer. The contract price submitted by the contractor shall be considered as lump sum for the completed project unless there is a plan revision or written change to the scope of work.

INCIDENTAL CONSTRUCTION
Whenever the performance of work is indicated on the plans and no item is included in the contract for payment, the work shall be considered incidental to the contract and no additional compensation will be provided.

MAINTENANCE OF SITE DRAINAGE
During construction operations any loose material that is deposited in the flow line of gutters, drainage structures, ditches, etc. and obstructs the natural drainage flow line shall be removed at the close of each working day by the responsible party. The contractor shall insure positive site drainage at the close of each work day. Drainage may be achieved by ditching, pumping, or any other acceptable method. Failure to provide positive drainage will preclude any possible added compensation requested due to delays or unsuitable materials created as a result thereafter. At the conclusion of construction operations all drainage structures and flow lines shall be free from dirt and debris. This work shall be considered incidental to the contract.

TRAFFIC CONTROL
The contractor is responsible for the installation and maintenance of adequate signage, traffic control, and warning devices to inform and protect the public during all phases of construction. All barricades and warning signs shall be provided in accordance with the IDOT Standard Specifications. Adequate lighting shall be maintained from dusk to dawn at all locations where construction operations warrant, or as designated by the engineer or applicable governmental agency. Traffic control items shall be in accordance with the IDOT "Manual on Uniform Traffic Control Devices."

PAVEMENT REMOVAL/REPLACEMENT
Existing permanent type pavements or other permanent improvements which abut or otherwise interfere with proposed improvements and must be removed shall be saw cut full depth prior to removal. Items so removed shall be replaced with similar construction materials to original condition or better. Payment for saw cutting shall be included in the removal cost and replacement will be paid under the respective item in the contract, unless otherwise indicated. Removed pavement, sidewalk, curb, etc. shall be disposed of by the contractor at his own expense at an offsite dump site.

TREE PROTECTION
Existing trees not scheduled for removal shall be protected from damage. Trimming and sealing shall be in accordance with IDOT Standard Specifications.

EXISTING SIGNAGE & MAIL BOXES
Existing signage and mail boxes that interfere with construction shall be removed, stored, and replaced/reset by the contractor in accordance with the IDOT Standard Specifications. Damage to these items shall be repaired/replaced by the contractor at his expense. Temporary mailbox facilities shall be provided as an incidental cost.

EXISITNG FIELD TILE
Field tile encountered during construction shall be connected to proposed storm sewer or extended to outlet into a proposed drainage way. If this is not possible, then existing tile shall be repaired with new pipe of same size and material (or better) and restored in acceptable operating condition at the original grade. Records of location and elevation shall be made by the contractor and furnished to the engineer upon project completion.

CONSTRUCTION DEBRIS CLEAN-UP
The contractor is responsible for removal and disposal of all excess material and debris resulting from his construction operations at no expense to the owner.

CONSTRUCTION RECORD
The contractor shall keep a set of approved construction plans on the jobsite, and shall maintain a legible record on said plans of field tile encountered, modifications/alterations to alignment/installation of proposed improvements, etc. Upon completion of the contractor's work, said record documents shall be provided to the engineer. Final payments shall not come due until this information is provided to the engineer.

MACHINE GUIDANCE
These plans are not suitable for machine guidance purposes. Should these plans be used to prepare files for machine guidance, the engineer shall be in responsible charge of digital terrain model (DTM) creation, and the project surveyor shall be in responsible charge of site calibration. This work is an additional service requiring negotiated compensation to the engineer and surveyor.

SAFETY & CONSTRUCTION EXECUTION
The contractor shall comply with the rules and regulations of OSHA and appropriate authorities regarding jobsite safety provisions. The engineer and owner are not responsible for the construction means, methods, techniques, sequences or procedures, time for performance, programs, or for any safety precautions used by the contractor. The contractor is solely responsible for execution of his work in accordance with the contract documents.

INSURANCE
Contractors responsible for construction shall purchase insurance for the benefit of the engineer, naming RWG Engineering, LLC as an additional insured to cover claims and expenses, including cost of defense, asserted against engineer, it's agents, employees, and consultants for bodily injury, sickness, disease or death caused by any negligent act or omission of the contractor, any subcontractor, anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable. Such insurance shall state that: "The coverage afforded the additional insured's shall be primary insurance for the additional insured with respect to claims arising out of operations performed by or on behalf of the contractor." A certificate shall be issued to the engineer prior to the start of work. Applicable insurance maintained by RWG Engineering, LLC shall be considered secondary and on an excess or contingent basis.

PROJECT SPECIFICATIONS

I. SOIL EROSIONS AND SEDIMENT CONTROL

GENERAL STANDARDS
Unless specifically modified below, all soil erosion and sediment control work shall be done in accordance with NPDES General Permit No. ILR10 and the "Illinois Urban Manual." The contractor shall conform to all requirements of this general permit including maintenance and inspection of erosion control measures and filing applicable certifications and reports. A copy of the notification of coverage letter shall be posted at the site in a prominent place for public viewing. Any control measures in addition to those outlined in these plans which are deemed necessary by the owner, engineer, or applicable governmental agency shall be immediately implemented by the contractor. Maintenance and replacement of erosion control items shall be considered incidental.

SWPPP
A copy of the Stormwater Pollution Prevention Plan (SWPPP) shall be kept onsite with all supplemental material as required per NPDES General Permit No. ILR10. Construction operations shall conform to permit requirements.

SITE PREPARATION
Prior to clearing and grading, perimeter silt fence shall be installed, and onsite sediment control measures shall be constructed and functional per the soil erosion and sediment control plan. The contractor shall construct ditches, swales, sediment traps, and siltation control measures to intercept surface waters prior to conveyance onto adjacent properties, routing surface flow to onsite treatment facilities.

STABILIZED CONSTRUCTION ENTRANCE
Temporary gravel construction entrances shall be installed and maintained to prevent sediment from being trucked offsite. Sediment reaching a public road shall be removed by shoveling or street sweeping at the end of each work day. Loose material deposited in the flow line of any gutter or drainage structure shall be removed at the end of each work day.

TOPSOIL STOCKPILES
Topsoil stockpiles shall be seeded within seven (7) calendar days of completion for erosion control, unless they will be distributed within fourteen (14) calendar days. Stockpiles shall be encompassed with a silt fence.

DUST CONTROL
Dust control shall be performed on a daily basis using water dispersed from a truck mounted tank with a standard discharge header for uniform application rate.

DE-WATERING
During de-watering operations water shall be pumped into sediment basins or silt traps. De-watering directly into field tile or stormwater structures is not permitted. Water pumped during construction operations shall be filtered.

STABILIZATION
Disturbed areas shall be stabilized by seeding within seven (7) days of completion of disturbance unless the area will be disturbed within fourteen (14) days. Temporary seed mixtures shall be applied at a rate of 64 lbs/acre.

SEDIMENT BASINS
When stormwater is routed through proposed detention basins to allow for settlement of suspended silt and debris, the basins shall be constructed at the start of the project. Basins shall be sufficiently over-excavated to provide appropriate volume for sediment collection.

INLET PROTECTION BASKETS
Inlet protection devices shall be installed in each onsite and adjacent offsite drainage structure. (SEE PLANS)

DRAINAGE SYSTEM MAINTENANCE
All storm sewers, catch basins, sumps, and detention basins provided with this project shall be cleaned at construction completion and prior to final acceptance. Cleaning may also be required during construction if the traps are not functioning properly.

INSPECTIONS
The contractor shall inspect all erosion control measures at least once every seven (7) calendar days, and within 24 hours of a storm event of 0.5 inches or greater (or equivalent snowfall) and in accordance with NPDES guidelines. Necessary repairs or clean up to maintain the effectiveness of the control measures shall be done immediately.

CLEANUP
All erosion and sediment control measures shall be removed and disposed of in accordance with applicable governmental agency requirements within 30 days of final site stabilization.

II. EXCAVATION AND GRADING - (EARTHWORK)

GENERAL STANDARDS
Unless specifically modified below, all excavation and grading - (earthwork) shall be done in accordance with the applicable sections of the "Standard Specifications for Road and Bridge Construction in Illinois," as published by IDOT, Latest Edition.

SITE PREPARATIONS
Prior to onset of operations, the contractor shall become familiar with the soil erosion control specifications. The establishment of erosion control procedures and the placement of filter fencing, etc. to protect adjacent property shall occur before mass grading begins, and in accordance with the implementation schedule.

Tree protection fencing shall be placed around any trees designated to be preserved within the construction zone. Fencing shall be placed in a circle centered around the tree, such that the entire drip zone (extent of furthest extended branches) shall be within the fence limits. The existing grade within the fenced area shall remain undisturbed.

DEMOLITION
Demolition of existing structures, pavements, curbs, flatwork, utilities, etc. shall be disposed of at an offsite dump site provided by the contractor. Onsite disposal will only be allowed if approved by the owner. Existing water wells shall be closed and capped in accordance with the Illinois Water Well Construction Code, as published by the Department of Public Health. Existing septic tanks and grease traps shall have all liquids and solids removed by a licensed waste hauler prior to structure removal or filling by the contractor.

CLEARING AND GRUBBING
Unless noted for preservation, all vegetative growth including trees and tree stumps shall be removed from the construction area. Offsite disposal shall be assumed unless permitted otherwise by owner.

TOPSOIL REMOVAL
Topsoil shall be stripped from all roadway, driveway, parking area, right-of-way, building pad and other designated structural areas. Stockpiling of topsoil for respread shall be at locations as directed by the owner. Topsoil stockpiled for future use shall be free from large roots, sticks, weeds, brush, stones larger than one inch diameter, and other litter or waste products not conducive to plant growth. Failure to properly sequence stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, drainage swales, flood routing areas, utility locations, utility easements or right-of-way.

UNSUITABLE MATERIAL
Unsuitable subgrade material shall be removed from roadway, driveway, parking lot, building pad, and any other designated areas. Obviously soft underlying soil shall be removed from all structural improvement areas, areas to receive clay fill, and wherever else designated on the site. If underlying structural subgrade soils rut deeper than one inch under construction equipment or if the moisture content exceeds that needed for proper compaction, the soil shall be scarified, dried, and recompacted to the required specifications.

EXCAVATION AND EMBANKMENT
Upon completion of topsoil removal, the contractor shall perform excavation and embankment (fill) operations in accordance with the improvement plans.

Structural embankment material shall be placed in level uniform layers so that the compacted thickness is approximately six inches. Each layer shall be thoroughly mixed during spreading to insure uniformity.

Embankment material within roadway, driveway, parking areas, and other structural clay fill areas shall be compacted to a minimum of ninety percent (90%) of maximum density (modified proctor method), or to such other density as determined appropriate by the soils engineer. Embankment for building pads shall be compacted to a minimum of ninety-five percent (95%) of maximum density (modified proctor method), or to such other density as determined appropriate by the soils engineer.

Embankment material within non-structural fill areas (random fill) shall be compacted to a minimum of eighty-five percent (85%) of maximum density (modified proctor method), or to such other density as determined appropriate by the soils engineer.

All subgrades for proposed street and pavement areas shall be proof-rolled by the contractor and any unstable areas shall be removed and replaced as directed by the soils engineer.

BACKFILLING CURBS, PAVEMENT, ETC.
Curbs, pavements, sidewalks, etc. shall be backfilled by the contractor after installation in accordance with the improvement plan grades.

TOPSOIL RESPREAD
Except where otherwise noted, the contractor shall respread a minimum six (6) inch layer of topsoil on all designated open space, parkway, landscape, and other non-structural areas.

EXCESS MATERIAL
Unless otherwise approved by the owner, the contractor shall remove from the site any excess or unsuitable earth material.

SEEDING
Upon completion of topsoil respread, the contractor shall install seed and fertilizer as indicated on these improvement plans or per owner provided landscape plans.

INSPECTION BY THE SOILS ENGINEER
The owner provided soils engineer shall closely supervise and inspect the grading operations, particularly during the removal of unsuitable material and the construction of embankments or building pads. All testing, inspection and supervision of embankment quality, unsuitable removal and replacement, and other soils related operations shall be entirely the responsibility of the soils engineer.

GRADING TOLERANCE
Building pad elevations, subgrades for pavement, driveways and sidewalks, and all yard/open space areas shall be completed within a tolerance of plus or minus 0.1 foot of design subgrade elevations.

UTILITY INSTALLATION PREPARATION
Prior to utility construction, proposed pavement areas, building pads, driveway and sidewalk areas, and yard/open space areas shall be rough graded to plus or minus one foot of design subgrade elevations.

NOTE REGARDING PLAN GRADES
Grade elevations shown on the improvement plans are finished grades. Pavement and/or topsoil respread thicknesses must be subtracted to determine subgrade elevations.

SITE DRAINAGE MAINTENANCE
Grading and site improvement construction shall not cause ponding of stormwater. All areas adjacent to improvements shall be graded to provide positive site drainage.

SOIL BORING REPORTS
Soil boring reports, available at the office of the engineer or owner, are solely for information and guidance for the contractor. The engineer and owner make no representation or warranty regarding the information contained in the boring logs. The contractor is encouraged to make his own investigation and plan his work accordingly. Arrangements to enter the property during the bid phase may be made with the owner. There will be no additional payment for expenses incurred resulting from adverse soil or ground water conditions.

SUBGRADE DESIGN CRITERIA
Pavement subgrade shall have a minimum IBR of 3.0 as determined by the soils engineer. The proposed pavement design has been based on a minimum IBR of 3.0. If areas of pavement subgrade are encountered which do not meet the minimum IBR requirement, subgrade remedial work or pavement design revisions will be ordered by the owner to obtain equivalent pavement strength.

III. UNDERGROUND UTILITIES - UNIVERSAL

GENERAL STANDARDS
All sewer and water main improvements shall be constructed in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois," Latest Edition, along with applicable sections of the "Standard Specifications for Road and Bridge Construction in Illinois" as published by IDOT, Latest Edition, and the construction details and specifications of the applicable governmental agency.

GENERAL WORK SCOPE
Underground utility construction shall include trenching or augering; installation of pipe, structures and castings; backfilling of trenches with compaction; and testing as required. Fittings and accessories necessary to complete the work may not be specified, but shall be considered incidental to the cost of the contract.

GRADE PREPARATION
Rough grading to within one foot of finished subgrade shall be completed by the earthwork contractor prior to commencement of underground utility construction.

DE-WATERING
The contractor is responsible for dewatering any excavation for the installation of sewer or water systems. Dewatering will be considered incidental to the respective underground utility construction.

SHEETING AND BRACING
Any anticipated costs for sheeting and bracing shall be reflected in the contract amounts. Additional costs for sheeting and bracing will not be allowed.

SELECT GRANULAR BACKFILL
All utility trenches beneath existing or proposed pavement, driveways and sidewalks, and existing or proposed utilities (i.e. crossings), and for a distance of three (3) feet either side of same (or more for deeper utilities as noted on the plans), and/or wherever else shown on the plans shall be backfilled with select granular material and firmly compacted in accordance with the construction standard details.

