Proposed Improvements
for
PROPOSED STARBUCKS
470-480 NORTH INDEPENDENCE BOULEVARD
VILLAGE OF ROMEOVILLE, ILLINOIS

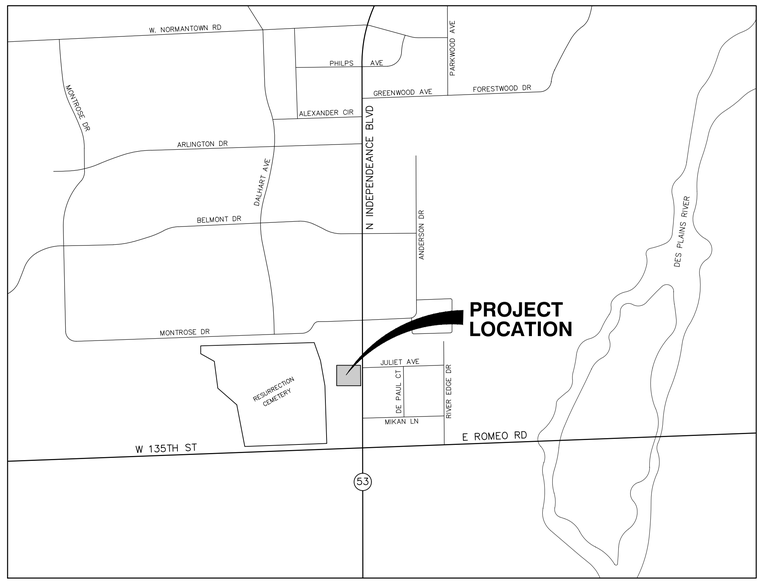
STANDARD SYMBOLS

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
	COMBINED SEWER	
FM	FORCEMAIN	FM
	DRAINTILE	
W	WATER MAIN	W
E	ELECTRIC	E
G	GAS	G
T	TELEPHONE	T
OH	OVERHEAD WIRES	OH
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	STORM INLET	
	CLEANOUT	
	HAY BALES	
	RIP RAP	
	VALVE IN VAULT	
	VALVE IN BOX	
	FIRE HYDRANT	
	BUFFALO BOX	
	FLARED END SECTION	
	STREET LIGHT	
	SUMMIT / LOW POINT	S/CL
795.20 / 790.25	RIM ELEVATION / INVERT ELEVATION	795.25 / 790.20
	DITCH OR SWALE	
	DIRECTION OF FLOW	
	OVERFLOW RELIEF SWALE	
764	1 FOOT CONTOURS	764
	CURB AND GUTTER	
	DEPRESSED CURB AND GUTTER	
	REVERSE CURB AND GUTTER	
	SIDEWALK	
	DETECTABLE WARNINGS	
	PROPERTY LINE	
	EASEMENT LINE	
	SETBACK LINE	
	MAIL BOX	
	SIGN	
	TRAFFIC SIGNAL	
	POWER POLE	
	GUY WIRE	
	GAS VALVE	
	HANDHOLE	
E	ELECTRICAL EQUIPMENT	
T	TELEPHONE EQUIPMENT	
	CHAIN-LINK FENCE	
792.8	SPOT ELEVATION	792.8
	BRUSH/TREE LINE	
16"	DECIDUOUS TREE WITH TRUNK DIA. IN INCHES (TBR)	16"
25'	CONIFEROUS TREE WITH HEIGHT IN FEET (TBR)	25'
S	SILT FENCE	S
	RETAINING WALL	
	WETLAND	

ABBREVIATIONS

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

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



LOCATION MAP
N.T.S.

OWNER: GLAZIER ROMEOVILLE LLC
CONTACT: DANIEL ABDO
ADDRESS: 1406 W. FULTON ST, STE A2
CHICAGO, IL 60607
PH: 312-208-2500

NOTE: For municipal inspections, please call (815) 886-6355

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Sheet List Table

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NOTES:

THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY MANHARD CONSULTING, LTD. ON APRIL 12, 2021. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS.

BENCHMARKS:

REFERENCE BENCHMARK: (NGS PID: MF0114)
BENCHMARK DISK LOCATED ABOUT 1.5 MILES NORTHEAST ALONG STATE HIGHWAY 4A FROM ITS INTERSECTION WITH SITE HIGHWAY 7 AT LOCKPORT, AT THE JUNCTION OF A ROAD LEADING NORTH TO MOMEO ROAD AND A THE SOUTHEAST CORNER OF A CEMETERY, 168 FEET NORTHEAST OF THE CENTER OF THE JUNCTION OF THE ROADS, 45 FEET NORTHWEST OF THE CENTERLINE OF HIGHWAY 4A, 4 FEET SOUTHEAST OF THE CEMETERY FENCE, 2 FEET SOUTHWEST OF A WHITE WOODEN WITNESS POST, ABOUT 1/2" FOOT BELOW THE JUNCTION AND SET IN THE TOP OF A CONCRETE POST PROJECTING 4 INCHES.

ELEVATION= 653.52 DATUM=NAVD88-GEOID 18B

SITE BENCHMARK: SITE BM 1
CUT "X" WITHIN A SQUARE ON THE EAST SIDE OF BACK OF CURB FOR ACCESS DRIVE, WEST SIDE OF SITE, APPROXIMATELY 110 FEET NORTH OF BUILDING.

ELEVATION= 619.48 DATUM=NAVD88-GEOID 18B

SITE BENCHMARK: SITE BM 2
NORTHEAST BOLT ON HYDRANT, 10 FEET WEST OF THE SIGN FOR JOE'S BEVERAGE WAREHOUSE, SOUTHEAST SIDE OF SITE.

ELEVATION= 620.96 DATUM=NAVD88-GEOID 18B

DRAINAGE CERTIFICATION:

I, ZACK GRABIJAS, HEREBY CERTIFY THAT ADEQUATE STORM WATER STORAGE AND DRAINAGE CAPACITY HAS BEEN PROVIDED FOR THIS DEVELOPMENT, SUCH THAT SURFACE WATER FROM THE DEVELOPMENT WILL NOT BE DIVERTED ONTO AND CAUSE DAMAGE TO ADJACENT PROPERTY FOR STORMS UP TO AND INCLUDING THE ONE HUNDRED (100) YEAR EVENT, AND THAT THE DESIGN PLANS ARE IN COMPLIANCE WITH ALL APPLICABLE STATE, COUNTY, AND VILLAGE ORDINANCES.

ZACK GRABIJAS, P.E.

UTILITY CONTACTS

ELECTRIC COMED 2 LINCOLN CENTER OAK BROOK TERRACE, IL. 60181 (800) 334-7661 CONTACT:	WATER VILLAGE OF ROMEOVILLE PUPLIC WORKS 615 ANDERSON DRIVE ROMEOVILLE, IL. 60446 (815) 886-1870 CONTACT: ERIC BJORK
GAS NICOR 1844 FERRY ROAD NAPERVILL, IL. 60563 (888) 642-6748 CONTACT:	SEWER VILLAGE OF ROMEOVILLE PUPLIC WORKS 615 ANDERSON DRIVE ROMEOVILLE, IL. 60446 (815) 886-1870 CONTACT: ERIC BJORK
TELEPHONE AT&T 267 S. WEBER ROAD ROMEOVILLE, IL. 60446 (815) 836-6730 CONTACT:	VILLAGE CONTACT VILLAGE OF ROMEOVILLE 615 ANDERSON DRIVE ROMEOVILLE, IL. 60446 (815) 886-1870 CONTACT: MR. JONATHON A. ZABROCKI, P.E.

ZACHARY A. GRABIJAS
062-070623
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXP. 11-30-21
SEAL

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PROPOSED STARBUCKS
VILLAGE OF ROMEOVILLE, ILLINOIS
TITLE SHEET

PROJ. MGR.:	ZAG
PROJ. ASSOC.:	EAF
DRAWN BY:	REH
DATE:	4-30-21
SCALE:	N.T.S.

SHEET 1 OF 11
TAD.RVIL02

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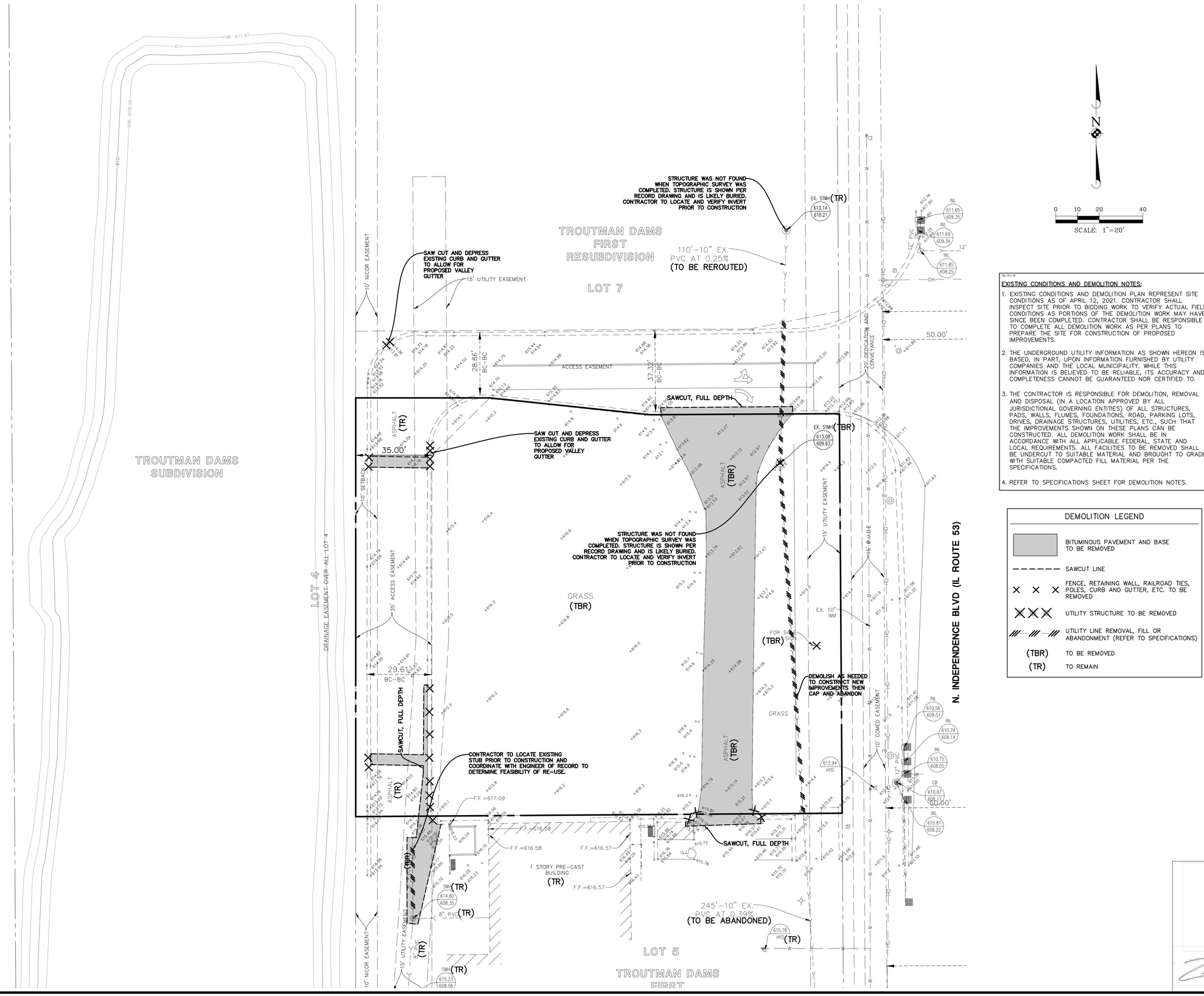

09-01-16

EXISTING CONDITIONS AND DEMOLITION NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF APRIL 12, 2021. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
3. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL (IN A LOCATION APPROVED BY ALL JURISDICTIONAL GOVERNING ENTITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, ROAD, PARKING LOTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THESE PLANS CAN BE CONSTRUCTED. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
4. REFER TO SPECIFICATIONS SHEET FOR DEMOLITION NOTES.

DEMOLITION LEGEND

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

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PROPOSED STARBUCKS

470-480 N. INDEPENDENCE BOULEVARD

EXISTING CONDITIONS AND DEMOLITION PLAN

PROJ. MGR.:	ZAC
PROJ. ASSOC.:	EAF
DRAWN BY:	REH
DATE:	4-30-21
SCALE:	1"=20'

SHEET 2 OF 11

TAD.RVIL02

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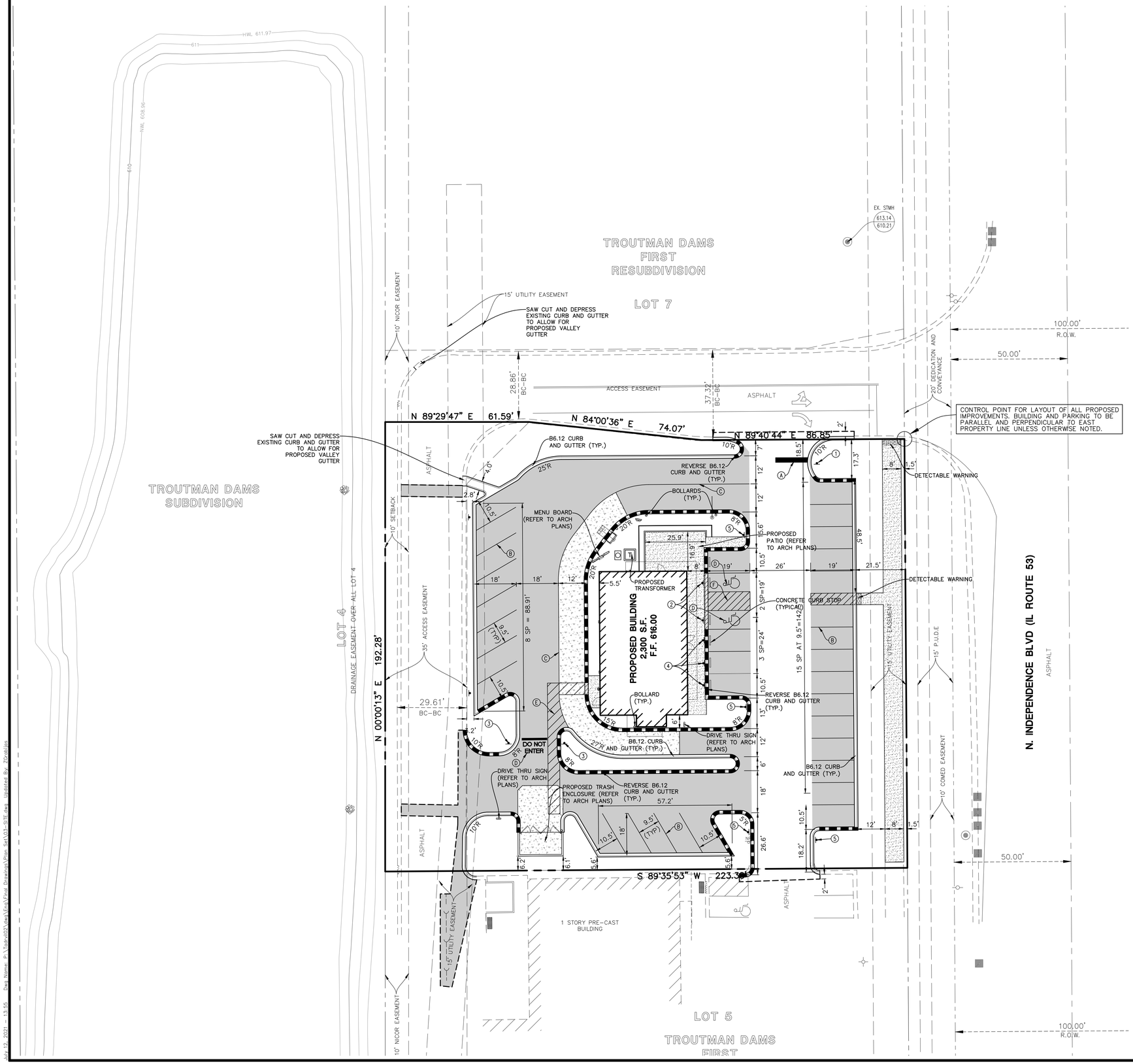

06-01-16

SITE DIMENSIONAL AND PAVING NOTES:

1. ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE.
2. ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED.
3. ALL CURB RADII SHALL BE 3' MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
4. TIE ALL PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH THREE (3) DRILLED AND GROUTED NO. 5 REINFORCING BARS OR EXPANSION TIE ANCHORS, 5/8" IN DIAMETER.
5. BUILDING DIMENSIONS AND ADJACENT PARKING HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. BUILDING DIMENSIONS SHOWN SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT OF BUILDING.
6. IMPROVEMENTS ADJACENT TO BUILDING, IF SHOWN, SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, AND TRANSFORMERS ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
7. LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAY. CONTRACTOR TO VERIFY ACTUAL BUILDING PLAN LOCATIONS WITH ARCHITECT/DEVELOPER PRIOR TO CONSTRUCTING THE SIDEWALKS.
8. ALL ROADWAY AND PARKING LOT SIGNAGE, STRIPING, SYMBOLS, ETC. SHALL BE IN ACCORDANCE WITH LATEST JURISDICTIONAL GOVERNMENTAL ENTITY DETAILS.
9. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
10. PROVIDE DEPRESSED CURB AND RAMP AT ALL HANDICAP ACCESSIBLE SIDEWALK AND PATH LOCATIONS PER FEDERAL AND STATE STANDARDS.
11. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT

06-01-16

PAVEMENT LEGEND

STANDARD DUTY PAVEMENT
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
2 1/4" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
8" AGGREGATE BASE COURSE, TYPE B

HEAVY DUTY PAVEMENT
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
3" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
12" AGGREGATE BASE COURSE, TYPE B

CONCRETE PAVEMENT
8" PORTLAND CEMENT CONCRETE PAVEMENT W/ 6 X 6 W1.4 WWF
4" COMPACTED AGGREGATE BASE, TYPE B

CONCRETE SIDEWALK
6" PORTLAND CEMENT CONCRETE
4" COMPACTED AGGREGATE BASE COURSE, TYPE B

01-01-16

FLOOR AREA RATIO CALCULATION

TOTAL FLOOR AREA	2,300 S.F.
LOT AREA	41,814.60 S.F.
FLOOR AREA RATIO	0.225

SIGN LEGEND

1. R1-1 STOP SIGN
2. R7-8 HANDICAP PARKING SIGN ON BOLLARD
3. R5-1 DO NOT ENTER
4. MOBILE ORDER PICKUP SIGNS SIGN PER STARBUCKS
5. "NO PARKING - FIRE LANE" ALL WEATHER SIGN

SITE DATA

SITE AREA	0.96 ACRES
IMPERVIOUS AREA	0.70 ACRES
PERVIOUS AREA	0.26 ACRES
PARKING PROVIDED	35 SPACES
HANDICAP PROVIDED	2 SPACES
PARKING RATIO	15.22 SPACES/1000 S.F.

PAVEMENT MARKING LEGEND

- (A) 24" WHITE STOP BAR
- (B) 4" YELLOW LINE
- (C) 6" SOLID WHITE
- (D) LETTERS AND SYMBOLS PAVEMENT MARKINGS
- (E) 4" YELLOW DIAGONAL AT 45° SPACED 3' O.C. W/ 4" YELLOW BORDER
- (F) 4" YELLOW DIAGONAL AT 45° SPACED 2' O.C. W/ 4" YELLOW BORDER

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

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PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD
SITE DIMENSIONAL AND PAVING PLAN

ISSUE FOR PERIT - NOT FOR CONSTRUTION

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PROJ. ASSOC.:	EAF
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DATE:	4-30-21
SCALE:	1"=20'

SHEET 3 OF 11
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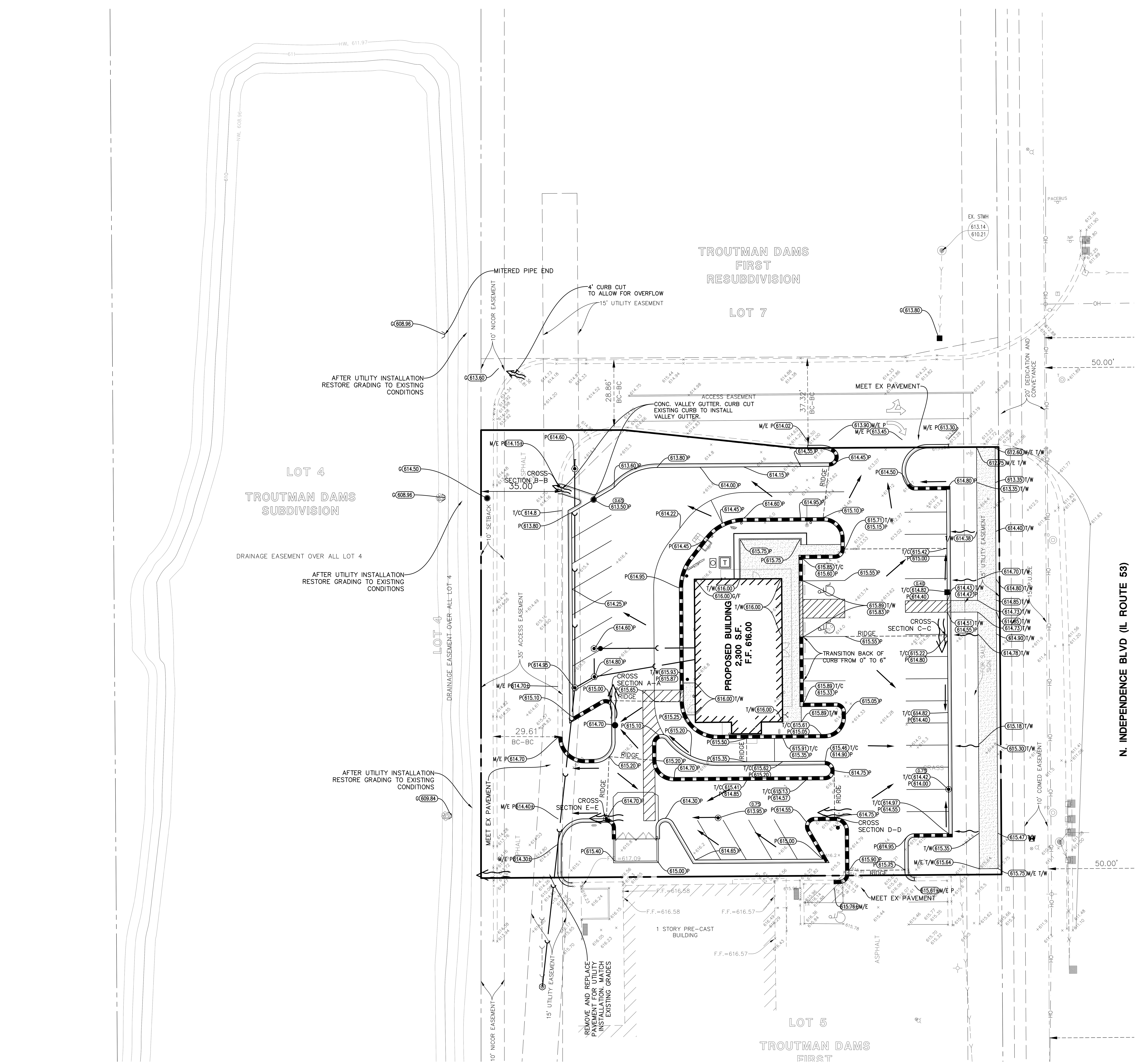