EXCESS TRENCH MATERIAL
The contractor shall spread excess excavated trench material adjacent to the trenches in an orderly fashion so as not to create a hazard or obstruction, and to maintain the site in a workable condition.

DISSIMILAR MATERIALS/PIPE CONNECTIONS
"Band-Seal" or similar flexible type couplings shall be used when connecting sewer pipes of dissimilar materials. When connection to an existing sewer main by means other than an existing wye, tee, or an existing structure, one of the following methods shall be used:
- Circular coring of sewer main with proper tools ("Shewer-Tap" machine or similar) and installation of hub-wye or hub-tee saddle
- Remove entire section of pipe (breaking only the top of one bell) and replace with precast wye or tee branch section
- Using a pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using a non-shear mission coupling to hold assembly firmly in place

UTILITY STRUCTURE SELECT BACKFILL
Where select granular bedding and backfill is required around utility structures, the cost for same shall be merged into the structure cost.

STRUCTURE CASTINGS
Frames and lids (or grates) for sanitary, water main and storm sewer structures shall be as indicated on the plans, and the cost of same shall be integrated into the respective structure cost.

ADJUSTING RINGS
All structures shall incorporate a minimum of three (3) inches and a maximum of eight (8) inches of adjusting rings (two (2) rings maximum).

STRUCTURE ADJUSTMENT
All top of frames for utility structures (including B-Boxes) shall be adjusted to meet final finished grade upon completion of finished grading and final inspection (cost incidental). The contractor shall insure that roadway, curb, and pavement inlets or structures (frames and grates) are at finished grade.

HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS
Horizontal and vertical separation between water and sewer mains shall be maintained in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois and said specifications standard drawings 18, 19, 20, 21, 22, 23, and 24.

FLOOR DRAINS AND FOOTING DRAINS
All floor drains and floor drain sump pumps shall discharge into the sanitary sewer. All downspouts, footing drains and subsurface stormwaters shall discharge into the storm sewer or onto the ground - not into the sanitary sewer.

CONSTRUCTION RECORD
The contractor shall maintain a legible record on a set of construction plans information concerning all manholes, wyes and services, valve boxes, curb boxes, etc. such that they can be field located in a manner acceptable to the applicable governmental agency.

IV UNDERGROUND UTILITIES - SANITARY SEWER

SANITARY SEWER PIPE
Sanitary sewers and services (or combined sewers in combined sewer areas) shall be constructed of one or more of the following materials as specified on the plans:
- PVC gravity sewer pipe conforming to ASTM D-3034 for pipe diameters of 4 inch to 15 inch, or conforming to ASTM F-679 for pipe diameters of 18 inch to 48 inch, with minimum SDR of 26, and with Elastomeric gasket joints conforming to ASTM D-3212. The gasket shall comply with ASTM F-477. Sanitary services shall conform to ASTM D-2680 and D-2751 with solvent cement welded joints conforming to same.
- Cement-lined ductile iron pipe class 52, conforming to AWWA C-151 (ANSI 21.51) with push-on joints conforming to AWWA C-111 (ANSI A21.11)

SANITARY SEWER BEDDING
Sanitary sewers shall be installed on compacted granular crushed stone bedding, 1/4 inch to 3/4 inch in size (IDOT gradation CA-11 or CA-13), with a minimum thickness of one fourth of the outside pipe diameter, but not less than 4 inches nor more than 8 inches. Bedding shall extend to one foot over the top of pipe for all sanitary sewer and services. Cost for bedding shall be merged into lineal footage cost for the respective sewer pipe.

SANITARY SEWER MANHOLES
Manholes shall be 4 foot diameter precast reinforced concrete structures with eccentric cones. Cone openings shall be centered parallel to mainline flow. Structure sections and adjusting rings shall be securely sealed to each other using resilient, flexible, non-hardening, preformed bituminous mastic (Ram-Nek or approved equal). Mastic shall be applied such that no surface or ground water inflow can enter the structure. All structures shall be equipped with appropriate steps, frame and lid, and if indicated shall include an internal or external chimney seal (see construction standard detail).

TESTING
Sanitary sewers including manholes and service lines shall be subjected to either an infiltration test or air test (and deflection test for flexible pipe) by the contractor. Allowable infiltration shall not exceed 200 gallons per inch diameter of pipe per mile per day. Vacuum testing of manholes shall be in accordance with ASTM C-1244. Testing procedures shall be in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois. The contractor shall coordinate the testing with all applicable governmental agencies.

TELEVISING
Main line sanitary sewer shall be televised prior to acceptance and a DVD shall be provided to applicable governmental agencies. Corrective work required shall be done immediately. Cost for televising shall be merged into the unit price for the sewer pipe.

V. UNDERGROUND UTILITIES - WATER MAIN

WATER MAIN PIPE
Water main shall be cement-lined ductile iron pipe class 52 conforming to AWWA C-151 (ANSI A21.51). Rubber gasket joints shall conform to AWWA C-111 (ANSI A21.11). Push-On pipe joints shall incorporate "Field Lock Gaskets" by U.S. Pipe or Series 1700 Mega-Lug. Ductile iron fittings shall conform to AWWA C-110 (ANSI A21.10). Cement lining shall conform to AWWA C-104 (ANSI A21.4). Protective wrapping is required. It shall conform to AWWA C105-99, minimum thickness 8 mill polyethylene tube such as Clow type F-191 or equal, and shall completely encase and seal the main, fittings, and accessories per manufacturer's directions.

FITTINGS
Water main fittings (bends, elbow, tees, increasers, reducers, etc.) may or may not be specifically referenced on the plans and quantities - if not, they shall be considered incidental and included in the lineal footage coast for the water main.

DEPTH OF COVER - MAIN AND SERVICES
Minimum depth of cover from finished grade to top of water main or water service pipe shall be five and a half (5.5) feet.

THRUST BLOCKING
Thrust blocking shall be installed with water mains at all bends, tees, elbows, etc. (see construction standard detail). Retainer glands or mega-lug fittings may be substituted if permitted by the applicable governmental agency. Cost of either to be merged into lineal footage cost for the water main.

WATER MAIN BEDDING
Water main shall be installed on compacted granular crushed stone bedding, 1/4 inch to 3/4 inch in size (IDOT gradation CA-6), a minimum of 4 inches below the bottom of the pipe and extending upward to the springline (1/2 the pipe diameter). Cost for bedding shall be merged into lineal footage cost for the water main.

WATER VALVES
Unless specifically noted otherwise, gate valves in accordance with the applicable governmental standard shall be used wherever valves are called for. Valves shall be iron body, bronze mounted, parallel resilient seat valves per AWA C-509. Valves shall be rated for 300 psi test pressure and 200 psi working pressure.

VALVE VAULTS
Valve vaults shall be used at all valve locations. Vaults shall be precast reinforced concrete structures, diameter as noted on the plans. Vaults shall include appropriate frames and lids (see construction standard detail(s).

PRESSURE TAPS
Where indicated on the plan, pressure tap operations shall be done while maintaining system pressure in the existing main. The existing main shall be cleaned prior to installation of the tapping sleeve. Tapping valve shall conform to AWWA C-500. Vault, supports, frame, and lid shall conform to the construction standard detail.

FIRE HYDRANTS
Hydrants shall be of the manufacture and equipped with auxiliary valves and valve boxes in accordance with the applicable governmental agency's standard. Hydrants shall be equipped with two 2 1/2 inch hose nozzle connections and one 4 1/2 inch pumper port. Hose threads shall be the standard of the applicable governmental agency. Hydrants shall open left (counter-clockwise). Hydrants shall generally be located three (3) feet clear of the back of curb.

TESTING AND DISINFECTION
Water mains shall be subject to a pressure test by the contractor. Hydrostatic pressure test and leakage shall be based on 150 psi for 2 hours. Chlorination for disinfection shall be in accordance with the Standard Specifications. Testing and chlorination of existing water mains (where connections are indicated on the plans) shall be considered incidental. In the event that pressure testing of existing mains fail, and such failures are attributable to pre-existing conditions not under the contractor's control, the contractor is entitled to additional payment to correct the deficiencies in the existing system.

VI. UNDERGROUND UTILITIES - STORM SEWER

STORM SEWER PIPE
Storm sewers and services shall be constructed of one or more of the following materials as specified on the plans:
- Reinforced concrete pipe of the class as indicated on the plans, conforming to ASTM C-76 with joints and pipe to incorporate flexible gaskets conforming to ASTM C-361 in lieu of mastic.
- Cement-lined ductile iron pipe class 52, conforming to AWWA C-151 (ANSI 21.51) with push-on joints conforming to AWWA C-111 (ANSI A21.11).
- PVC gravity sewer pipe conforming to ASTM D-3034 (for pipe diameters of 4 inch to 15 inch) or conforming to ASTM F-679 (for pipe diameters of 18 inch to 48 inch). All pipe shall be SDR 35 or stronger, with elastomeric gasket joints conforming to ASTM D-3212.

STORM SEWER BEDDING
Storm sewers shall be installed on compacted granular crushed stone bedding, 1/4 inch to 3/4 inch in size (IDOT gradation CA-6), with a minimum thickness of one fourth of the outside pipe diameter, but not less than 4 inches nor more than 8 inches. Bedding shall extend upward to the springline of the pipe for concrete and ductile iron pipe, and one foot over the top of the pipe for PVC pipe. Cost for bedding shall be merged into lineal footage cost for the respective sewer pipe.

INLETS, CATCH BASINS, AND MANHOLES
All structures shall be pre-cast reinforced concrete (see construction standard details). Structure sections and adjusting rings shall be securely sealed to each other with flexible bituminous mastic. Gaps at pipe connections shall be filled and securely sealed with non-shrink hydraulic cement mortar. Frames and grates (or lids) shall be as noted on the plans and shall be securely grouted with non-shrink hydraulic cement mortar.

SPECIAL STRUCTURES
If called for on the plans, special structures (headwalls, boxes, etc.) shall be in accordance with the construction standard details.

VII. PAVEMENT, CURBS, AND SIDEWALKS

GENERAL STANDARDS
Unless specifically modified below, all pavement, curb, and sidewalk construction shall be done in accordance with the applicable sections of the "Standard Specifications for Road and Bridge Construction in Illinois," as published by IDOT, latest edition.

SUBGRADE PREPARATON
The subgrade for roadways, pavement, and/or curbs and walks shall be finished by the excavation contractor to within 0.1 foot, plus or minus, of plan elevation. The paving contractor shall confirm the proper preparation of the rough subgrade, or notify the owner and engineer in writing of any discrepancies. Prior to placement of base material, the paving contractor shall fine grade the subgrade to insure proper thicknesses for all base and pavement courses.

BITUMINOUS PAVEMENT
Bituminous Pavement shall consist of the sub-base course, base course, hot-mix asphalt binder course, and hot-mix asphalt surface course, of the thickness and materials as specified on the plans. The maximum size aggregate for the hot-mix surface course mixture shall be 3/8 inches. A prime coat shall be applied to the sub-base course (or base course) as indicated on the plans. A tack coat shall be applied to the binder course prior to surface course placement.

WEATHER REQUIREMENTS FOR BITUMINOUS PAVING
Hot-mix binder shall be placed only when the ambient air temperature is at least 40 degrees Fahrenheit and the forecast is for rising temperatures. Hot-mix surface shall be placed when the ambient air temperature is at least 45 degrees Fahrenheit and the forecast is for rising temperatures.

BITUMINOUS PAVEMENT INSTALLATION
After installation of the base course, all traffic shall be kept off the base until the binder course is placed. After installation of the binder course and upon completion of inspection and approval by the applicable governmental agency and owner, the binder shall be cleaned, a tack coat shall be applied at a rate of 0.05 gal/square yard (cost incidental), and the surface course shall be placed. All damaged areas in the binder, base or curb shall be repaired prior to surface replacement.

REINFORCED CONCRETE PAVEMENT
Concrete pavement and base course shall be of the thickness as shown on the plans. All concrete pavement shall be reinforced with 6 inch x 6 inch No. 6 welded wire fabric. All concrete pavement shall be broom finished. Contraction joints shall be sawcut immediately after pavement installation and initial curing.

CONCRETE PAVEMENT JOINTING
Joints for concrete pavement shall be determined by contractor in the field using best practices. Maximum distance between joints shall be 15 feet. Jointing shall follow the American Concrete Pavement Association Publication "Proper use of Isolation and Expansion Joints in Concrete Pavements."

CONCRETE CURB AND GUTTER
Combination curb and gutter shall be as detailed on the plans, underlain with the specified base course. Pre-molded fiber expansion joints (3/4 inch thick) with 3/4 inch x 8 inch plain round steel dowel bars shall be installed at 60 foot intervals and at all P.C.'s, P.T.'s, curb returns, and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted with metal expansion tubes. Fiber expansion joints 3/4 inch shall also be used wherever sidewalk abuts the curb. Contraction joints shall be sawcut at 15 foot intervals. Two (2) reinforcing bars (No. 4), 10 feet long, shall be installed wherever curb and gutter crosses utility trenches or service lines. Curbs shall be depressed at all locations where public walks or pedestrian paths intersect curb lines (ADA Requirements - see construction standard details). Concrete curb and gutter shall be placed and vibrated to eliminate any honey-combing.

CONCRETE SIDEWALKS
Sidewalks and base course shall be of the thickness and dimensions as shown on the plans. Sidewalks crossing driveways shall be reinforced with 6 inch x 6 inch No. 6 welded wire mesh. Sidewalks crossing utility trenches shall be reinforced with three (3) No. 4 reinforcing bars 10 feet long, centered over the trench crossing.

CONCRETE CURING
Curing and weather protection of all concrete surfaces (pavement, curb, sidewalk) shall be per the standard specifications.

TESTING
Testing of all pavement courses, curbs, and concrete shall be done by a qualified testing firm employed by the owner.

PAINTED PAVEMENT MARKINGS
Painted pavement markings and symbols shall be installed in the color and location as shown on the plan, and conforming to the standard specifications. Markings and symbols shall only be applied when the temperature is 50 degrees Fahrenheit or above.

THERMOPLASTIC PAVEMENT MARKINGS
Thermoplastic pavement markings and symbols, of the type and color as noted on the plans, shall be installed on public roadways. Thermoplastic shall only be applied when the air temperature is 55 degrees Fahrenheit or greater, and no later than November 1st or earlier than April 15th.

A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
   * STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * VILLAGE OF ____________ MUNICIPAL CODE;
   * THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
   * IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055 OR SEND EMAIL NOTIFICATION WITH PROJECT NAME, LOCATION AND PERMIT NUMBER TO WMOJOBSTART@MWRD.ORG).
2. THE VILLAGE OF ____________ ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS ________ FT.
2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.
5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.
6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.
10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.
3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONCRETE SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE		
6-INCH TO 15-INCH DIAMETER SDR 26	ASTM D-3034	ASTM D-3212
18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM F-679	ASTM D-3212
HIGH DENSITY POLYETHYLENE (HDPE)	ASTM D-3350 ASTM D-3035	ASTM D-3261,F-2620 (HEAT FUSION) ASTM D-3212,F-477 (GASKETED)
WATER MAIN QUALITY PVC		
4-INCH TO 36-INCH	ASTM D-2241	ASTM D-3139
4-INCH TO 12-INCH	AWWA C900	ASTM D-3139
14-INCH TO 48-INCH	AWWA C905	ASTM D-3139

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
POLYPROPYLENE (PP) PIPE		
12-INCH TO 24-INCH DOUBLE WALL	ASTM F-2736	D-3212, F-477
30-INCH TO 60-INCH TRIPLE WALL	ASTM F-2764	D3212, F-477

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¼ " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.
10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.
11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    a) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OR HUB-TEE SADDLE.
    b) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
    c) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.
16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.
18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.
3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
   a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
   b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.
9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.
10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.
11. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.
12. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
13. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
14. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.
15. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.
16. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
17. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER AREA FOR GREEN INFRASTRUCTURE PRACTICES.
18. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
19. THE CONTRCTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.
20. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.
21. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.
22. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
23. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

TECHNICAL GUIDANCE MANUAL | 10/13/2022
MWRD GENERAL NOTES | STD. DWG. NO.18 | PAGE NO. 19

	DATE	REVISIONS	DRAWN BY
1	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2	02/17/23	ARCHITECT REVISIONS	TLM
3	02/27/23	PER CITY REVIEW	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
PROJECT NOTES AND SPECIFICATIONS

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PROJECT NO. 63912021
DATE 12/09/22
SCALE NONE
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

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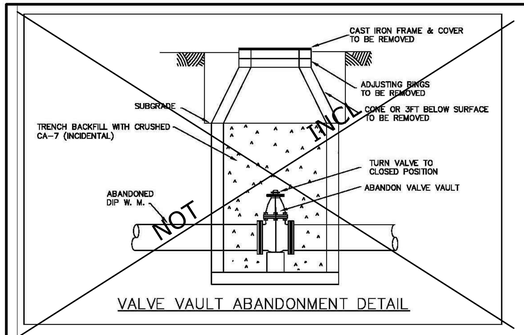
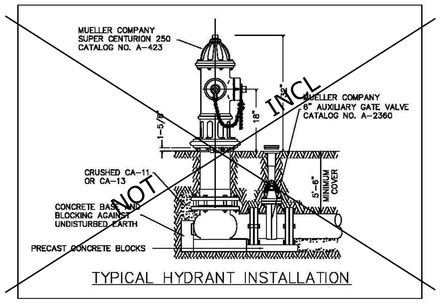
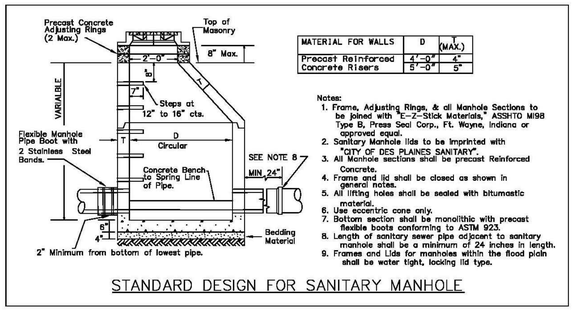


VALVE VAULT ABANDONMENT DETAIL



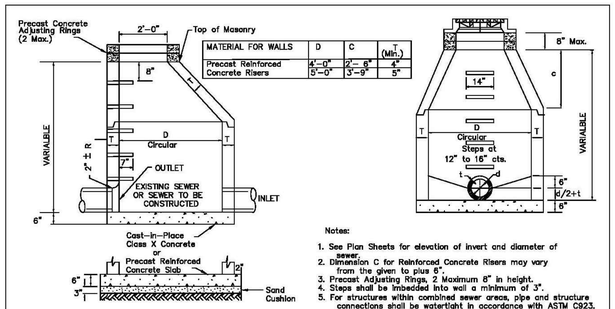
TYPICAL HYDRANT INSTALLATION



MATERIAL FOR WALLS	D	(MIN.)
Precast Reinforced Concrete Risers	4'-0"	4"
	5'-0"	5"

Notes:
1. Frame, Adjusting Rings, & all Manhole Sections to be joined with "C-Z-Stick Materials," ASSHTO M198 Type B, Press Seal Corp., Ft. Wayne, Indiana or approved equal.
2. Sanitary Manhole lids to be imprinted with "CITY OF DES PLAINES SANITARY".
3. All Manhole sections shall be precast Reinforced Concrete.
4. Frame and lid shall be closed as shown in general notes.
5. All lifting holes shall be sealed with bitumastic material.
6. Use eccentric cone only.
7. Bottom section shall be monolithic with precast flexible boots conforming to ASTM 923.
8. Length of sanitary sewer pipe adjacent to sanitary manhole shall be a minimum of 24 inches in length.
9. Frames and Lids for manholes within the flood plain shall be water tight, locking lid type.

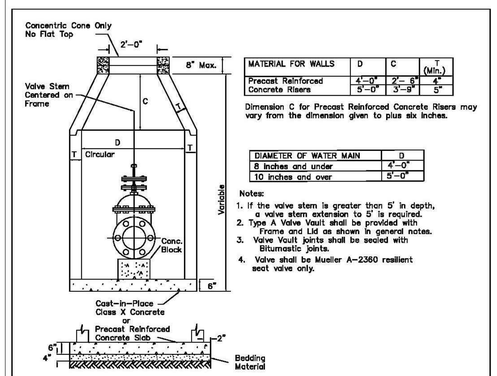
STANDARD DESIGN FOR SANITARY MANHOLE



MATERIAL FOR WALLS	D	C	T (Min.)
Precast Reinforced Concrete Risers	4'-0"	2'- 6"	4"
	5'-0"	3'-9"	5"

Notes:
1. See Plan Sheets for elevation of invert and diameter of sewer.
2. Dimension C for Reinforced Concrete Risers may vary from the given to plus 6".
3. Precast Adjusting Rings, 2 Maximum 8" in height.
4. Steps shall be imbedded into wall a minimum of 3".
5. For structures within combined sewer areas, pipe and structure connections shall be watertight in accordance with ASTM C923.

STANDARD DESIGN FOR STORM MANHOLE (TYPE A)



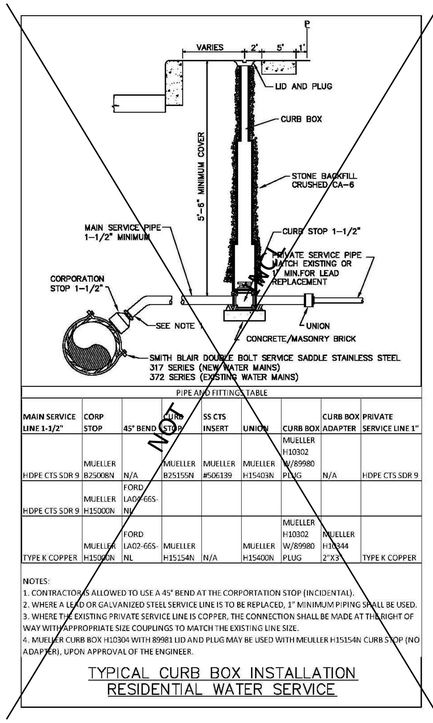
MATERIAL FOR WALLS	D	C	T (Min.)
Precast Reinforced Concrete Risers	4'-0"	2'- 6"	4"
	5'-0"	3'-9"	5"

Dimension C for Precast Reinforced Concrete Risers may vary from the dimension given to plus six inches.

DIAMETER OF WATER MAIN	D
8 inches and under	4'-0"
10 inches and over	5'-0"

Notes:
1. If the valve stem is greater than 5' in depth, a valve stem extension to 5' is required.
2. Type A Valve Vault shall be provided with Frame and Lid as shown in general notes.
3. Valve Vault joints shall be sealed with Bitumastic joints.
4. Valve shall be Mueller A-2360 resilient seat valve only.

STANDARD DESIGN FOR VALVE VAULT (TYPE A)



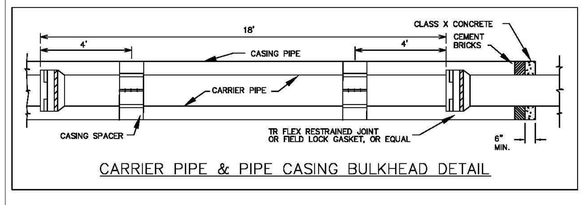
PIPE AND FITTING TABLE

MAIN SERVICE LINE 1-1/2"	CORP STOP	45° BEND	CURB STOP	SS CTS INSERT	UNION	CURB BOX	CURB BOX ADAPTER	PRIVATE SERVICE LINE 1"
HDPE CTS SDR 9	MUELLER B25008N	N/A	MUELLER B25155N	MUELLER #506139	MUELLER H15403N	MUELLER H10302 W/89980 PLUG	N/A	HDPE CTS SDR 9
HDPE CTS SDR 9	MUELLER H15000N	FORD LA02-66S-NL						
TYPE K COPPER	MUELLER H15000N	FORD LA02-66S-NL	MUELLER H15154N	N/A	MUELLER H15400N	MUELLER H10302 W/89980 PLUG	MUELLER H10344 2"X3"	TYPE K COPPER

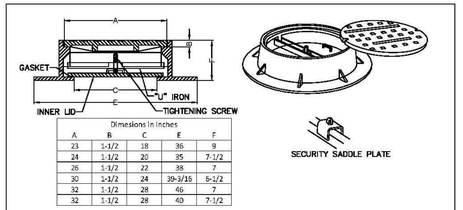
NOTES:
1. CONTRACTOR IS ALLOWED TO USE A 45° BEND AT THE CORPORTATION STOP (INCIDENTAL).
2. WHERE A LEAD OR GALVANIZED STEEL SERVICE LINE IS TO BE REPLACED, 1" MINIMUM PIPING SHALL BE USED.
3. WHERE THE EXISTING PRIVATE SERVICE LINE IS COPPER, THE CONNECTION SHALL BE MADE AT THE RIGHT OF WAY WITH APPROPRIATE SIZE COUPLINGS TO MATCH THE EXISTING LINE SIZE.
4. MUELLER CURB BOX H10304 WITH 89981 LID AND PLUG MAY BE USED WITH MEULLER H15154N CURB STOP (NO ADAPTER), UPON APPROVAL OF THE ENGINEER.

TYPICAL CURB BOX INSTALLATION RESIDENTIAL WATER SERVICE

DISINFECTION/FLUSHING-TAP DETAIL- INCIDENTAL

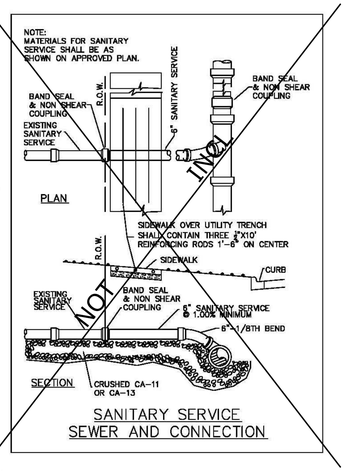


CARRIER PIPE & PIPE CASING BULKHEAD DETAIL

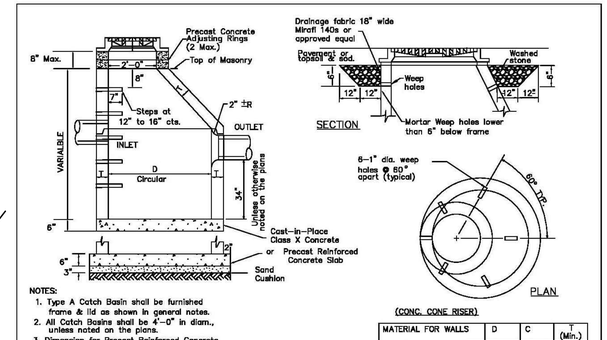


Dimesions in Inches				
A	B	C	E	F
23	1-1/2	18	36	9
24	1-1/2	20	35	7-1/2
26	1-1/2	22	38	7
30	1-1/2	24	39-3/16	6-1/2
32	1-1/2	28	46	7
32	1-1/2	28	40	7-1/2

LOCKING LID DETAIL



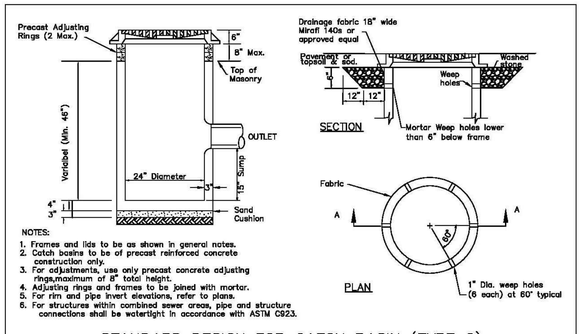
SANITARY SERVICE SEWER AND CONNECTION



MATERIAL FOR WALLS	D	C	T (Min.)
Precast Reinforced Concrete Risers	4'-0"	2'- 6"	4"
	5'-0"	3'-9"	5"

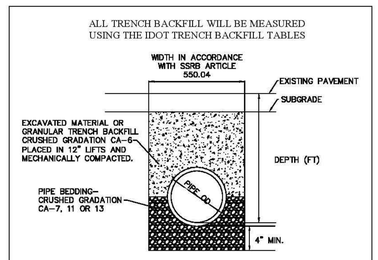
NOTES:
1. Type A Catch Basin shall be furnished frame & lid as shown in general notes.
2. All Catch Basins shall be 4'-0" in diam., unless noted on the plans.
3. Dimension for Precast Reinforced Concrete Risers may vary from the dimension to plus 6".
4. See drawings for elev. of invert & diam. of sewer.
5. Precast Adjusting Rings, 2 ea. max. 8" in height.
6. Steps shall be embedded into the wall with a minimum depth of 3".
7. For structures within combined sewer areas, pipe and structure connections shall be watertight in accordance with ASTM C923.

STANDARD DESIGN FOR CATCH BASIN (TYPE A)

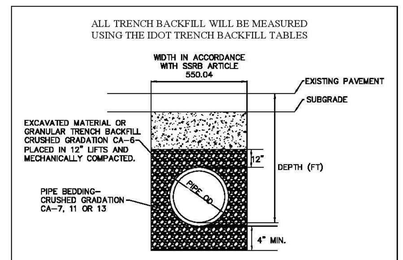


Notes:
1. Frames and lids to be as shown in general notes.
2. Catch basins to be of precast reinforced concrete construction only.
3. For adjustments, use only precast concrete adjusting rings,maximum of 8" total height.
4. Adjusting rings and frames to be joined with mortar.
5. For rim and pipe invert elevations, refer to plans.
6. For structures within combined sewer areas, pipe and structure connections shall be watertight in accordance with ASTM C923.