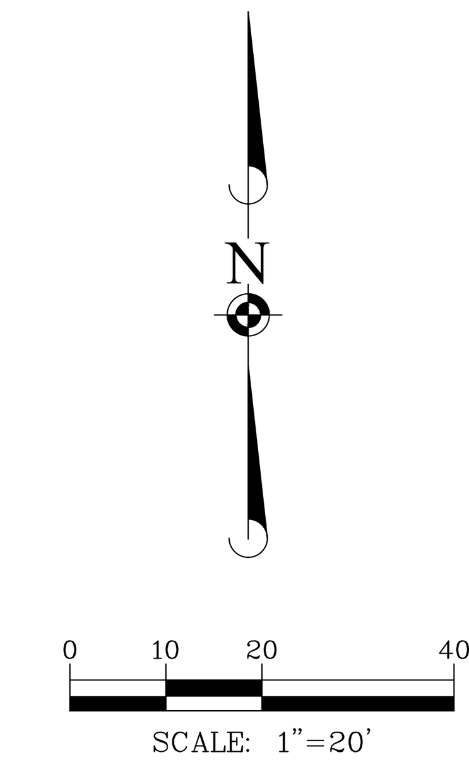

06-01-16

GRADING NOTES:

1. PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
2. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
3. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
5. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
6. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
8. ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 12H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
9. EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY MANHARD CONSULTING ON APRIL 12, 2021. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
10. TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.

01-01-16

GRADING PLAN LEGEND

764	PROPOSED 1 FOOT CONTOURS
792.8 G	PROPOSED SPOT ELEVATION
F.F.	PROPOSED FINISHED FLOOR ELEVATION
G/F	PROPOSED GRADE AT FOUNDATION
P	PROPOSED PAVEMENT ELEVATION
T/C	PROPOSED TOP OF CURB
T/W	PROPOSED TOP OF WALK
M/E	MEET EXISTING
G	PROPOSED GROUND GRADE OR GROUND AT BASE OF RETAINING WALL
	PROPOSED DITCH OR SWALE
	PROPOSED DIRECTION OF FLOW
	OVERFLOW RELIEF SWALE
RIDGE	PROPOSED RIDGE LINE
0.5'	PROPOSED DEPTH OF PONDING

DETENTION NOTE

DETENTION IS PROVIDED FOR THIS PARCEL AS DESCRIBED IN THE APPROVED "STORMWATER MANAGEMENT REPORT" BY KIMLEY-HORN DATED NOVEMBER 19TH, 2015 AND REVISED ON APRIL 1ST, 2016.

ZACHARY A. GRABIJAS
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PROFESSIONAL
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STATE OF ILLINOIS
EXP. 11-30-21

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PROPOSED STARBUCKS

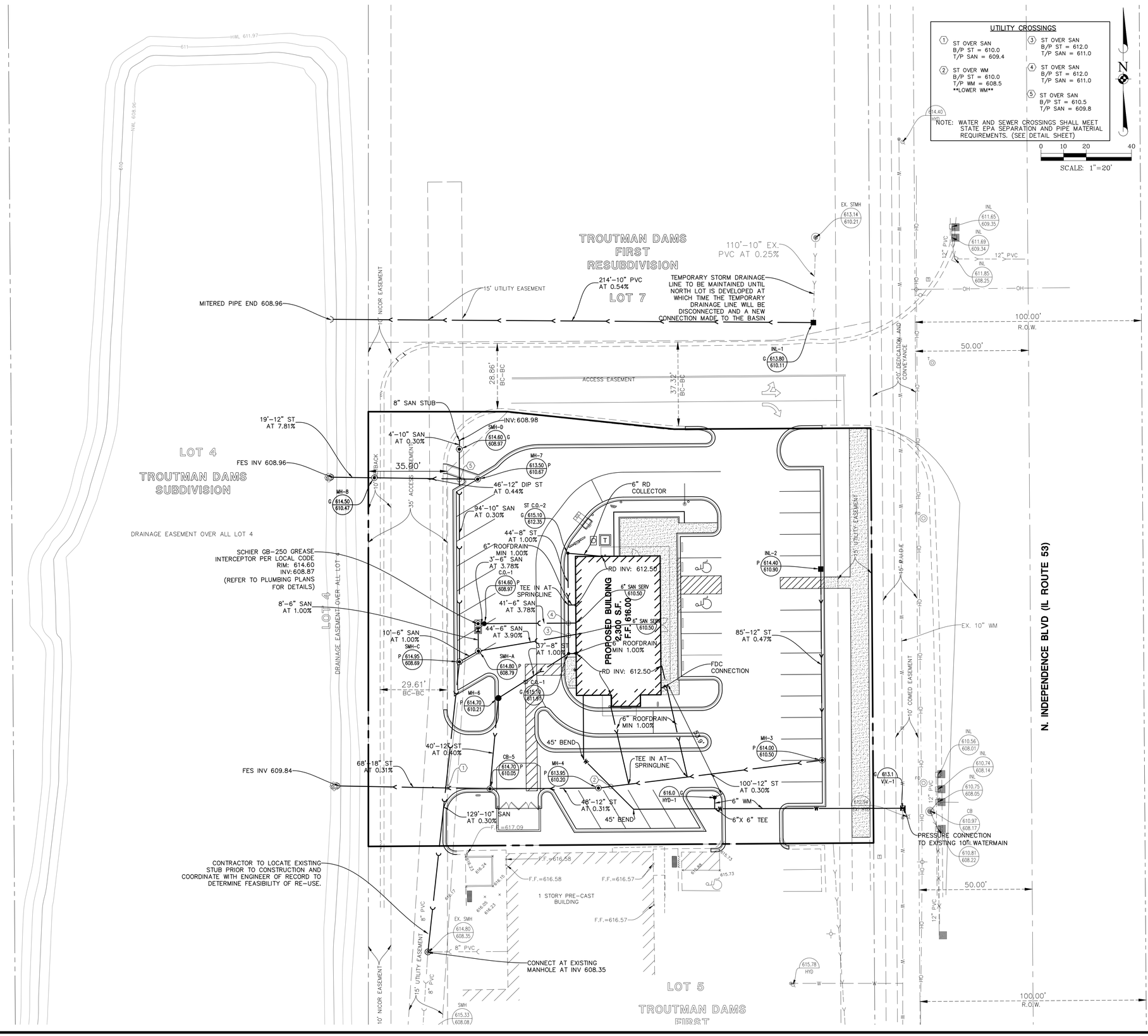
470-480 N. INDEPENDENCE BOULEVARD

GRADING PLAN

PROJ. MGR.: ZAG
PROJ. ASSOC.: EAF
DRAWN BY: REH
DATE: 4-30-21
SCALE: 1"=20'

SHEET
4 OF 11
TAD.RVIL02

ISSUE FOR PERIT - NOT FOR CONSTRUTION



08-01-16

UTILITY NOTES:

1. ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
3. CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
4. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
5. AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
6. ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE. ALL WATERMAINS MUST BE WRAPPED IN V-BIO POLYETHYLENE ENCASEMENT. ALTERNATE MODIFIED METHOD A: WET TRENCH CONDITIONS. A LAYER OF ARC-SPRAYED ZINC PER ISO 8179 IS REQUIRED ON EXTERIOR OF PIPE.
7. ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
8. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HERE ON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED.
9. ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO FES.
10. CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
11. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
12. ALL D.I. WATERMAIN PIPE AND D.I. WATERMAIN FITTINGS SHALL BE WRAPPED.
13. ALL VALVES AND HYDRANTS SHALL BE SUBMITTED TO THE VILLAGE OF ROMEOVILLE WATER DEPARTMENT FOR WRITTEN APPROVAL PRIOR TO ORDERING.
14. STORM SEWER JOINTS MUST BE FLEXIBLE GASKET O-RINGS ASTM C361, ASTM C443 AND ASTM C1619.
15. FOR CLOSED LID STORM STRUCTURES, FRAME AND COVER SHALL BE EAST JORDAN 1050Z1 EMBOSSED WITH "STORM" AND "VILLAGE OF ROMEOVILLE"
16. GRANULAR TRENCH BACKFILL (CA-6) IS REQUIRED WHEN THE TRENCH IS WITHIN TWO FEET OF PAVEMENT OR CURB.
17. ALL NEW AND EXISTING MANHOLES BEING ADJUSTED SHALL HAVE CHIMNEY SEAL. INTERNAL CHIMNEY SEALS SHALL BE RAVEN 581 BRUSH GRADE, A 100% SOLIDS, FLUID APPLIED POLYURIA ELASTOMER REPAIR MATERIAL AS APPLIED PER THE FOLLOWING: FOR SURFACE PREPARATION, SURFACES SHOULD BE THOROUGHLY CLEAN AND DRY. CONCRETE AND MORTAR MUST BE CURED AT LEAST 7 DAYS AND NO FROST OR WET CONDITIONS CAN BE PRESENT DURING INSTALLATION. REMOVED ALL LOOSE MORTAR AND FOREIGN MATERIAL. SURFACE MUST BE FREE OF LAITANCE, CONCRETE DUST, DIRT, FORM RELEASE AGENTS, MOISTURE CURING MEMBRANES, LOOS CEMENT AND HARDENERS. FILL BUG HOLES, AIR POCKETS AND OTHER VOIDS WITH STEEL-SEAM FT910. AFTER ENSURING THAT ALL SURFACES ARE CLEAN THE CHIMNEY SEAL COATING MATERIAL SHALL BE APPLIED EVENLY BY SPRAYING OVER THE ENTIRE CHIMNEY SEAL AREA INCLUDING THE FRAME JOINT AREA AND THE VERTICAL RISER OF THE MANHOLE CONE INCLUDING ALL EXTENSIONS TO THE CHIMNEY AREA. APPLICATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND FILM SHALL BE APPLIED AT A WET MILS SPREADING RATE OF BETWEEN 100 TO 125 MILS. THE FINAL CHIMNEY SEAL SHALL PASS VISUAL INSPECTION AND BE COMPLETELY FREE OF PINHOLES OR VOIDS.
18. WHEN EXISTING UTILITY STRUCTURE ADJUSTMENTS ARE NECESSARY A MINIMUM OF TWO ADJUSTING RINGS (MIN. 6" ADJUSTING HEIGHT) AND MAXIMUM OF THREE RINGS (MAX 10: ADJUSTING HEIGHT). NO 1" OR 2" CONCRETE RINGS ARE ALLOWED. UNDER PAVED AREAS, TOP RING SHOULD BE RUBBER. USE ONE (1) EJIW INFRA-RISER RUBBER COMPOSITE.
19. GAS LINE TO BE POTHOLED TO CONFIRM STORM AND GAS CROSSING PRIOR TO CONSTRUCTION
20. A MINIMUM OF 48 HOURS PRIOR TO ANY WATER USAGE, THE CONTRACTOR MUST CALL THE VILLAGE OF ROMEOVILLE'S WATER DEPARTMENT AT 815-886-1870 TO GET APPROVAL OF SAID USAGE. ANY UNAUTHORIZED USAGES WILL RESULT IN PENALTIES.
21. PLEASE BE CONSCIOUS OF DAMAGING THE PAINT ON THE HYDRANTS DURING INSTALLATION. IF REQUESTED BY THE VILLAGE OF ROMEOVILLE WATER SUPERINTENDENT, ANY HYDRANTS EXHIBITING EXCESSIVE DAMAGE WILL BE SAND BLASTED AND REPAINTED BY AN APPROVED CONTRACTOR PRIOR TO ACCEPTANCE.
22. THE VILLAGE REQUIRES SUBMISSION OF RECORDED VIDEO INSPECTIONS OF ALL PUBLIC STORM SEWERS.
23. PROPERLY COMPACTED TRENCH BACKFILL IS REQUIRED WHEN THE TRENCH IS WITHIN TWO FEET OF PAVEMENT OR CURB AND UNDER ALL PAVEMENT AND CURB. SEE DETAIL SHEET FOR REQUIRED TRENCH BACKFILL DETAIL.

DRAWN BY	REVISIONS	DATE
	07-09-21 REVISED PER VILLAGE COMMENTS	

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PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD
UTILITY PLAN

ISSUE FOR PERMIT - NOT FOR CONSTRUCTION

PROJ. MGR.:	ZAC
PROJ. ASSOC.:	EAF
DRAWN BY:	REH
DATE:	4-30-21
SCALE:	1"=20'

SHEET 5 OF 11
TAD.RVL02

ZACHARY A. GRABIAN 062-070623 LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS EXP. 11-30-21

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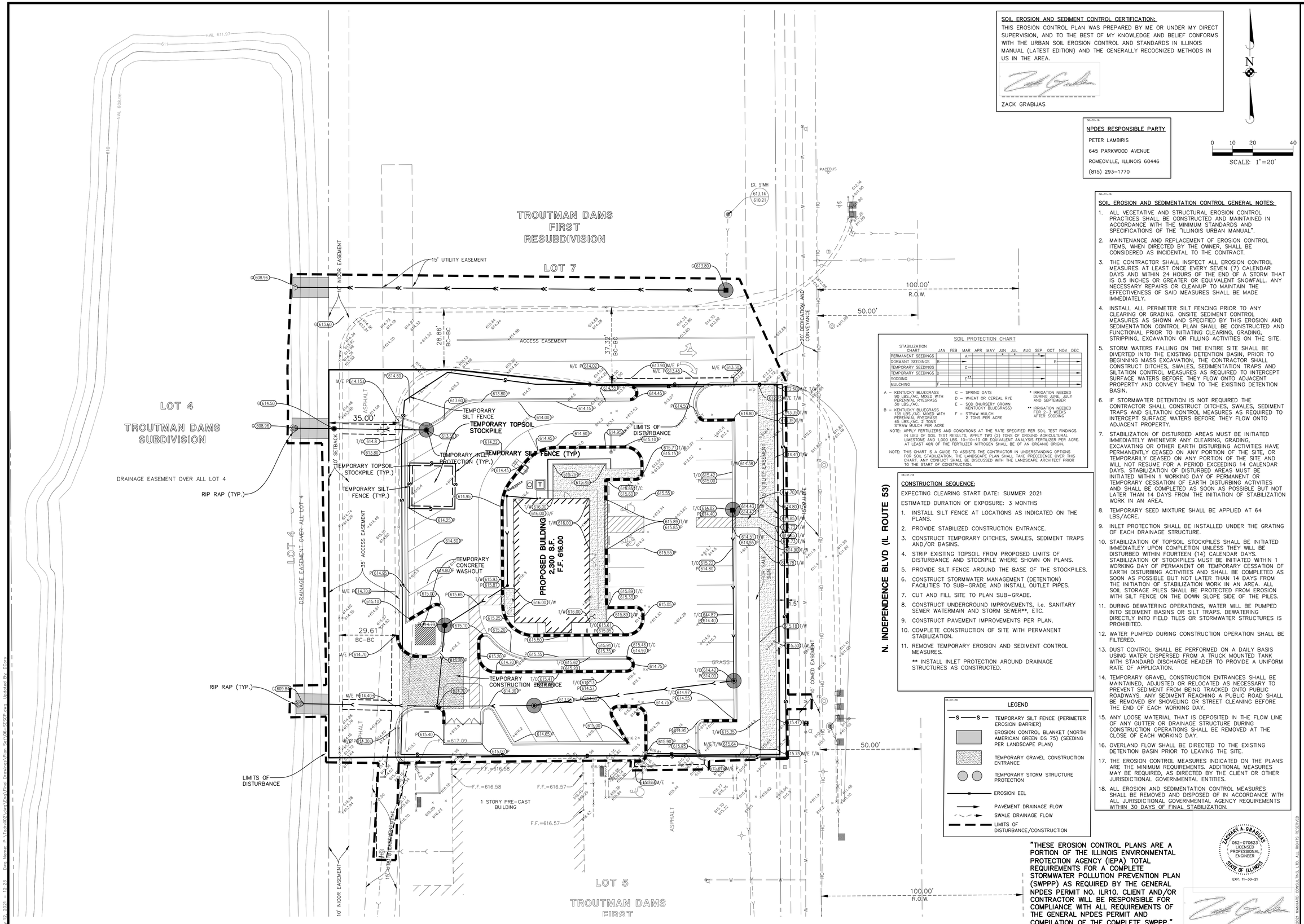

SOIL EROSION AND SEDIMENT CONTROL CERTIFICATION:

THIS EROSION CONTROL PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF CONFORMS WITH THE URBAN SOIL EROSION CONTROL AND STANDARDS IN ILLINOIS MANUAL (LATEST EDITION) AND THE GENERALLY RECOGNIZED METHODS IN US IN THE AREA.

ZACK GRABIJAS

06-01-16

NPDES RESPONSIBLE PARTY

PETER LAMBIRIS
645 PARKWOOD AVENUE
ROMEOVILLE, ILLINOIS 60446
(815) 293-1770

0 10 20 40
SCALE: 1"=20'

SOIL PROTECTION CHART

STABILIZATION CHART	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDINGS			A						*			
DORMANT SEEDINGS	B										B	
TEMPORARY SEEDINGS			C									
TEMPORARY SEEDINGS	D											
SODDING			E	**								
MULCHING	F											

A – KENTUCKY BLUEGRASS 90 LBS./AC. MIXED WITH PERENNIAL RYEGRASS 30 LBS./AC.

B – KENTUCKY BLUEGRASS 135 LBS./AC. MIXED WITH PERENNIAL RYEGRASS 45 LBS./AC. 2 TONS STRAW MULCH PER ACRE

C – SPRING OATS
D – WHEAT OR CEREAL RYE
E – SOD (NURSERY GROWN, KENTUCKY BLUEGRASS)
F – STRAW MULCH 2 TONS PER ACRE

* IRRIGATION NEEDED DURING JUNE, JULY AND SEPTEMBER

** IRRIGATION NEEDED FOR 2-3 WEEKS AFTER SODDING

NOTE: APPLY FERTILIZERS AND CONDITIONS AT THE RATE SPECIFIED PER SOIL TEST FINDINGS. IN LIEU OF SOIL TEST RESULTS, APPLY TWO (2) TONS OF GROUND AGRICULTURAL LIMESTONE AND 1,000 LBS. 10-10-10 OR EQUIVALENT ANALYSIS FERTILIZER PER ACRE. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE OF AN ORGANIC ORIGIN.

NOTE: THIS CHART IS A GUIDE TO ASSISTS THE CONTRACTOR IN UNDERSTANDING OPTIONS FOR SOIL STABILIZATION. THE LANDSCAPE PLAN SHALL TAKE PRECEDENCE OVER THIS CHART. ANY CONFLICT SHALL BE DISCUSSED WITH THE LANDSCAPE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.

06-01-16

CONSTRUCTION SEQUENCE:

EXPECTING CLEARING START DATE: SUMMER 2021

ESTIMATED DURATION OF EXPOSURE: 3 MONTHS

1. INSTALL SILT FENCE AT LOCATIONS AS INDICATED ON THE PLANS.
2. PROVIDE STABILIZED CONSTRUCTION ENTRANCE.
3. CONSTRUCT TEMPORARY DITCHES, SWALES, SEDIMENT TRAPS AND/OR BASINS.
4. STRIP EXISTING TOPSOIL FROM PROPOSED LIMITS OF DISTURBANCE AND STOCKPILE WHERE SHOWN ON PLANS.
5. PROVIDE SILT FENCE AROUND THE BASE OF THE STOCKPILES.
6. CONSTRUCT STORMWATER MANAGEMENT (DETENTION) FACILITIES TO SUB-GRADE AND INSTALL OUTLET PIPES.
7. CUT AND FILL SITE TO PLAN SUB-GRADE.
8. CONSTRUCT UNDERGROUND IMPROVEMENTS, i.e. SANITARY SEWER WATERMAIN AND STORM SEWER**, ETC.
9. CONSTRUCT PAVEMENT IMPROVEMENTS PER PLAN.
10. COMPLETE CONSTRUCTION OF SITE WITH PERMANENT STABILIZATION.
11. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

** INSTALL INLET PROTECTION AROUND DRAINAGE STRUCTURES AS CONSTRUCTED.

06-01-16

LEGEND

- TEMPORARY SILT FENCE (PERIMETER EROSION BARRIER)
- EROSION CONTROL BLANKET (NORTH AMERICAN GREEN DS 75) (SEEDING PER LANDSCAPE PLAN)
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
- TEMPORARY STORM STRUCTURE PROTECTION
- EROSION EEL
- PAVEMENT DRAINAGE FLOW
- SWALE DRAINAGE FLOW
- LIMITS OF DISTURBANCE/CONSTRUCTION

"THESE EROSION CONTROL PLANS ARE A PORTION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) TOTAL REQUIREMENTS FOR A COMPLETE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED BY THE GENERAL NPDES PERMIT NO. ILR10. CLIENT AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL NPDES PERMIT AND COMPILATION OF THE COMPLETE SWPPP."