STANDARD DESIGN FOR CATCH BASIN (TYPE C)



TRENCH BACKFILL DETAIL ALL SEWER AND WATER (EXCEPT PVC)



TRENCH BACKFILL DETAIL PVC SEWER

TRENCH BACKFILL DETAIL CONTROLLED LOW STRENGTH MATERIAL ALL PIPE TYPES

REV. NO.	DATE	DESCRIPTION

FILE: H:\COMMON\AUTODESK\CIVIL 3D PROJECTS\STANDARD DETAILS\STANDARD DETAILS REV2022 FOR WEB.DWG

CITY OF DES PLAINES
PUBLIC WORKS AND ENGINEERING DEPARTMENT
1420 MINER STREET
DES PLAINES, IL 60016
PHONE-847-391-5390 FAX 847-391-5619
WWW.DESPLAINES.ORG

DETAIL SHEET

DESIGNED BY	BLS/AJD
CHECKED BY	AJD
APPROVED BY	TPO
DATE	2/22/2022
SCALE	HORIZ: N/A VERT: N/A
SHEET NO.	1 OF 2

DATE	REVISIONS	DRAWN BY
1. 01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2. 02/17/23	ARCHITECT REVISIONS	TLM
3. 02/27/23	PER CITY REVIEW	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
CONSTRUCTION DETAILS AND STANDARDS

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PROJECT NO. 63912021
DATE 12/09/22
SCALE NONE
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
15 OF 20

February 22, 2023 11:16:57 a.m. AcadVer:22.0s (LMS Tech)
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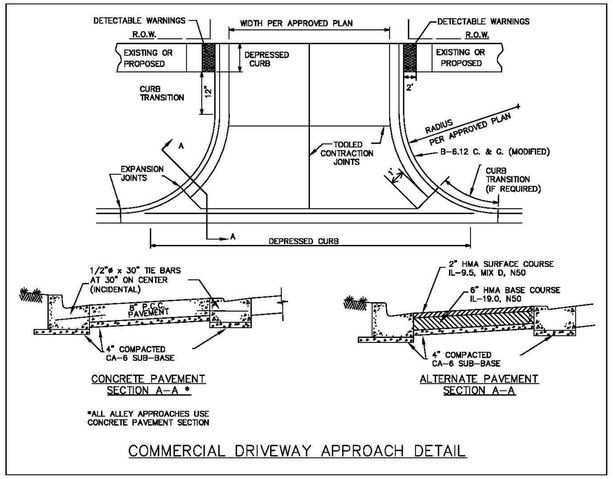
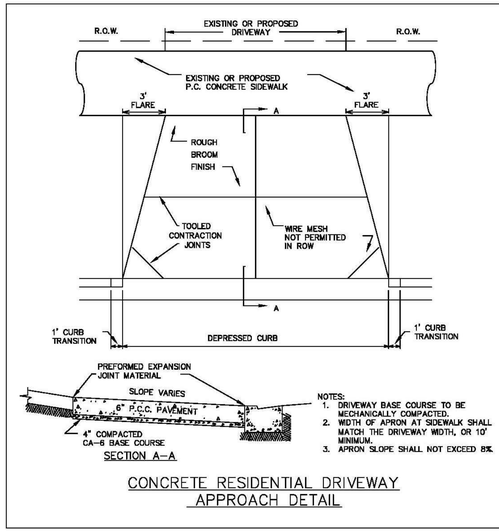


CONCRETE PAVEMENT SECTION A-A *

ALTERNATE PAVEMENT SECTION A-A

*ALL ALLEY APPROACHES USE CONCRETE PAVEMENT SECTION

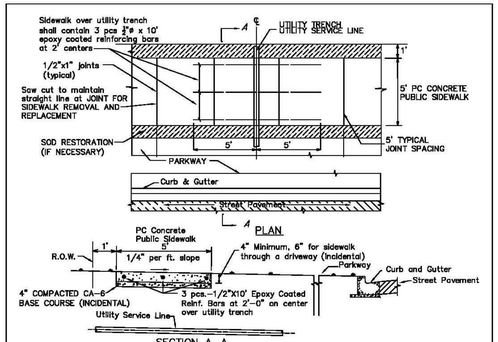
COMMERCIAL DRIVEWAY APPROACH DETAIL



SECTION A-A

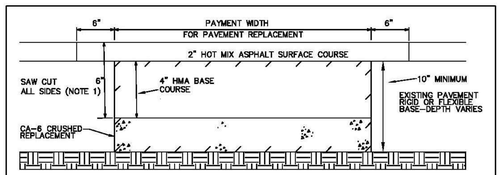
NOTES:
1. DRIVEWAY BASE COURSE TO BE MECHANICALLY COMPACTED.
2. WIDTH OF APRON AT SIDEWALK SHALL MATCH THE DRIVEWAY WIDTH, OR 10' MINIMUM.
3. APRON SLOPE SHALL NOT EXCEED 8%.

CONCRETE RESIDENTIAL DRIVEWAY APPROACH DETAIL



SECTION A-A

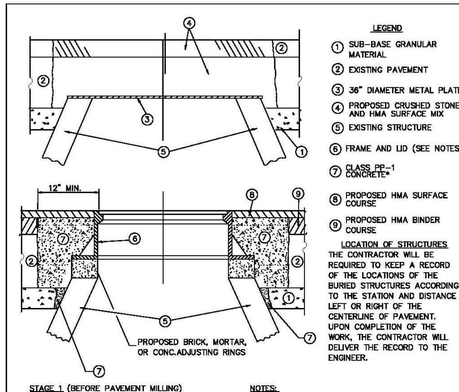
CONCRETE PUBLIC SIDEWALK DETAIL



NOTE 1 - SAW CUT DEPTH:
AGGREGATE BASE-CUT FULL DEPTH OF HMA SURFACING ONLY.
CONCRETE AND HMA BASE-CUT FULL DEPTH OF BASE COURSE.

SAW CUT DEPTH TO BE A MINIMUM OF 4" OR TO BOTTOM OF EXISTING BASE, WHICHEVER IS GREATER. CRUSHED CA-6 REPLACEMENT TO BE MECHANICALLY COMPACTED.

PAVEMENT PATCHING



LEGEND
1. SUB-BASE GRANULAR MATERIAL
2. EXISTING PAVEMENT
3. 36" DIAMETER METAL PLATE
4. PROPOSED CRUSHED STONE AND HMA SURFACE MIX
5. EXISTING STRUCTURE
6. FRAME AND LID (SEE NOTES)
7. CLASS PP-1 CONCRETE*
8. PROPOSED HMA SURFACE COURSE
9. PROPOSED HMA BINDER COURSE

LOCATION OF STRUCTURES
THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

STAGE 1 (BEFORE PAVEMENT MILLING)
A) REMOVE A MINIMUM OF 12" OF THE PAVEMENT FROM AROUND THE STRUCTURE.
B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
C) COVER THE STRUCTURE OPENING WITH A 36" DIAMETER METAL PLATE.
D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1 ½" THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)
A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

NOTES:
EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

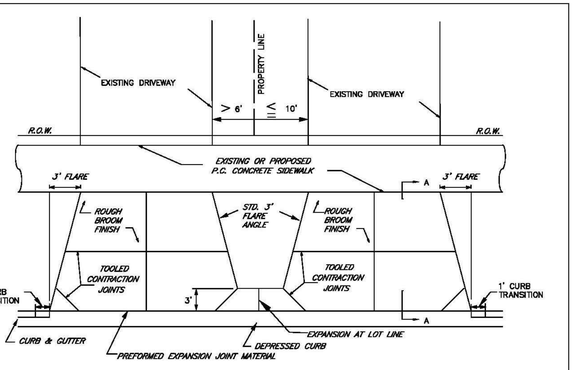
IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

ADJUSTING RINGS SHALL BE 2 MAXIMUM, 8" IN TOTAL HEIGHT. FOR SANITARY MANHOLES AND VALVE VAULTS: USE 2 RINGS OF ROPE MASTIC MATERIAL BETWEEN MANHOLE, ADJUSTING RINGS, AND FRAME. FOR STORM SEWER MANHOLES: USE 1" MORTAR BED TO SET FRAMES AND ADJUSTING RINGS.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

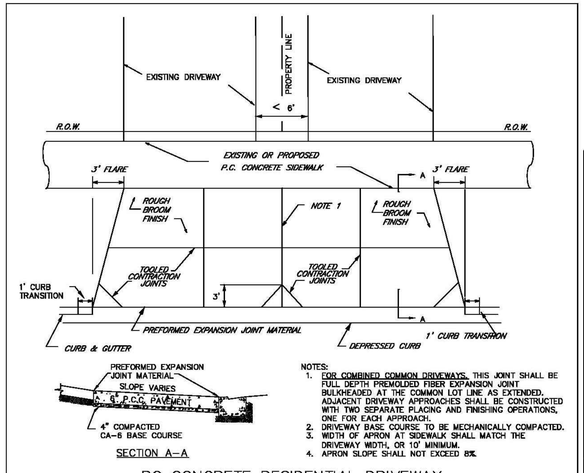
MANHOLE ADJUSTMENT DETAIL



SECTION A-A

NOTES:
1. DRIVEWAY BASE COURSE TO BE MECHANICALLY COMPACTED.
2. WIDTH OF APRON AT SIDEWALK SHALL MATCH THE DRIVEWAY WIDTH, OR 10' MINIMUM.
3. APRON SLOPE SHALL NOT EXCEED 8%.

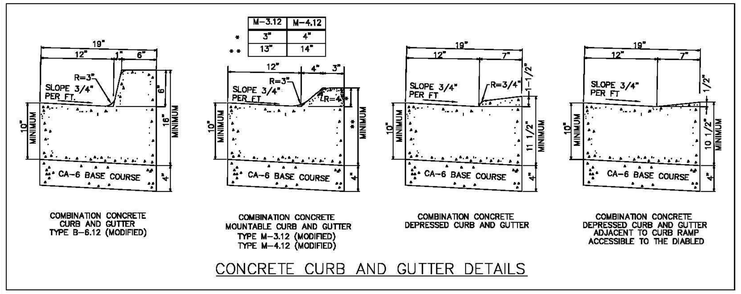
PC CONCRETE RESIDENTIAL DRIVEWAY DUAL APPROACH DETAILS (6-10 FT)



SECTION A-A

NOTES:
1. FOR COMBINED COMMON DRIVEWAYS, THIS JOINT SHALL BE FULL DEPTH PREMOLDED FIBER EXPANSION JOINT BULKHEADED AT THE COMMON LOT LINE AS EXTENDED. ADJACENT DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH TWO SEPARATE PLACING AND FINISHING OPERATIONS, ONE FOR EACH APPROACH.
2. DRIVEWAY BASE COURSE TO BE MECHANICALLY COMPACTED.
3. WIDTH OF APRON AT SIDEWALK SHALL MATCH THE DRIVEWAY WIDTH, OR 10' MINIMUM.
4. APRON SLOPE SHALL NOT EXCEED 8%.

PC CONCRETE RESIDENTIAL DRIVEWAY DUAL APPROACH DETAILS (<6 FT)



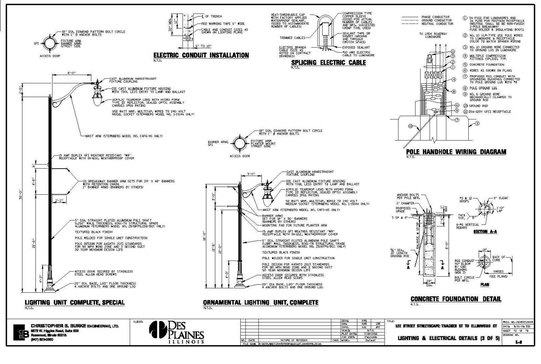
COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12 (MODIFIED)

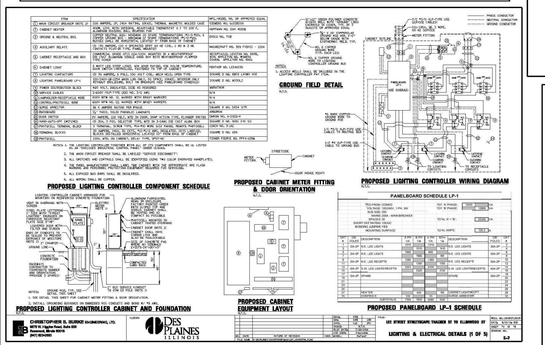
COMBINATION CONCRETE MOUNTABLE CURB AND GUTTER TYPE M-3.12 (MODIFIED) TYPE M-4.12 (MODIFIED)

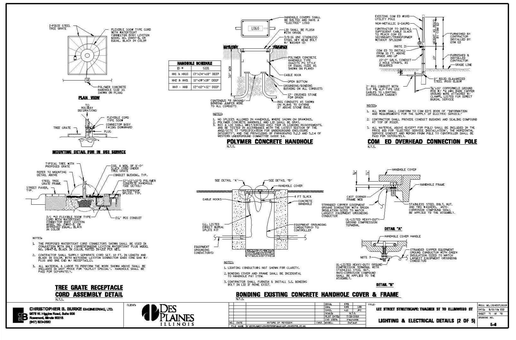
COMBINATION CONCRETE DEPRESSED CURB AND GUTTER

COMBINATION CONCRETE DEPRESSED CURB AND GUTTER ADJACENT TO CURB RAMP ACCESSIBLE TO THE DIABLED

CONCRETE CURB AND GUTTER DETAILS







3

REV. NO.	DATE	DESCRIPTION

FILE: H:\COMMON\AUTODESK\CIVIL 3D PROJECTS\STANDARD DETAILS\STANDARD DETAILS REV2022 FOR WEB.DWG

CITY OF DES PLAINES
PUBLIC WORKS AND ENGINEERING DEPARTMENT
1420 MINER STREET
DES PLAINES, IL 60016
PHONE-847-391-5390 FAX 847-391-5619
WWW.DESPLAINES.ORG

DETAIL SHEET

DESIGNED BY: BLS/AJD	SCALE: HORIZ: N/A
CHECKED BY: AJD	VERT: N/A
APPROVED BY: TPO	SHEET NO.: 2 OF 2
DATE: 2/22/2022	

REVISIONS			DRAWN BY
1.	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2.	02/17/23	ARCHITECT REVISIONS	TLM
3.	02/27/23	PER CITY REVIEW	TLM

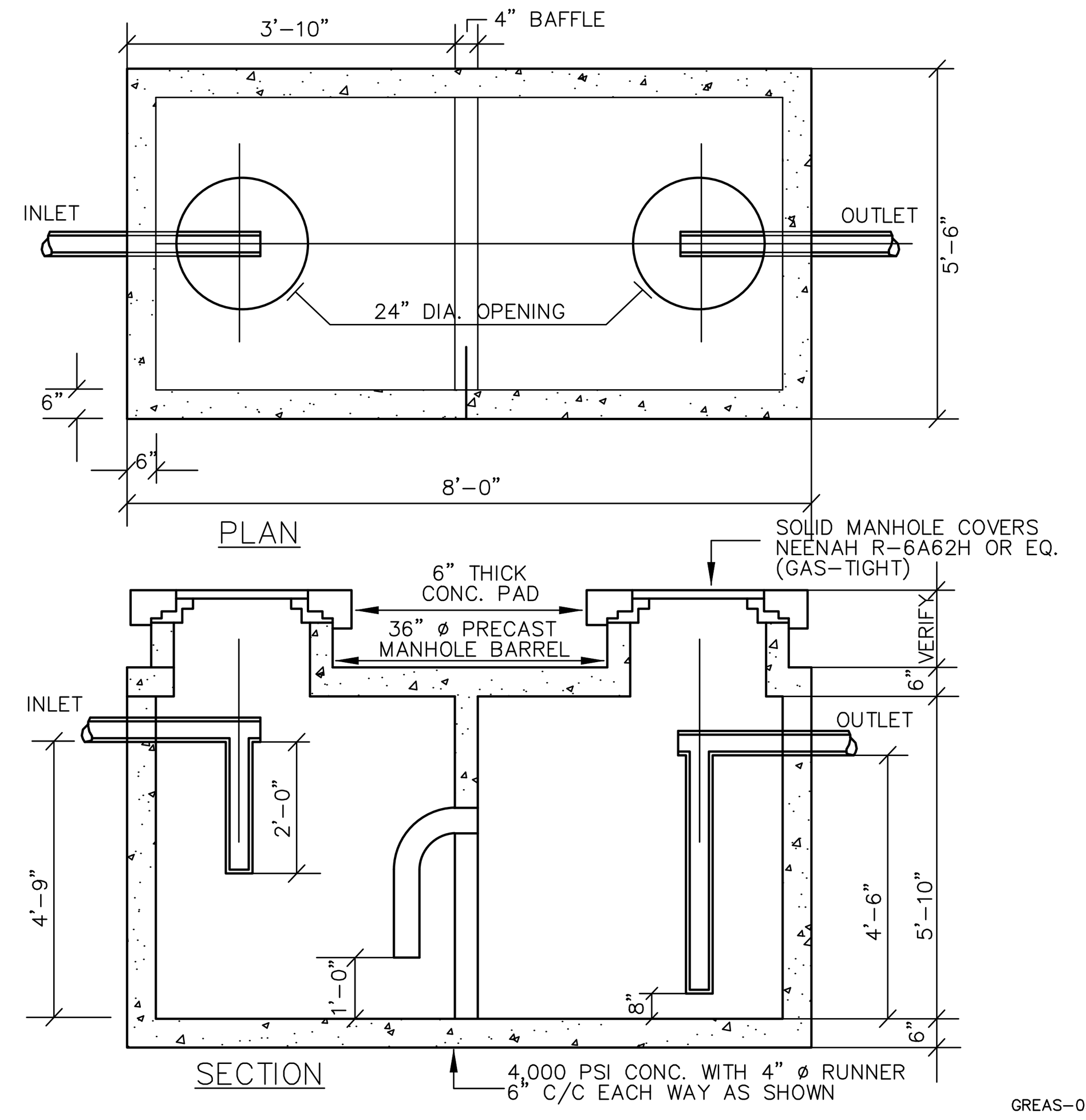
622 GRACELAND AVE. APARTMENTS
DES PLAINES, ILLINOIS
CONSTRUCTION DETAILS AND STANDARDS

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St. Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

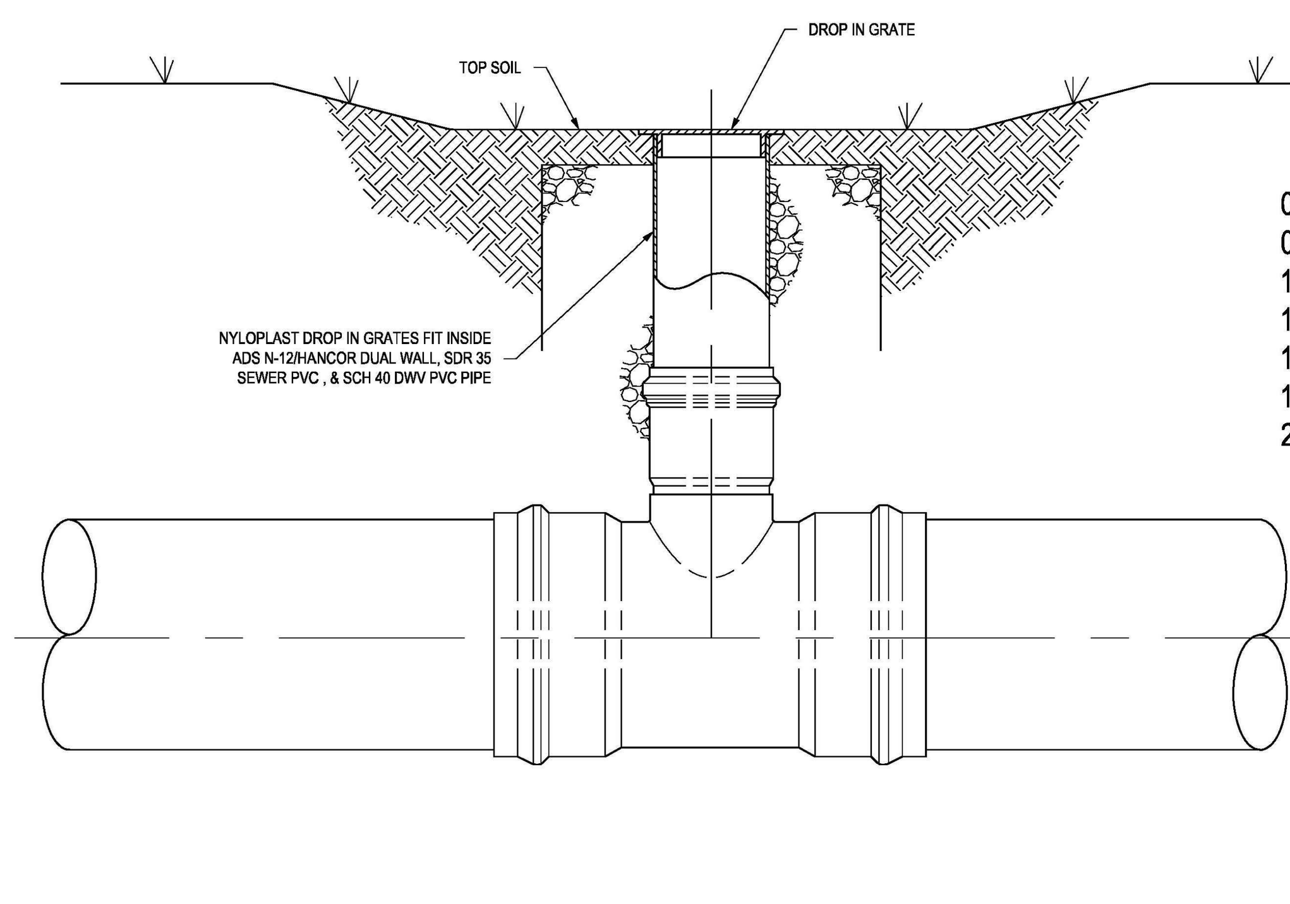
PROJECT NO. 63912021
DATE 12/09/22
SCALE NONE
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET 16 OF 20

February 22, 2023 11:17:42 a.m. AcadVer:22.0s (LMS Tech)
Drawing: S:\63912021 - 622 GRACELAND AVE APTS\300_ENGINEERING\310_CADD\FINAL\639_BASE.DWG



PRECAST CONCRETE GREASE SEPARATOR



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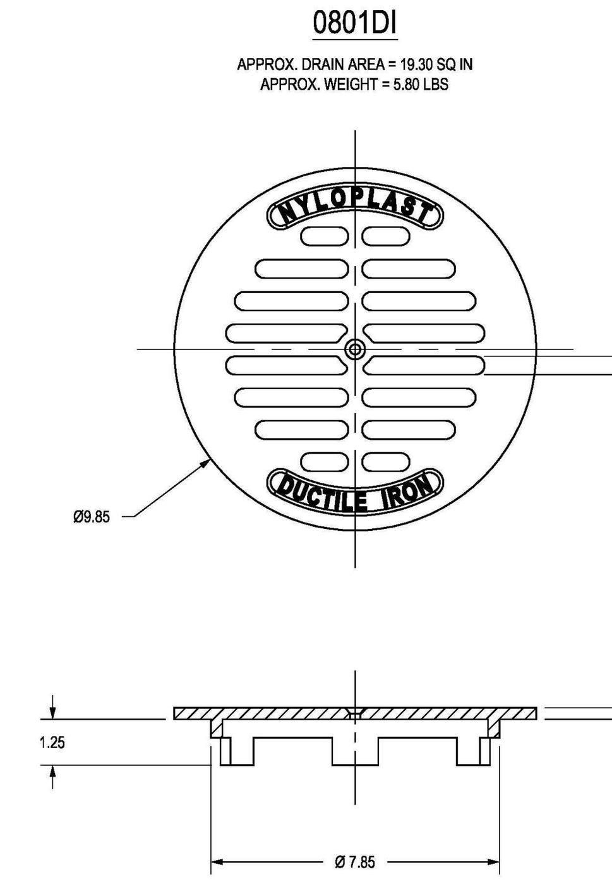
DRAWN BY AWA	MATERIAL	Nyloplast 3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 5-4-00		
REVISED BY EBC	PROJECT NO./NAME	TITLE 6 IN - 24 IN DROP IN GRATE INSTALLATION
DATE 2-9-10		
DWG SIZE A	SCALE 1:8 SHEET 1 OF 1	DWG NO. 7001-110-017 REV E

0801DI

APPROX. DRAIN AREA = 19.30 SQ IN
APPROX. WEIGHT = 5.80 LBS



DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE HAS LIGHT DUTY RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
SIZE OF OPENING MEETS REQUIREMENTS OF AMERICAN DISABILITY ACT AS STATED IN FEDERAL REGISTER PART III, DEPARTMENT OF JUSTICE, 28 CFR PART 36.

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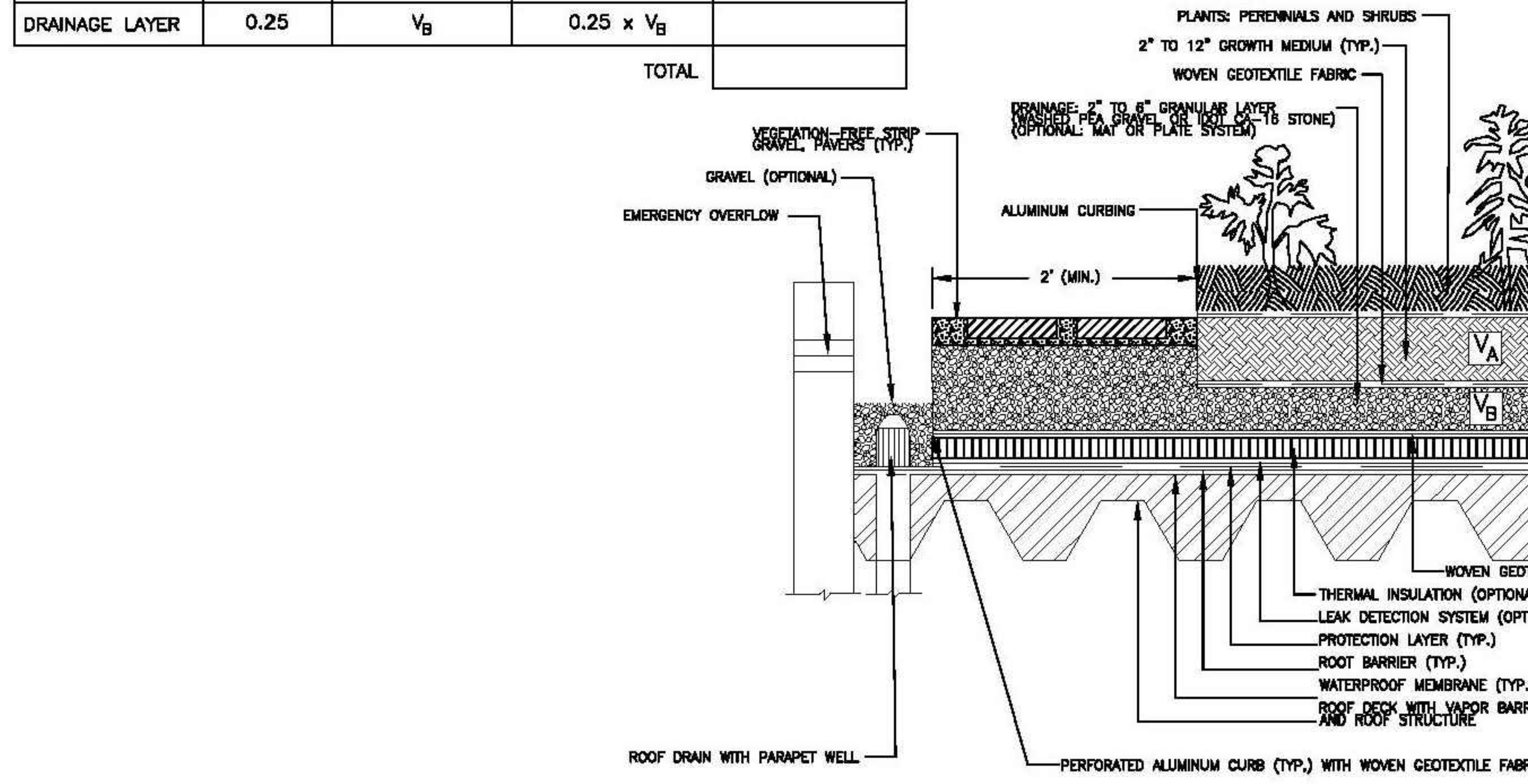
DRAWN BY AWA	MATERIAL	Nyloplast 3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 3-5-00		
APPD BY JJC	PROJECT NO./NAME	TITLE 8 IN DROP IN
DATE 8-14-12		
DWG SIZE A	SCALE 1:4 SHEET 1 OF 1	DWG NO. 7001-110-019 REV D

VOLUME TYPE	POROSITY	MEDIA VOLUME	STORAGE VOLUME	VOLUME PROVIDED
GROWTH MEDIUM	0.25	V_A	0.25 x V_A	
DRAINAGE LAYER	0.25	V_B	0.25 x V_B	
			TOTAL	



NOTES:
1) WOVEN GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF SPECIFICATION IUM 592 GEOTEXTILE, TABLE 1, CLASS I, WITH AN APPARENT OPENING SIZE OF 50.
2) PLANTINGS SHALL BE SELECTED ACCORDING TO ASTM E2400-06, *GUIDE FOR SELECTION, INSTALLATION AND MAINTENANCE OF PLANTS FOR GREEN (VEGETATED) ROOF SYSTEMS.*
3) GROWTH MEDIA SHALL CONSIST OF 80% LIGHTWEIGHT INORGANIC MATERIALS AND 20% ORGANIC MATTER.
4) THERE SHALL BE A MINIMUM SETBACK OF 2-FEET FROM ROOF PERIMETER AND ROOF PENETRATIONS.