06-01-16

SOIL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES:

1. ALL VEGETATIVE AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "ILLINOIS URBAN MANUAL".
2. MAINTENANCE AND REPLACEMENT OF EROSION CONTROL ITEMS, WHEN DIRECTED BY THE OWNER, SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.
3. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER OR EQUIVALENT SNOWFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF SAID MEASURES SHALL BE MADE IMMEDIATELY.
4. INSTALL ALL PERIMETER SILT FENCING PRIOR TO ANY CLEARING OR GRADING. ONSITE SEDIMENT CONTROL MEASURES AS SHOWN AND SPECIFIED BY THIS EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE CONSTRUCTED AND FUNCTIONAL PRIOR TO INITIATING CLEARING, GRADING, STRIPPING, EXCAVATION OR FILLING ACTIVITIES ON THE SITE.
5. STORM WATERS FALLING ON THE ENTIRE SITE SHALL BE DIVERTED INTO THE EXISTING DETENTION BASIN, PRIOR TO BEGINNING MASS EXCAVATION, THE CONTRACTOR SHALL CONSTRUCT DITCHES, SWALES, SEDIMENTATION TRAPS AND SILTATION CONTROL MEASURES AS REQUIRED TO INTERCEPT SURFACE WATERS BEFORE THEY FLOW ONTO ADJACENT PROPERTY AND CONVEY THEM TO THE EXISTING DETENTION BASIN.
6. IF STORMWATER DETENTION IS NOT REQUIRED THE CONTRACTOR SHALL CONSTRUCT DITCHES, SWALES, SEDIMENT TRAPS AND SILTATION CONTROL MEASURES AS REQUIRED TO INTERCEPT SURFACE WATERS BEFORE THEY FLOW ONTO ADJACENT PROPERTY.
7. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA.
8. TEMPORARY SEED MIXTURE SHALL BE APPLIED AT 64 LBS/ACRE.
9. INLET PROTECTION SHALL BE INSTALLED UNDER THE GRATING OF EACH DRAINAGE STRUCTURE.
10. STABILIZATION OF TOPSOIL STOCKPILES SHALL BE INITIATED IMMEDIATLEY UPON COMPLETION UNLESS THEY WILL BE DISTURBED WITHIN FOURTEEN (14) CALENDAR DAYS. STABILIZATION OF STOCKPILES MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA. ALL SOIL STORAGE PILES SHALL BE PROTECTED FROM EROSION WITH SILT FENCE ON THE DOWN SLOPE SIDE OF THE PILES.
11. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
12. WATER PUMPED DURING CONSTRUCTION OPERATION SHALL BE FILTERED.
13. DUST CONTROL SHALL BE PERFORMED ON A DAILY BASIS USING WATER DISPERSED FROM A TRUCK MOUNTED TANK WITH STANDARD DISCHARGE HEADER TO PROVIDE A UNIFORM RATE OF APPLICATION.
14. TEMPORARY GRAVEL CONSTRUCTION ENTRANCES SHALL BE MAINTAINED, ADJUSTED OR RELOCATED AS NECESSARY TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADWAYS. ANY SEDIMENT REACHING A PUBLIC ROAD SHALL BE REMOVED BY SHOVELING OR STREET CLEANING BEFORE THE END OF EACH WORKING DAY.
15. ANY LOOSE MATERIAL THAT IS DEPOSITED IN THE FLOW LINE OF ANY GUTTER OR DRAINAGE STRUCTURE DURING CONSTRUCTION OPERATIONS SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY.
16. OVERLAND FLOW SHALL BE DIRECTED TO THE EXISTING DETENTION BASIN PRIOR TO LEAVING THE SITE.
17. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE CLIENT OR OTHER JURISDICTIONAL GOVERNMENTAL ENTITIES.
18. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL JURISDICTIONAL GOVERNMENTAL AGENCY REQUIREMENTS WITHIN 30 DAYS OF FINAL STABILIZATION.

ZACHARY A. GRABIJAS
062-070623
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXP. 11-30-21

DRAWN BY | REVISIONS | DATE

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PROPOSED STARBUCKS
VILLAGE OF ROMEOVILLE, ILLINOIS
SOIL EROSION AND SEDIMENT CONTROL PLAN

ISSUE FOR PERIT - NOT FOR CONSTRUTION

PROJ MGR.:	ZAG
PROJ ASSOC.:	EAF
DRAWN BY:	REH
DATE:	4-30-21
SCALE:	1"=20'

SHEET 6 OF 11
TAD.RVIL02

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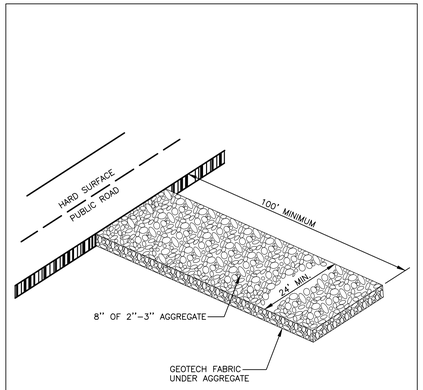
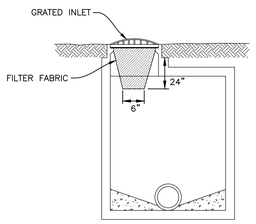


NOTE:
PERIODIC TOP DRESSING OF THE CONSTRUCTION EXIT MAY BE REQUIRED TO PREVENT TRACK OUT.

06-01-15

GRAVEL CONSTRUCTION ACCESS DETAIL

S-EC-CONST-ENTRANCE



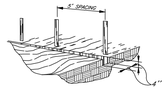
NOTE:
1. CONTRACTOR HAS THE OPTION OF USING A MANUFACTURED PRODUCT SUCH AS DANDY BAG, IPP INLET FILTER, FLEXSTORM OR APPROVED EQUAL.
2. FOR CURB STRUCTURES, CONTRACTOR HAS THE OPTION OF USING A MANUFACTURED PRODUCT SUCH AS DANDY CURB SACK OR APPROVED EQUAL.

06-01-15

FILTER BASKET INLET SEDIMENT FILTER

EC-ST-FB-INLETPROTECT

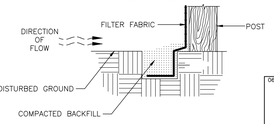
1. SET 2"X2"X36" POSTS 12" INTO THE GROUND & EXCAVATE A 4"X4" TRENCH ALONG THE LINE OF POSTS.



2. ATTACH THE FILTER FABRIC TO POST AND EXTEND IT INTO THE TRENCH.

3. BACKFILL AND COMPACT THE EXCAVATED SOIL.

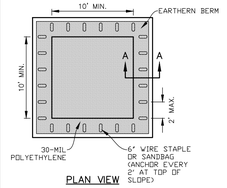
CROSS SECTION OF FABRIC AND WIRE INTO THE TRENCH.



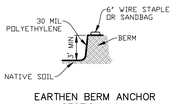
06-01-17

SILT FENCE DETAIL

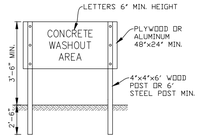
S-EC-SILT FENCE



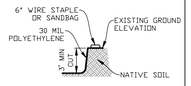
PLAN VIEW



EARTHEN BERM ANCHOR SECTION A-A



SIGN DETAIL



SUBGRADE ANCHOR SECTION A-A

NOTES:
1. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED 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.

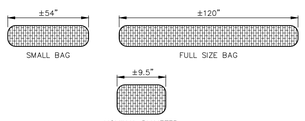
06-01-15

CONCRETE WASHOUT DETAIL

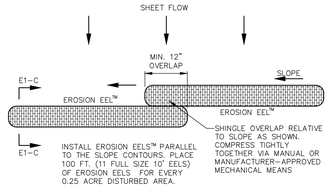
S-EC-CONST-ENTRANCE

VILLAGE OF ROMEOVILLE EROSION CONTROL NOTES:

1. ALL ACCESS TO AND FROM THE CONSTRUCTION SITE IS TO BE RESTRICTED TO THE CONSTRUCTION ENTRANCE.
2. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE EFFECTIVE PERFORMANCE OF THEIR INTENDED FUNCTION.
3. MAJOR AMENDMENTS OF THE SITE DEVELOPMENT OR EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE SUBMITTED TO THE DEPARTMENT OF COMMUNITY SERVICES & DEVELOPMENT TO BE APPROVED IN THE SAME MANNER AS THE ORIGINAL PLANS.
4. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY SHOVELING OR STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL.
5. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER THE FINAL SITE STABILIZATION IS ACHIEVED WITH PERMANENT SOIL STABILIZATION MEASURES.
6. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 7 CALENDAR DAYS FOLLOWING THE END OF ACTIVE DISTURBANCE OR REDISTURBANCE.
7. IF DEWATERING DEVICES AR USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. ALL PUMPED DISCHARGES SHALL BE ROUTED THROUGH APPROPRIATELY DESIGNED SEDIMENT TRAPS OR BASINS.



DETAIL: EROSION EELs™
N.T.S.



INSTALLATION FOR INTERCEPTING SHEET FLOW PERPENDICULAR TO FLOW PATH - PLAN VIEW

NOTE:
EROSION EELs™ SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURES'S RECOMMENDATIONS.

DATE?

TYPICAL EROSION EEL

JOB-CODE?

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

HENRY A. GRAHAM
062-070623
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXP. 11-30-21

SEAL

DRAWN BY | REVISIONS | DATE

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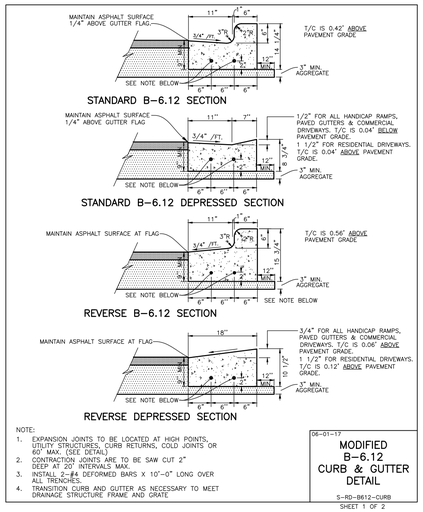
PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD
SOIL EROSION AND SEDIMENT CONTROL DETAILS

PROJ. MGR.: ZAG
PROJ. ASSOC.: EAF
DRAWN BY: EAF
DATE: 4-30-21
SCALE: N.T.S.

SHEET 7 OF 11

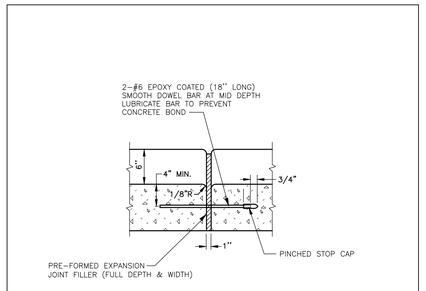
TAD.RVIL02

ISSUE FOR PERMIT - NOT FOR CONSTRUCTION



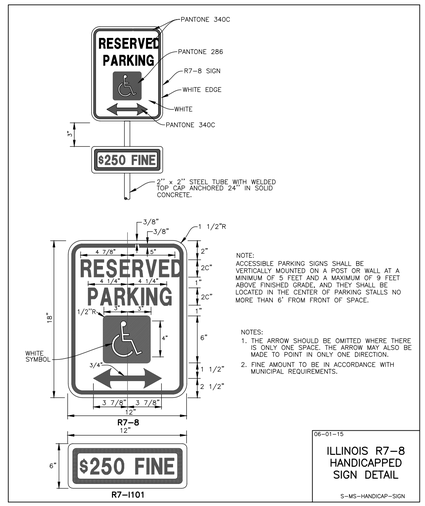
NOTE:
1. EXPANSION JOINTS TO BE LOCATED AT HIGH POINTS, UTILITY STRUCTURES, CURB RETURNS, COLD JOINTS OR 60' MAX. (SEE DETAIL)
2. CONTRACTION JOINTS ARE TO BE SAW CUT 2" DEEP AT 20' INTERVALS MAX.
3. INSTALL 2-#4 DEFORMED BARS X 10'-0" LONG OVER ALL TRENCHES.
4. TRANSITION CURB AND GUTTER AS NECESSARY TO MEET DRAINAGE STRUCTURE FRAME AND GRATE

06-01-17
MODIFIED B-6.12 CURB & GUTTER DETAIL
S-RD-B612-CURB
SHEET 1 OF 2



TYPICAL
EXPANSION JOINT DETAIL
CROSS SECTION

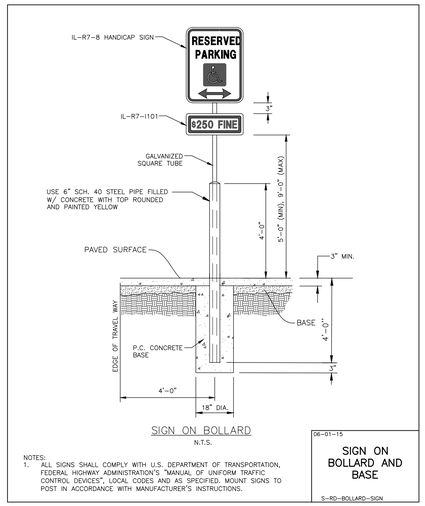
06-01-17
CURB EXPANSION JOINT
S-RD-EXPANSION-JOINT
SHEET 2 OF 2



NOTE:
ACCESSIBLE PARKING SIGNS SHALL BE VERTICALLY MOUNTED ON A POST OR WALL AT A MINIMUM OF 5 FEET AND A MAXIMUM OF 9 FEET ABOVE FINISHED GRADE, AND THEY SHALL BE LOCATED IN THE CENTER OF PARKING STALLS NO MORE THAN 6' FROM FRONT OF SPACE.

NOTES:
1. THE ARROW SHOULD BE OMITTED WHERE THERE IS ONLY ONE SPACE. THE ARROW MAY ALSO BE MADE TO POINT IN ONLY ONE DIRECTION.
2. FINE AMOUNT TO BE IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.

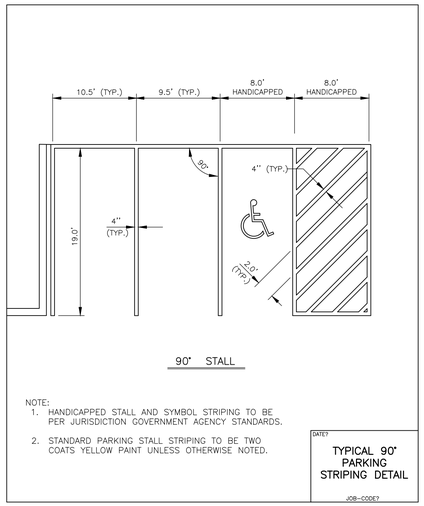
06-01-15
ILLINOIS R7-8 HANDICAPPED SIGN DETAIL
S-MS-HANDICAP-SIGN



SIGN ON BOLLARD
N.T.S.

NOTES:
1. ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

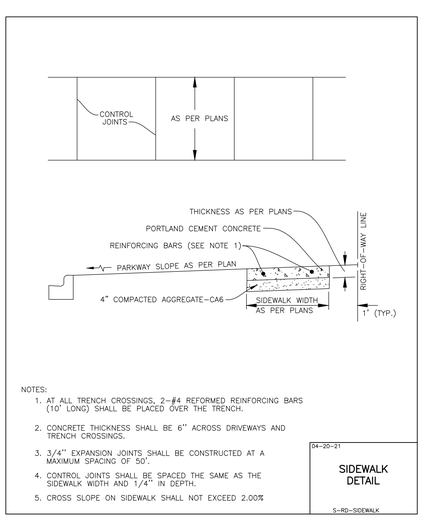
06-01-15
SIGN ON BOLLARD AND BASE
S-RD-BOLLARD-SIGN



90° STALL

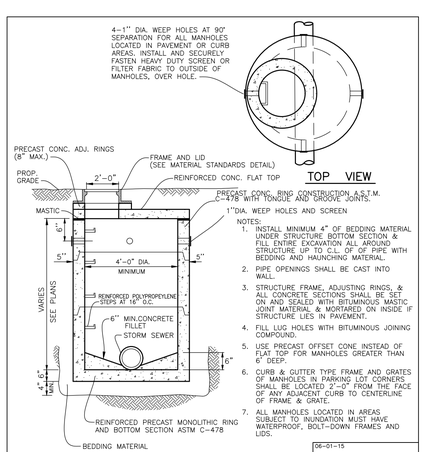
NOTE:
1. HANDICAPPED STALL AND SYMBOL STRIPING TO BE PER JURISDICTION GOVERNMENT AGENCY STANDARDS.
2. STANDARD PARKING STALL STRIPING TO BE TWO COATS YELLOW PAINT UNLESS OTHERWISE NOTED.

DATE?
TYPICAL 90° PARKING STRIPING DETAIL
JOB-CODE?



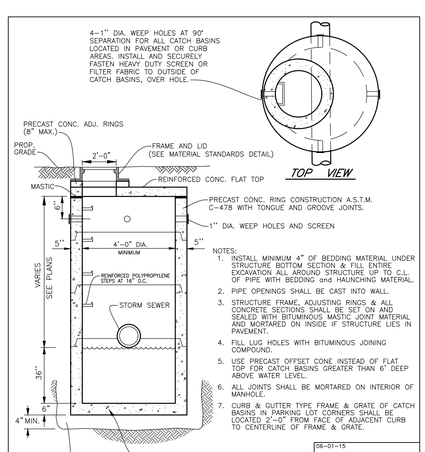
NOTES:
1. AT ALL TRENCH CROSSINGS, 2-#4 REFORMED REINFORCING BARS (10' LONG) SHALL BE PLACED OVER THE TRENCH.
2. CONCRETE THICKNESS SHALL BE 6" ACROSS DRIVEWAYS AND TRENCH CROSSINGS.
3. 3/4" EXPANSION JOINTS SHALL BE CONSTRUCTED AT A MAXIMUM SPACING OF 50'.
4. CONTROL JOINTS SHALL BE SPACED THE SAME AS THE SIDEWALK WIDTH AND 1/4" IN DEPTH.
5. CROSS SLOPE ON SIDEWALK SHALL NOT EXCEED 2.00%

04-20-21
SIDEWALK DETAIL
S-RD-SIDEWALK



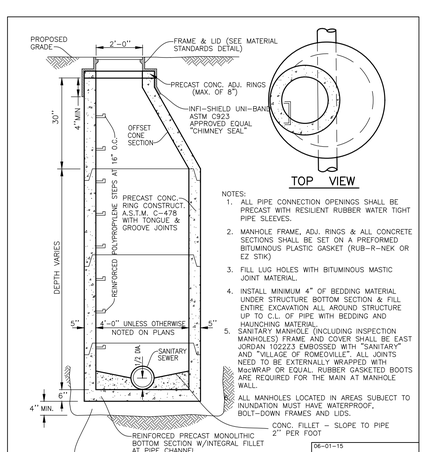
NOTES:
1. INSTALL MINIMUM 4" OF BEDDING MATERIAL UNDER STRUCTURE BOTTOM SECTION & FILL ENTIRE EXCAVATION ALL AROUND STRUCTURE UP TO C.L. OF PIPE WITH BEDDING and HAUNCHING MATERIAL.
2. PIPE OPENINGS SHALL BE CAST INTO WALL.
3. STRUCTURE FRAME, ADJUSTING RINGS, & ALL CONCRETE SECTIONS SHALL BE SET ON AND SEALED WITH BITUMINOUS MASTIC JOINT MATERIAL & MORTARED ON INSIDE IF STRUCTURE LIES IN PAVEMENT.
4. FILL LUG HOLES WITH BITUMINOUS JOINING COMPOUND.
5. USE PRECAST OFFSET CONE INSTEAD OF FLAT TOP FOR MANHOLES GREATER THAN 6' DEEP.
6. CURB & GUTTER TYPE FRAME AND GRATES OF MANHOLES IN PARKING LOT CORNERS SHALL BE LOCATED 2'-0" FROM THE FACE OF ANY ADJACENT CURB TO CENTERLINE OF FRAME & GRATE.
7. ALL MANHOLES LOCATED IN AREAS SUBJECT TO INUNDATION MUST HAVE WATERPROOF, BOLT-DOWN FRAMES AND LIDS.