TECHNICAL GUIDANCE MANUAL — 7/1/15
GREEN ROOF TYPICAL DETAIL — STD. DWG. NO.5 — PAGE NO. 6

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

ADS Advanced Drainage Systems, Inc.

ADS SiteAssist FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

GRACELAND - 01.12.23 △1

DES PLAINES, IL

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

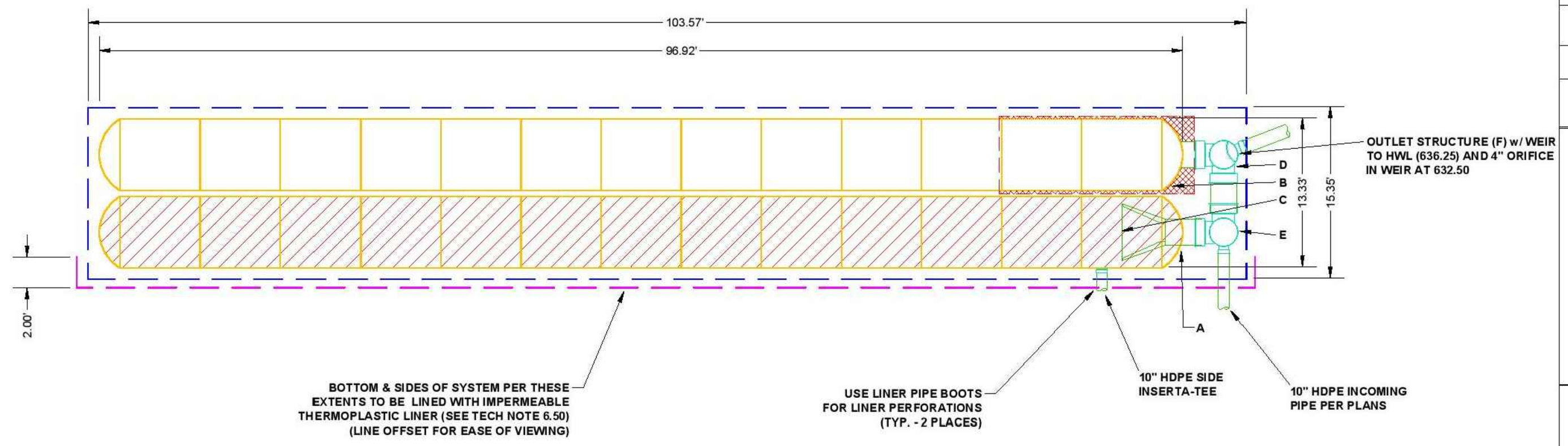
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT	
26	STORMTECH MC-3500 CHAMBERS
4	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
36	STONE VOID
2923	INSTALLED SYSTEM V/C (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE NOT INCLUDED)
1588	SYSTEM AREA (SF)
237.8	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	643.25
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	637.25
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	636.75
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	636.75
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	636.75
TOP OF STONE:	636.25
TOP OF MC-3500 CHAMBER:	635.25
24" x 24" TOP MANIFOLD INVERT:	632.71
24" ISOLATOR ROW PLUS INVERT:	631.67
24" BOTTOM CONNECTION INVERT:	631.67
BOTTOM OF MC-3500 CHAMBER:	631.50
BOTTOM OF STONE:	630.75

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	B	24" TOP CORED END CAP, PART#: MC3500IEPP24TC / TYP OF ALL 24" TOP CONNECTIONS	14.48"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MC350024RAMP		
MANIFOLD	D	24" x 24" TOP MANIFOLD, ADS N-12	14.48"	
NYLOPLAST (INLET W/ ISO PLUS ROW)	E	30" DIAMETER (24.00" SUMP MIN)		8.5 CFS IN
NYLOPLAST (OUTLET)	F	30" DIAMETER (DESIGN BY ENGINEER)		7.0 CFS OUT



ISOLATOR ROW PLUS (SEE DETAIL)
PLACE MINIMUM 17.50' OF ADSPLUS175 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
BED LIMITS

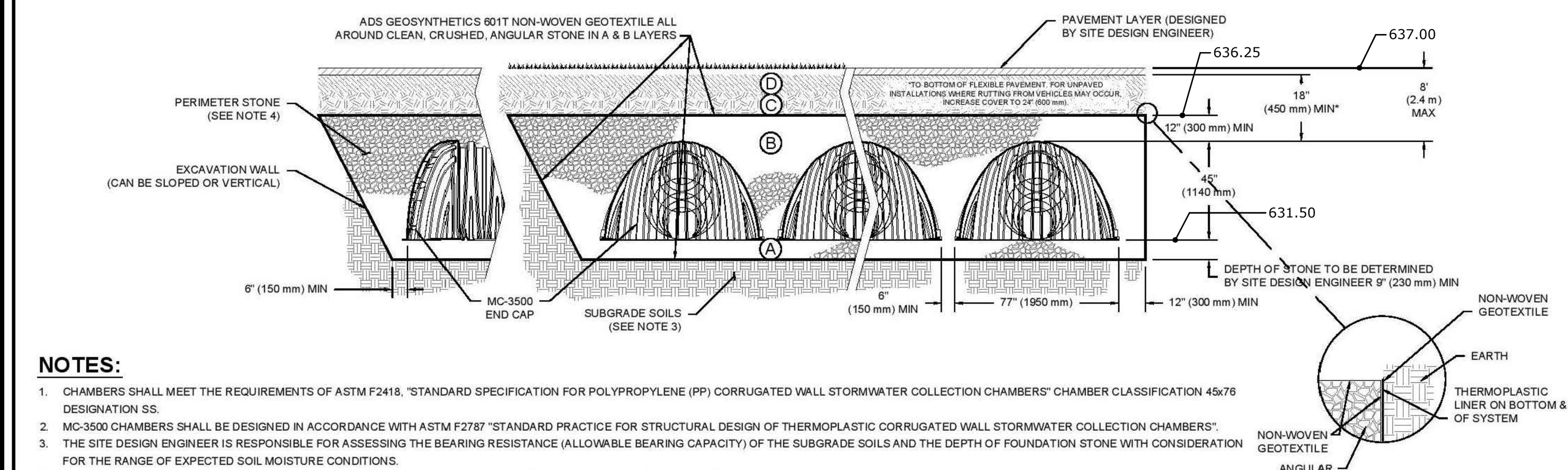
NOTES
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

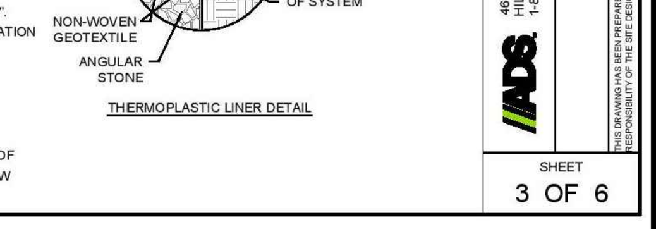
GRACELAND - 01.12.23 — DES PLAINES, IL — DATE: — PROJECT #: — DRAWN: MV — CHECKED: N/A
StormTech® Chamber System — 888-892-2694 | WWW.STORMTECH.COM — ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473
SHEET 2 OF 6

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.





THERMOPLASTIC LINER DETAIL

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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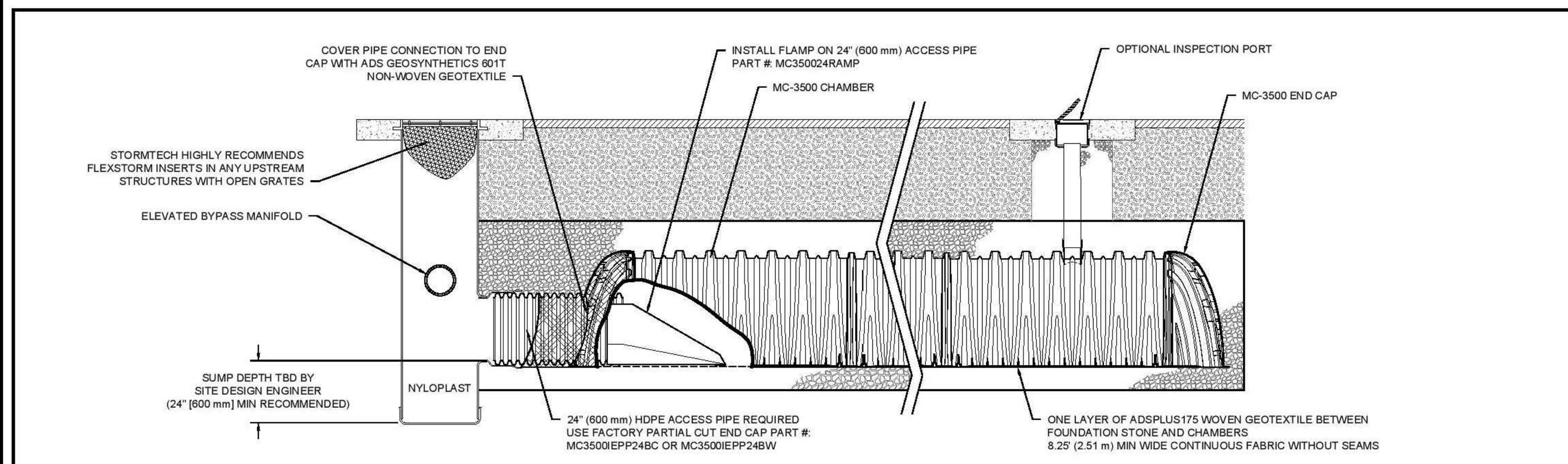
SHEET 3 OF 6



MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

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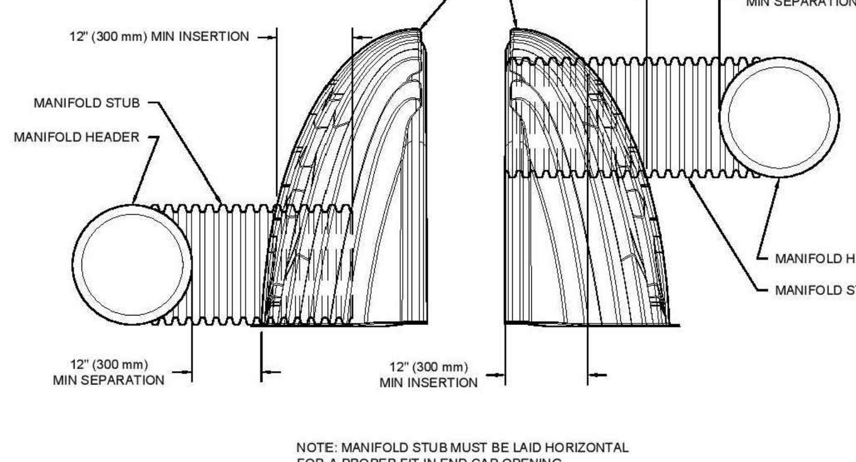
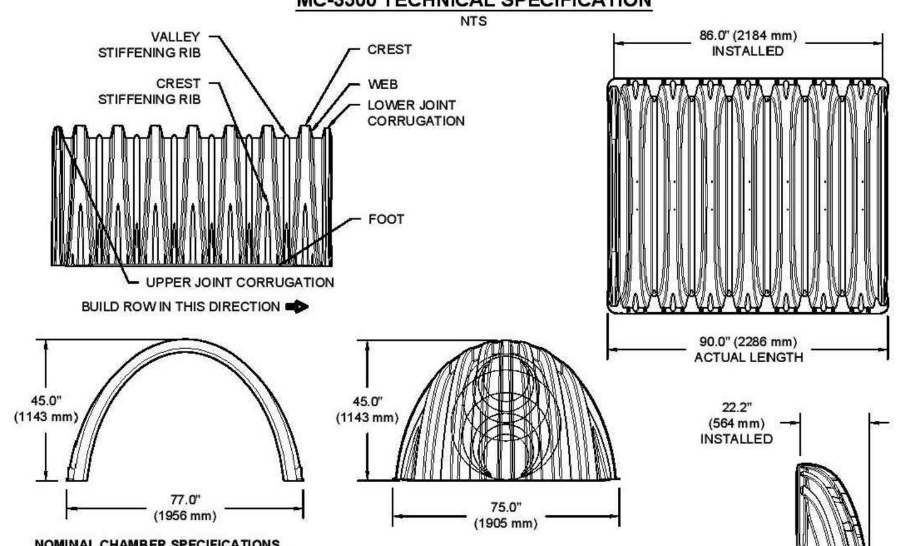
SHEET 4 OF 6

MC-SERIES END CAP INSERTION DETAIL
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-3500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

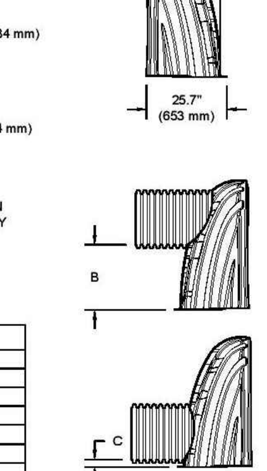
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

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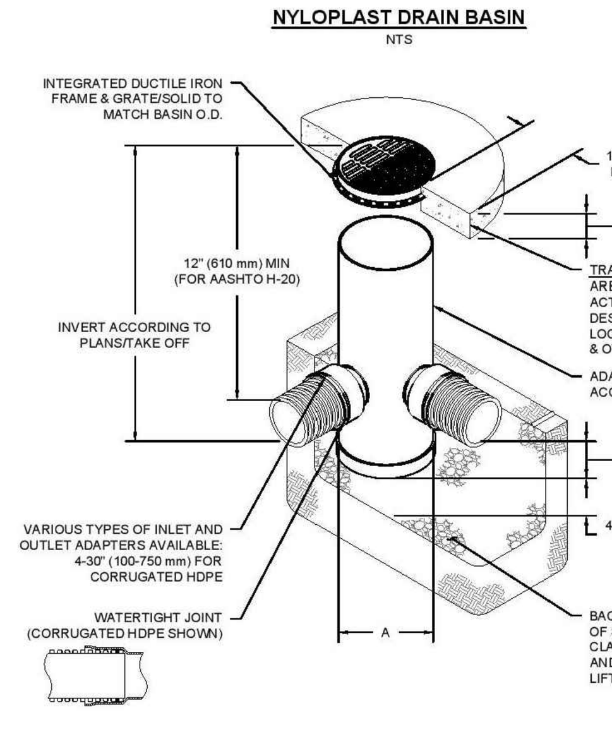
SHEET 5 OF 6

NYLOPLAST DRAIN BASIN
NTS

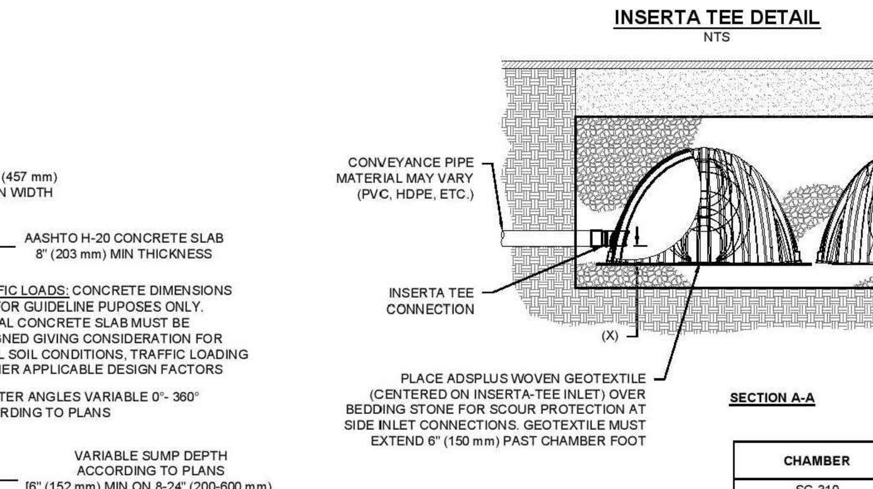


NOTES

1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: **WWW.NYLOPLAST-US.COM**
6. TO ORDER CALL: **800-821-6710**

A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

INSERTA TEE DETAIL
NTS



CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.