06-01-15
STORM MANHOLE DETAIL
S-ST-MANHOLE



NOTES:
1. INSTALL MINIMUM 4" OF BEDDING MATERIAL UNDER STRUCTURE BOTTOM SECTION & FILL ENTIRE EXCAVATION ALL AROUND STRUCTURE UP TO C.L. OF PIPE WITH BEDDING and HAUNCHING MATERIAL.
2. PIPE OPENINGS SHALL BE CAST INTO WALL.
3. STRUCTURE FRAME, ADJUSTING RINGS & ALL CONCRETE SECTIONS SHALL BE SET ON AND SEALED WITH BITUMINOUS MASTIC JOINT MATERIAL AND MORTARED ON INSIDE IF STRUCTURE LIES IN PAVEMENT.
4. FILL LUG HOLES WITH BITUMINOUS JOINING COMPOUND.
5. USE PRECAST OFFSET CONE INSTEAD OF FLAT TOP FOR CATCH BASINS GREATER THAN 6' DEEP ABOVE WATER LEVEL.
6. ALL JOINTS SHALL BE MORTARED ON INTERIOR OF MANHOLE.
7. CURB & GUTTER TYPE FRAME & GRATE OF CATCH BASINS IN PARKING LOT CORNERS SHALL BE LOCATED 2'-0" FROM FACE OF ADJACENT CURB TO CENTERLINE OF FRAME & GRATE.

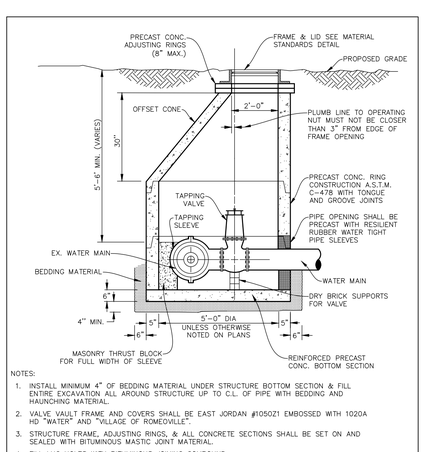
06-01-15
CATCH BASIN DETAIL (4'-0" DIA.)
S-ST-CATCHBASIN-4 FOOT



TOP VIEW

NOTES:
1. ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER TIGHT PIPE SLEEVES.
2. MANHOLE FRAME, ADJ. RINGS & ALL CONCRETE SECTIONS SHALL BE SET ON A PREFORMED BITUMINOUS PLASTIC GASKET (RUB-R-NEK OR EZ STIK)
3. FILL LUG HOLES WITH BITUMINOUS MASTIC JOINT MATERIAL.
4. INSTALL MINIMUM 4" OF BEDDING MATERIAL UNDER STRUCTURE BOTTOM SECTION & FILL ENTIRE EXCAVATION ALL AROUND STRUCTURE UP TO C.L. OF PIPE WITH BEDDING AND HAUNCHING MATERIAL.
5. SANITARY MANHOLE (INCLUDING INSPECTION MANHOLES) FRAME AND COVER SHALL BE EAST JORDAN 102223 EMBOSSED WITH "SANITARY" AND "VILLAGE OF ROMEOVILLE". ALL JOINTS NEED TO BE EXTERNALLY WRAPPED WITH MacWRAP OR EQUAL. RUBBER GASKETED BOOTS ARE REQUIRED FOR THE MAIN AT MANHOLE WALL.
6. ALL MANHOLES LOCATED IN AREAS SUBJECT TO INUNDATION MUST HAVE WATERPROOF, BOLT-DOWN FRAMES AND LIDS.

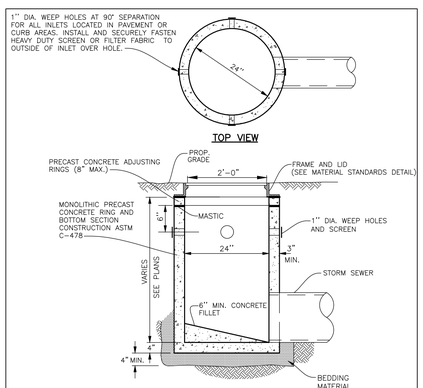
06-01-15
SANITARY MANHOLE DETAIL
S-SAN-MANHOLE



NOTES:
1. INSTALL MINIMUM 4" OF BEDDING MATERIAL UNDER STRUCTURE BOTTOM SECTION & FILL ENTIRE EXCAVATION ALL AROUND STRUCTURE UP TO C.L. OF PIPE WITH BEDDING AND HAUNCHING MATERIAL.
2. VALVE VAULT FRAME AND COVERS SHALL BE EAST JORDAN #105021 EMBOSSED WITH 1020A HD "WATER" AND "VILLAGE OF ROMEOVILLE".
3. STRUCTURE FRAME, ADJUSTING RINGS, & ALL CONCRETE SECTIONS SHALL BE SET ON AND SEALED WITH BITUMINOUS MASTIC JOINT MATERIAL.
4. FILL LUG HOLES WITH BITUMINOUS JOINING COMPOUND.
5. RUBBER GASKETED BOOTS ARE REQUIRED FOR ALL PENETRATIONS THROUGH THE MANHOLE WALL EXCEPT FOR DOGHOUSE MANHOLES (IF REQUIRED FOR PRESSURE CONNECTIONS) WHERE BRICK/MORTAR WITH HYDROPLUG CEMENT IS REQUIRED ON BOTH THE INSIDE AND OUTSIDE OF THE PENETRATION.

ROMEOVILLE NOTES:
1. ALL VALVE VAULTS SHALL BE A MINIMUM OF 5' DIAMETER.
2. FRAME AND COVER SHALL BE EAST JORDAN NO. 1022Z3 EMBOSSED WITH 1020A HD "WATER" AND "VILLAGE OF ROMEOVILLE".
3. ALL JOINTS NEED TO BE EXTERNALLY WRAPPED WITH MacWRAP OR EQUAL.
4. RUBBER GASKETED BOOTS ARE REQUIRED FOR ALL PENETRATIONS THROUGH THE MANHOLE WALL.
5. INTERNAL/EXTERNAL CHIMNEY SEALS AR REQUIRED.
6. MINIMUM OF TWO ADJUSTING RINGS (MIN. 6" ADJUSTING HEIGHT) AND MAXIMUM OF THREE RINGS (MAX 10" ADJUSTING HEIGHT), NO 1" OR 2" CONCRETE RING ARE ALLOWED. UNDER PAVED AREAS, TOP RING SHOULD BE RUBBER. USE ONE (1) EFW INFRA-RISER RUBBER COMPOSITE ADJUSTMENT RISERS (MINIMUM 2" THICK)
7. MANHOLES MUST CONFORM TO THE LATEST REQUIREMENTS OF ASTM C478.
8. NEVER TRANSPORT SECTIONS TO THE SITE UNTIL THEY CURED FOR AT LEAST TEN (10) DAYS.
9. MARK EACH PEACE PLAINLY WITH MANHOLE NUMBERS AND DATE OF MANUFACTURE SO IT CAN BE INSTALLED IN THE PROPER LOCATION, AS SHOWN ON THE PLANS.
10. MAKE SURE FACTORY-INSTALLED CUTOUTS IN THE BOTTOM SECTION ARE APPROPRIATE FOR THE PIPE BEING LAID.
11. PIPE CONNECTIONS AT MANHOLE – CUTOUTS SHOULD BE EQUIPPED WITH RUBBER BOOTS TO ENSURE A WATERTIGHT CONNECTION. MATERIAL SHALL BE EQUAL TO KOR-N-SEAL CONNECTOR, AS MANUFACTURED BY NPC, INC.
12. JOINT SEALANT – FLEXIBLE RUBBER SEALANT FOR JOINTS IN PRE-CAST SECTIONS SHALL PROVIDE PERMANENTLY FLEXIBLE WATERTIGHT JOINTS, SHALL REMAIN WORKABLE OVER A WIDE TEMPERATURE RANGE AND SHALL NOT SHRINK, HARDEN OR OXIDIZE UPON AGING. MATERIAL SHALL BE EQUAL TO TYLOX SUPERSEAL AND MEET ASTM C443 AND ASTM C361 REQUIREMENTS.
13. THE FRAME FOR THE LID SHALL BE INSTALLED WHEN CONE SECTION IS CAST.
14. HEAT-SHRINKABLE ENCAPSULATION FOR EXTERNAL WRAPPING OF ALL JOINTS; WRAPID SEAL AS MANUFACTURED BY CANUSA CPS, BIDCO EXTERNAL JOINT WRAP AS MANUFACTURED BY NPC OR APPROVED EQUAL.

06-01-15
PRESSURE CONNECTION VAULT DETAIL
S-WM-PRESSURECONNECT-V.V.



NOTES:
1. INSTALL MINIMUM 4" OF BEDDING MATERIAL UNDER STRUCTURE BOTTOM SECTION & FILL ENTIRE EXCAVATION ALL AROUND STRUCTURE UP TO C.L. OF PIPE WITH BEDDING AND HAUNCHING MATERIAL.
2. PIPE OPENINGS SHALL BE CAST IN TO WALL.
3. STRUCTURE FRAME, ADJUSTING RINGS, AND ALL CONCRETE SECTIONS SHALL BE SET ON AND SEALED WITH BITUMINOUS MASTIC JOINT MATERIAL AND MORTARED ON INSIDE IF STRUCTURE LIES IN PAVEMENT.
4. FILL LUG HOLES WITH BITUMINOUS JOINING COMPOUND.
5. CURB & GUTTER TYPE FRAME AND GRATES OF INLETS IN PARKING LOT CORNERS SHALL BE LOCATED 2'-0" FROM THE FACE OF ADJACENT CURB TO CENTERLINE OF FRAME & GRATE.

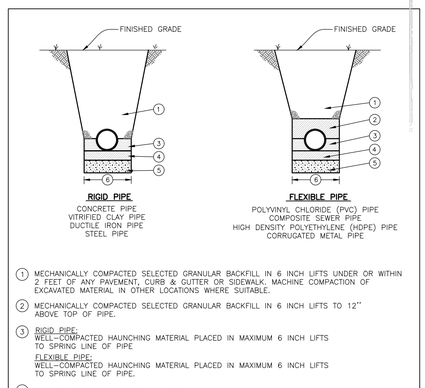
06-01-15
INLET DETAIL
S-ST-INLET

MATERIAL STANDARDS

ITEM	BRAND	PRODUCT
FIRE HYDRANTS (TRAFFIC MODEL)	EAST JORDAN	5BR250
GATE VALVES SPECIFY SIZE NON-RISING STEM, 2" NUT, M.J., OPEN LEFT	EAST JORDAN	C-515
VALVE BOXES 3 PIECE	EAST JORDAN TYLER/UNION	SCREW ADJUSTING EXTENSION TYPE
MANHOLES/CATCHBASINS/INLETS IN OPEN AREAS AND PAVEMENT (SELF-SEALING LID WITH PROPER UTILITY MARKINGS)	NEENAH EAST JORDAN *1 SWALES AND DITCHES	R-2502 C R-4340 B
MANHOLES/CATCH BASINS/INLETS IN COMBINATION CURB & GUTTER (BICYCLE SAFE)	NEENAH ROLL/MOUNTABLE CURB B6.12 CURB	R-3501-D2A R-3281A *-3281-AL