GRACELAND - 01.12.23 — DES PLAINES, IL — DATE: — PROJECT #: — DRAWN: MV — CHECKED: N/A
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SHEET 6 OF 6

February 22, 2023 11:18:47 a.m. AcadVer:22.0s (LMS Tech)
Drawing: S:\63912021 – 622 GRACELAND AVE APTS\300_ENGINEERING\310_CADD\FINAL\639_BASE.DWG

	DATE	REVISIONS	DRAWN BY
1	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2	02/17/23	ARCHITECT REVISIONS	TLM
3	02/27/23	PER CITY REVIEW	TLM

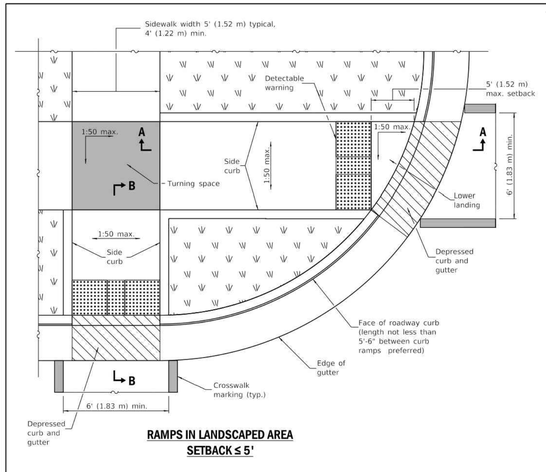
622 GRACELAND AVE. APARTMENTS

DESPLAINES, ILLINOIS

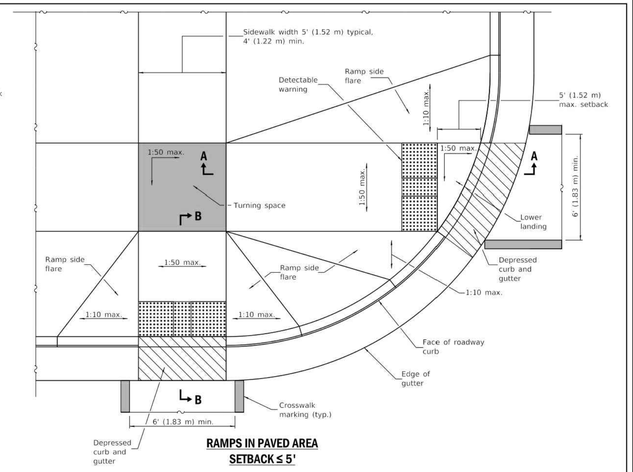
CONSTRUCTION DETAILS AND STANDARDS

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St, Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

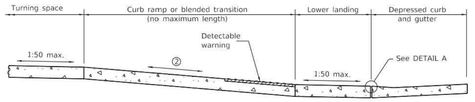
PROJECT NO.	63912021
DATE	12/09/22
SCALE	NONE
PROJ. MGR.	MRM
PROJ. ASSOC.	MKR
DRAWN BY	TLM



RAMPS IN LANDSCAPED AREA
SETBACK ≤ 5'

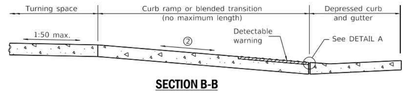


RAMPS IN PAVED AREA
SETBACK ≤ 5'



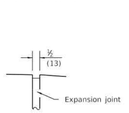
SECTION A-A

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

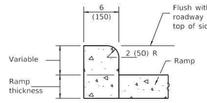


SECTION B-B

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



DETAIL A



SIDE CURB DETAIL

See Sheet 2 for GENERAL NOTES.

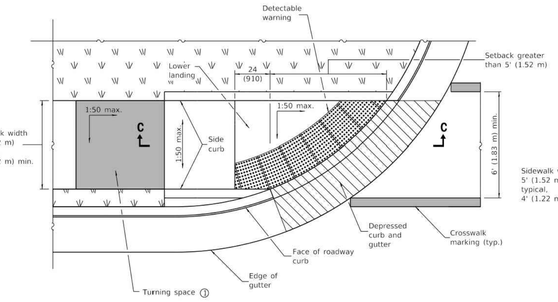
DATE	REVISIONS
1-1-19	Removed "15-foot rule", added
	"Blended transitions" and placement
	tolerances for detectable warnings.
1-1-18	Omitted diagonal slope at
	turning spaces and lower
	landings.

PERPENDICULAR CURB RAMPS FOR SIDEWALKS

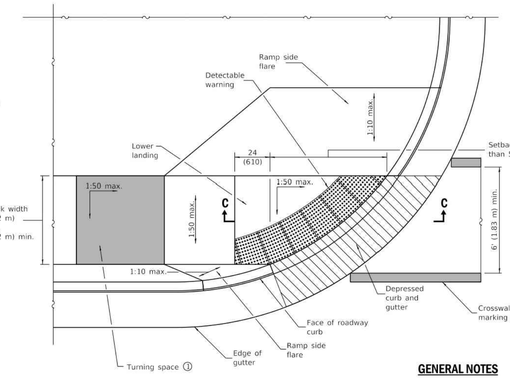
(Sheet 1 of 2)

STANDARD 424001-11

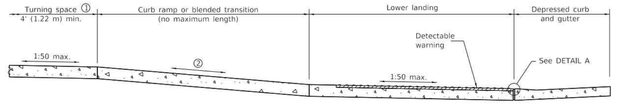
Illinois Department of Transportation
PASSED January 1, 2019 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
BDE 1197



RAMP IN LANDSCAPED AREA
SETBACK > 5'



RAMP IN PAVED AREA
SETBACK > 5'



SECTION C-C

① This turning space not required for blended transitions.

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

PERPENDICULAR CURB RAMPS FOR SIDEWALKS

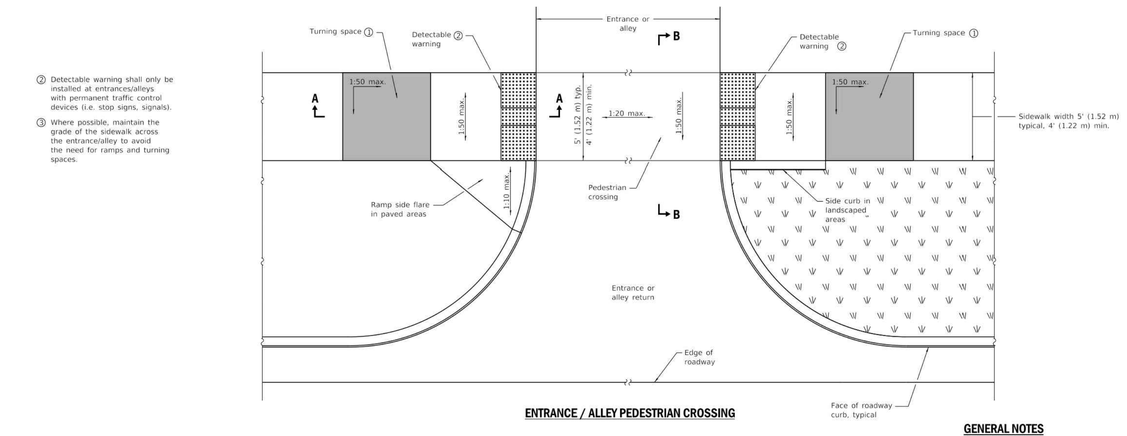
(Sheet 2 of 2)

STANDARD 424001-11

Illinois Department of Transportation
PASSED January 1, 2019 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
BDE 1197

DRAWN BY	DATE	REVISIONS
TLM	01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS
TLM	02/17/23	ARCHITECT REVISIONS
TLM	02/27/23	PER CITY REVIEW

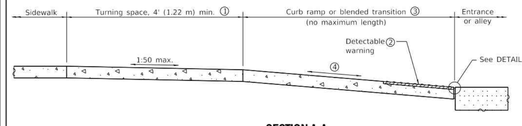
622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
IDOT CONSTRUCTION STANARDS AND DETAILS



② Detectable warning shall only be installed at entrances/alleys with permanent traffic control devices (i.e. stop signs, signals).

③ Where possible, maintain the grade of the sidewalk across the entrance/alley to avoid the need for ramps and turning spaces.

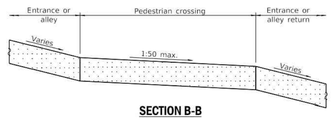
ENTRANCE / ALLEY PEDESTRIAN CROSSING



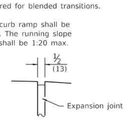
SECTION A-A

① Turning space not required for blended transitions.

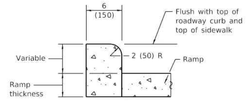
④ The running slope of a curb ramp shall be 1:20 min and 1:12 max. The running slope of a blended transition shall be 1:20 max.



SECTION B-B



DETAIL A



SIDE CURB DETAIL

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

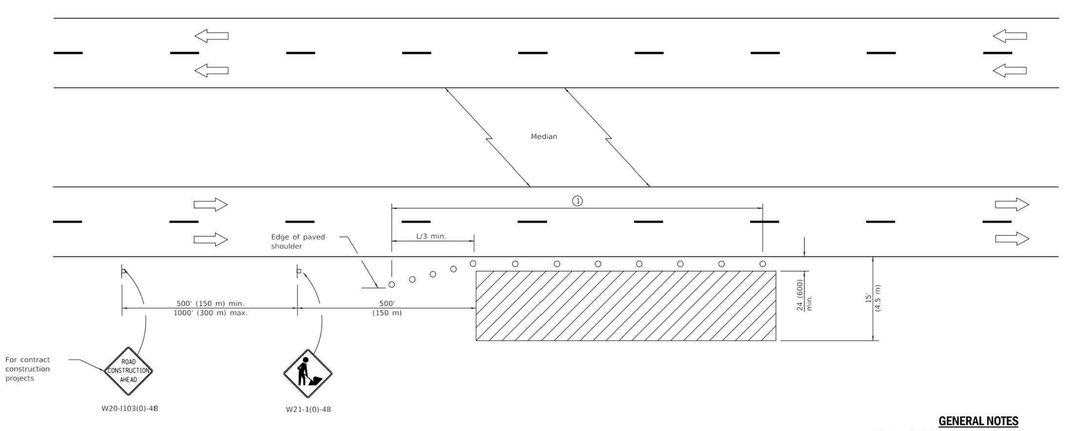
All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-19	Added blended transitions and
	placement tolerances for
	detectable warnings.
1-1-18	Omitted diagonal slope at
	upper landings.

ENTRANCE / ALLEY PEDESTRIAN CROSSINGS

STANDARD 424026-03

Illinois Department of Transportation
PASSED January 1, 2019 — ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019 — ENGINEER OF DESIGN AND ENVIRONMENT
BDE 1197



TYPICAL APPLICATIONS

Utility operations
Culvert extensions
Side slope changes
Guardrail installation and maintenance
Delineator installation
Landscaping operations
Shoulder repair
Sign installation and maintenance

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

SYMBOLS

Work area
Sign
Cone, drum or barricade

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24 (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	FORMULAS (Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
4-1-16	Corrected typo in title.
1-1-14	Revised workers sign
	number to agree with
	current MUTCD.

OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE

STANDARD 701101-05

Illinois Department of Transportation
PASSED April 1, 2016 — ENGINEER OF SAFETY ENGINEERING
APPROVED April 1, 2016 — ENGINEER OF DESIGN AND ENVIRONMENT
BDE 1197

RWG Engineering, LLC
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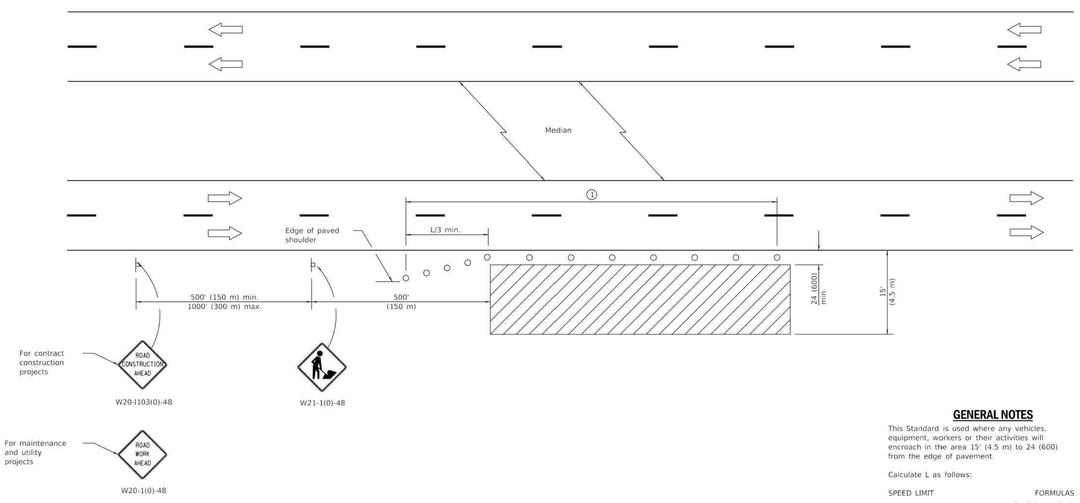
630.480.7889
www.rwg-engineering.com

PROJECT NO. 63912021
DATE 12/09/22
SCALE NONE
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
18 OF 20

Drawing: S:\63912021 - 622 GRACELAND AVE APTS\300_ENGINEERING\310_CADD\FINAL\639_BASE.DWG



TYPICAL APPLICATIONS

Utility operations
Culvert extensions
Side slope changes
Guardrail installation and maintenance
Delineator installation
Landscaping operations
Shoulder repair
Sign installation and maintenance

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

SYMBOLS

Work area
Sign
Cone, drum or barricade

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24 (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	(Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

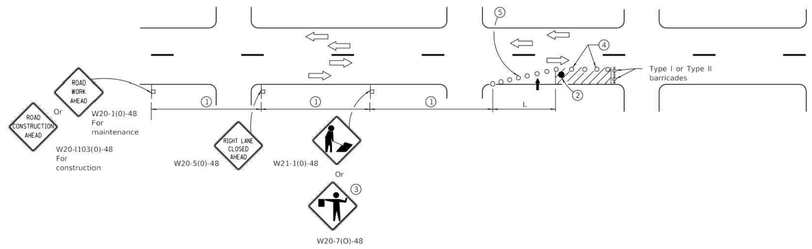
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
PASSED April 1, 2016 — ENGINEER OF SAFETY ENGINEERING
APPROVED April 1, 2016 — ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 11-97

DATE	REVISIONS
4-1-16	Corrected typo in title.
1-1-14	Revised workers sign
	number to agree with
	current MUTCD.

OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE

STANDARD 701101-05



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

SYMBOLS

Arrow board
Cone, drum or barricade
Sign on portable or permanent support
Work area
Barricade or drum with flashing light
Flagger with traffic control sign.

① Refer to SIGN SPACING TABLE for distances.

② Required for speeds > 40 mph.

③ Use flagger sign only when flagger is present.

④ Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.

⑤ Cones, drums or barricades at 20' (6 m) centers in taper.

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an Urban area.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	(Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
PASSED January 1, 2015 — ENGINEER OF SAFETY ENGINEERING
APPROVED January 1, 2015 — ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

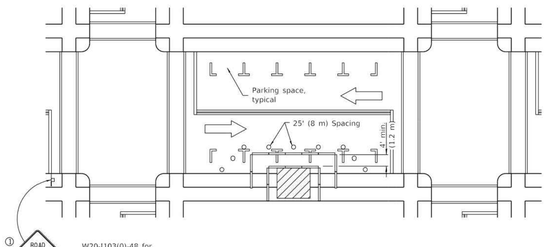
DATE	REVISIONS
1-1-15	Renamed standard. Moved
	case on Sheet 2 to new
	Highway Standard.
1-1-14	Revised workers sign
	number to agree with
	current MUTCD.

URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN

STANDARD 701606-10

DATE	REVISIONS	DRAWN BY
1. 01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2. 02/17/23	ARCHITECT REVISIONS	TLM
3. 02/27/23	PER CITY REVIEW	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS
IDOT CONSTRUCTION STANARDS AND DETAILS

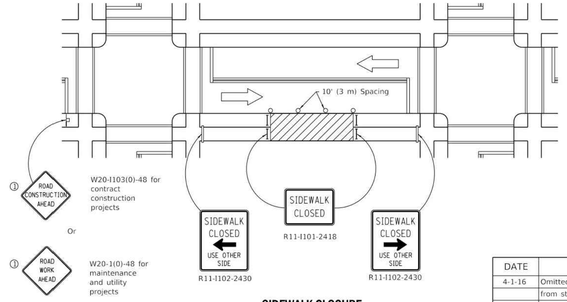


SIDEWALK DIVERSION

① Omit whenever duplicated by road work traffic control.

SYMBOLS

Work area
Sign on portable or permanent support
Barricade or drum
Cone, drum or barricade
Type III barricade
Detectable pedestrian channelizing barricade



SIDEWALK CLOSURE

GENERAL NOTES

This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.

This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.

Temporary facilities shall be detectable and accessible.

The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.

The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection to each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.

Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.

All dimensions are in inches (millimeters) unless otherwise shown.

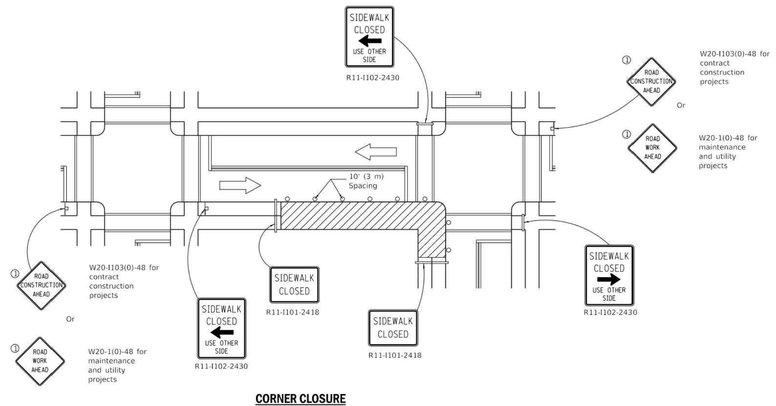
Illinois Department of Transportation
PASSED April 1, 2016 — ENGINEER OF SAFETY ENGINEERING
APPROVED April 1, 2016 — ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 11-97

DATE	REVISIONS
4-1-16	Omitted orange safety fence
	from standard as this is
	covered in the std. spec.
1-1-12	Added SIDEWALK DIVERSION.
	Modified appearance of
	plan views. Renamed Std.

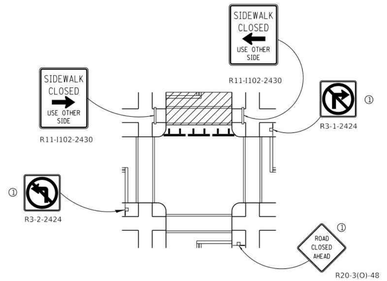
SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 1 of 2)

STANDARD 701801-06



CORNER CLOSURE



CROSSWALK CLOSURE

Illinois Department of Transportation
PASSED April 1, 2016 — ENGINEER OF SAFETY ENGINEERING
APPROVED April 1, 2016 — ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 2 of 2)

STANDARD 701801-06

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975 E. 22nd St. Suite 400
Wheaton, IL 60189
630.480.7889
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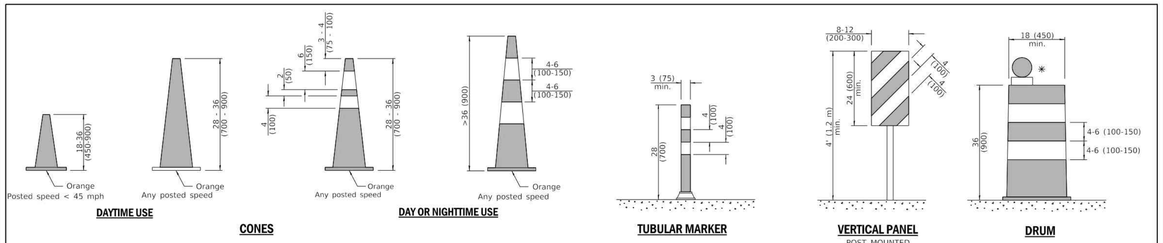
PROJECT NO. 63912021
DATE 12/09/22
SCALE NONE
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
19 OF 20

Drawing: S:\63912021 – 622 GRACELAND AVE APTS\300_ENGINEERING\310_CADD\FINAL\639_BASE.DWG



DAYTIME USE

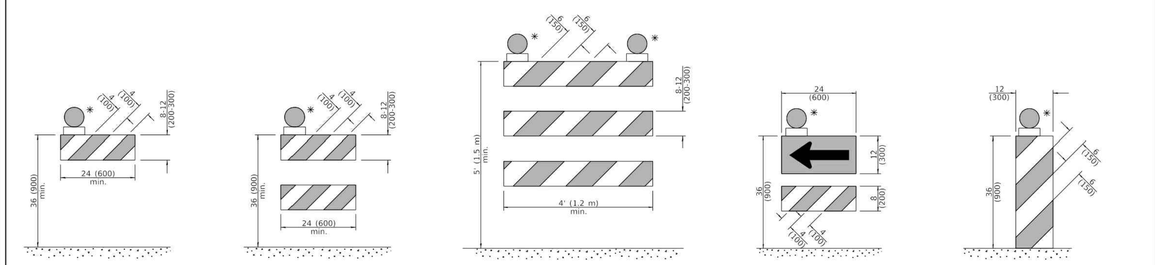
CONES

DAY OR NIGHTTIME USE

TUBULAR MARKER

VERTICAL PANEL
POST MOUNTED

DRUM



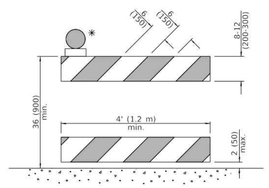
TYPE I BARRICADE

TYPE II BARRICADE

TYPE III BARRICADE

DIRECTION INDICATOR BARRICADE

VERTICAL BARRICADE



DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE

✳ Warning lights (if required)

GENERAL NOTES

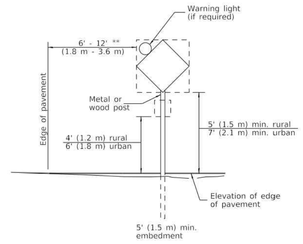
All heights shown shall be measured above the pavement surface.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-19	Revised cone usage and added cones >36" (900 m) height.
1-1-18	Revised END WORK ZONE SPEED LIMIT sign from orange to white background.

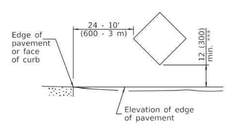
Illinois Department of Transportation
APPROVED January 1, 2019
ENGINEER OF SAFETY PROG. AND ENGINEERING
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-19

TRAFFIC CONTROL DEVICES
(Sheet 1 of 3)
STANDARD 701901-08



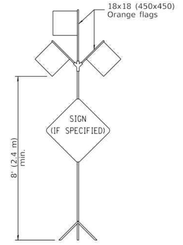
POST MOUNTED SIGNS

** When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

*** When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.

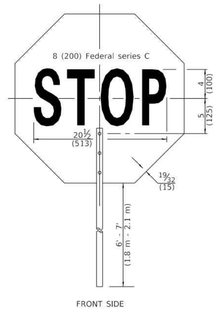


HIGH LEVEL WARNING DEVICE

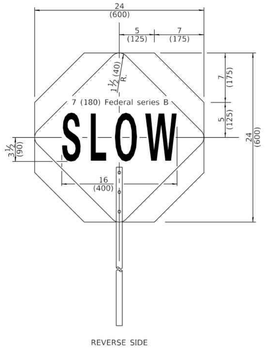
W12-I103-4848

WIDTH RESTRICTION SIGN

XX'-XX" width and X miles are variable.



FRONT SIDE



REVERSE SIDE

FLAGGER TRAFFIC CONTROL SIGN

ROAD CONSTRUCTION NEXT X MILES
G20-I104(0)-6036

END CONSTRUCTION
G20-I105(0)-6024

This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING

WORK ZONE
SPEED LIMIT
XX
PHOTO ENFORCED
W21-III5(0)-3618
R2-1-3648
R10-I108p-3618 ****
SXXX FINE MINIMUM
R2-I106p-3618

Sign assembly as shown on Standards or as allowed by District Operations.

END WORK ZONE SPEED LIMIT
G20-I103-6036

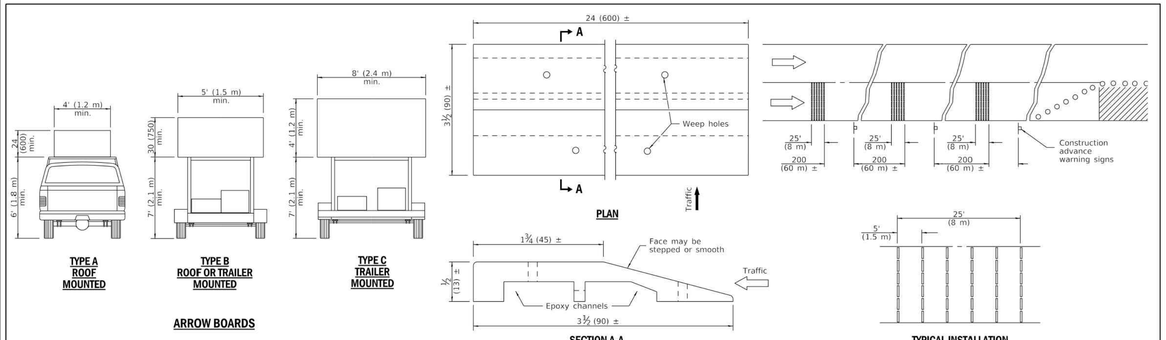
This sign shall be used when the above sign assembly is used.

HIGHWAY CONSTRUCTION SPEED ZONE SIGNS

**** R10-I108p shall only be used along roadways under the jurisdiction of the State.

Illinois Department of Transportation
APPROVED January 1, 2019
ENGINEER OF SAFETY PROG. AND ENGINEERING
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-19

TRAFFIC CONTROL DEVICES
(Sheet 2 of 3)
STANDARD 701901-08



TYPE A ROOF MOUNTED

TYPE B ROOF OR TRAILER MOUNTED

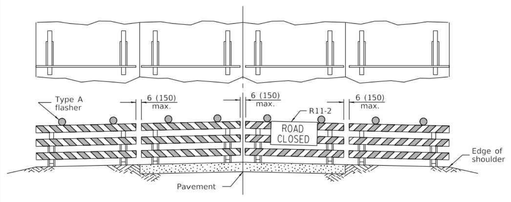
TYPE C TRAILER MOUNTED

ARROW BOARDS

SECTION A-A

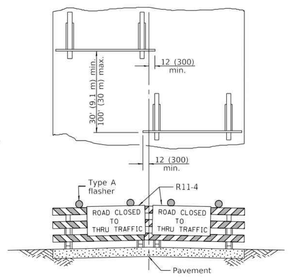
TYPICAL INSTALLATION

TEMPORARY RUMBLE STRIPS



ROAD CLOSED TO ALL TRAFFIC

Reflectorized striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.



ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD

Illinois Department of Transportation
APPROVED January 1, 2019
ENGINEER OF SAFETY PROG. AND ENGINEERING
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-19

TRAFFIC CONTROL DEVICES
(Sheet 3 of 3)
STANDARD 701901-08

DATE	REVISIONS	DRAWN BY
1. 01/17/23	CITY REVIEW #1 & ARCHITECT REVISIONS	TLM
2. 02/17/23	ARCHITECT REVISIONS	TLM
3. 02/27/23	PER CITY REVIEW	TLM

622 GRACELAND AVE. APARTMENTS
DESPLAINES, ILLINOIS

IDOT CONSTRUCTION STANARDS AND DETAILS

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PROJECT NO. 63912021
DATE 12/09/22
SCALE NONE
PROJ. MGR. MRM
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
20 OF 20

February 22, 2023 11:21:1 a.m. AcadVer:22.0s (LMS Tech)
Drawing: S:\63912021 – 622 GRACELAND AVE APTS\300_ENGINEERING\310_CADD\FINAL\639_BASE.DWG