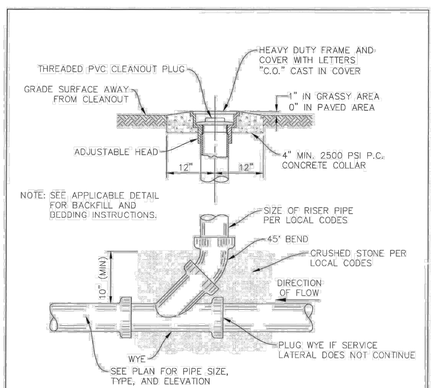
*1 WHEREVER STORMWATER COULD POSSIBLY ENTER STORM STRUCTURE

06-01-15
MATERIAL STANDARDS
S-MS-MATERIALSTNDS



1. MECHANICALLY COMPACTED SELECTED GRANULAR BACKFILL IN 6 INCH LIFTS UNDER OR WITHIN 2 FEET OF ANY PAVEMENT, CURB & GUTTER OR SIDEWALK. MACHINE COMPACTION OF EXCAVATED MATERIAL IN OTHER LOCATIONS WHERE SUITABLE.
2. MECHANICALLY COMPACTED SELECTED GRANULAR BACKFILL IN 6 INCH LIFTS TO 12" ABOVE TOP OF PIPE.
3. RIGID PIPE:
   WELL-COMPACTED HAUNCHING MATERIAL PLACED IN MAXIMUM 6 INCH LIFTS TO SPRING LINE OF PIPE
   FLEXIBLE PIPE:
   WELL-COMPACTED HAUNCHING MATERIAL PLACED IN MAXIMUM 6 INCH LIFTS TO SPRING LINE OF PIPE.
4. 4" WELL-COMPACTED BEDDING MATERIAL
5. UNSUITABLE MATERIAL TO BE REMOVED AND REPLACED WITH GRANULAR FOUNDATION MATERIAL WHERE SOIL CONDITIONS WARRANT
6. TRENCH WIDTH:
   TRENCH DEPTH OF 5 FEET AND LESS, WITHOUT PROTECTION
   OUTSIDE DIAMETER + 12 INCHES ON EACH SIDE OF THE PIPE.
   TRENCH DEPTH OF 5 FEET AND LESS, WITH PROTECTION
   OUTSIDE DIAMETER + 18 INCHES ON EACH SIDE OF THE PIPE.
   TRENCH DEPTH OF GREATER THAN 5 FEET
   OUTSIDE DIAMETER + 18 INCHES ON EACH SIDE OF THE PIPE.

06-01-15
PIPE INSTALLATION DETAIL
S-MS-PIPEINSTALL



06-01-15
SANITARY AND STORM PVC CLEANOUT DETAIL
S-SAN-ST-CLEANOUT

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

ANTHONY A. GRABIANOWSKI
062-070623
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXP. 11-30-21
SEAL

DRAWN BY	REVISIONS	DATE
		07-09-21

REVISED PER VILLAGE COMMENTS

Manhard CONSULTING LTD
One Overlook Point, Suite 250, Lincolnshire, IL 60069 p:847.634.5500 f:847.634.0066
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners
manhard.com

PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD
CONSTRUCTION DETAILS

ISSUE FOR PERIT - NOT FOR CONSTRUCTION

PROJ. MGR.:	ZAG
PROJ. ASSOC.:	EAF
DRAWN BY:	EAF
DATE:	4-30-21
SCALE:	N.T.S

SHEET 8 OF 11
TAD.RVIL02

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41–2.01 PROTECTION OF WATER MAIN AND WATER SERVICE LINES

41–2.01A GENERAL

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

41–2.01B HORIZONTAL SEPARATION – WATER MAINS AND SEWERS

(1.) Water mains shall be located at least ten (10) feet (3.1 m) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

(2.) Water mains may be located closer than ten (10) feet (3.1 m) to a sewer line when:

(a) local conditions prevent a lateral separation of ten (10) feet (3.1 m); and

(b) the water main invert is at least eighteen (18) inches (460 mm) above the crown of the sewer; and

(c) the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

(3.) When it is impossible to meet (1) or (2) above, both the water main and drain or sewer shall be constructed of slip–on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling. See Standard Drawing No. 18.

02–01–19
WATER AND SEWER SEPARATION REQUIREMENTS (HORIZONTAL SEPARATION)
S–WM–SEP–HORIZONTAL

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41–2.01C VERTICAL SEPARATION – WATER MAINS AND SEWERS

(1.) A water main shall be separated from a sewer so that its invert is a minimum of eighteen (18) inches (460mm) above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within ten (10) feet (3.1m) horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

(2.) Both the water main and sewer shall be constructed of slip–on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction when:

(a) it is impossible to obtain the proper vertical separation as described in (1) above; or

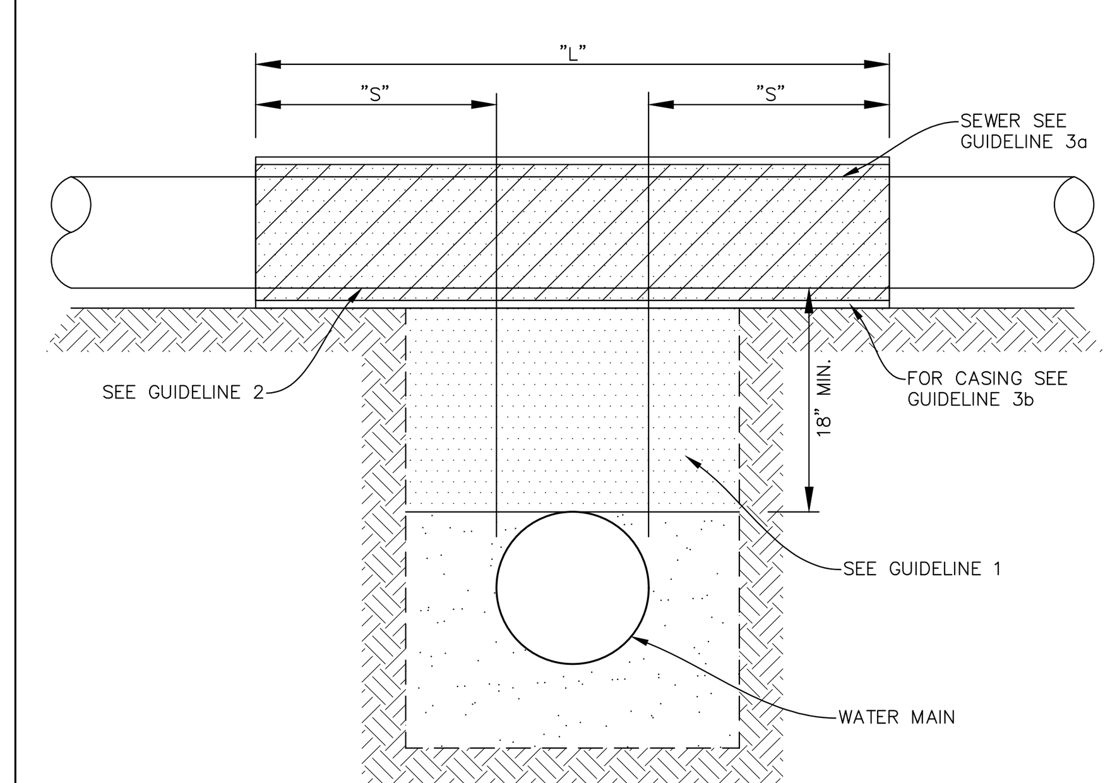
(b) the water main passes under a sewer or drain.

(3.) A vertical separation of eighteen (18) inches (460 mm) between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the main, as shown on the Plans or as approved by the ENGINEER.

(4.) Construction of water main quality pipe shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least ten (10) feet (3.1 m) See Standard Drawings No. 19–23.

02–01–19
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S–WM–SEP–VERTICAL

SEWER LINE WITH 18" VERTICAL SEPARATION ABOVE WATER MAIN

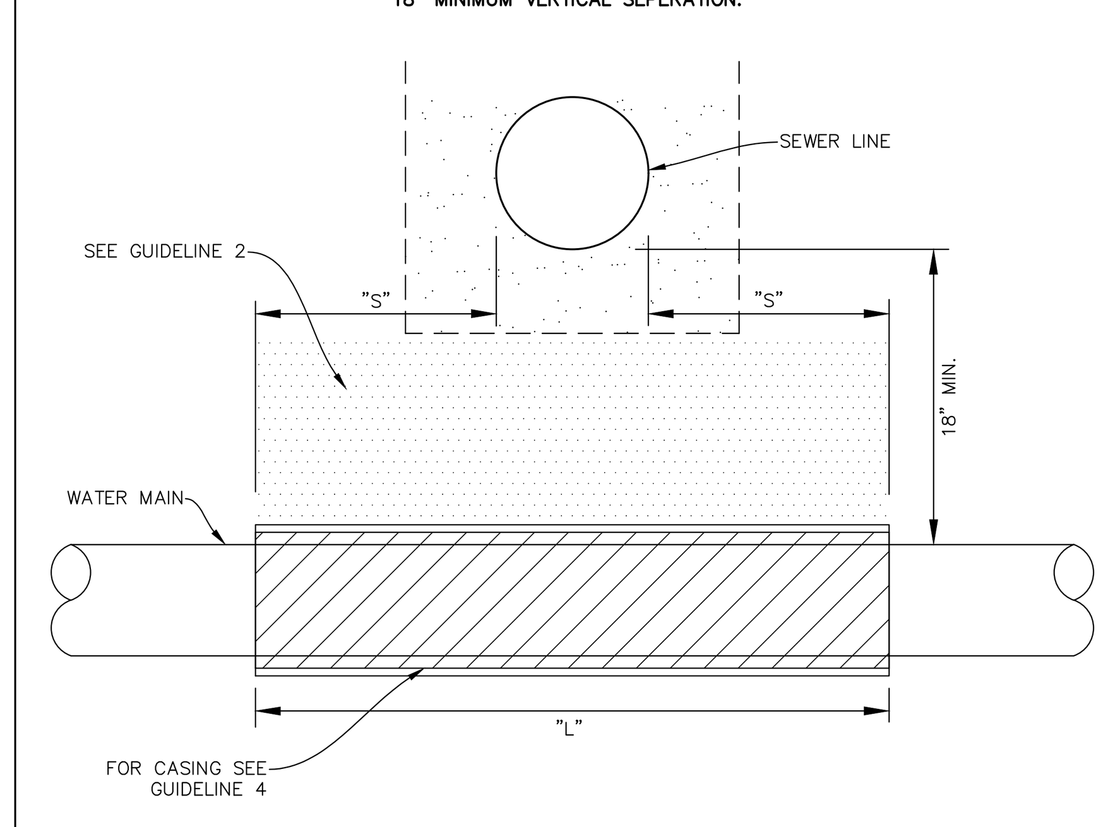


NOTE: "S" = THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING WATER MAIN.

GUIDELINES:
1. IF SELECT GRANULAR BACKFILL EXISTS: REMOVE WITHIN WIDTH OF SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L" FEET.
3. (a) CONSTRUCT "L" FEET OF SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR:
(b) USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF SEWER AND SEAL ENDS OF CASING.

06–01–15
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S–WM–SEP–VERTICAL–1

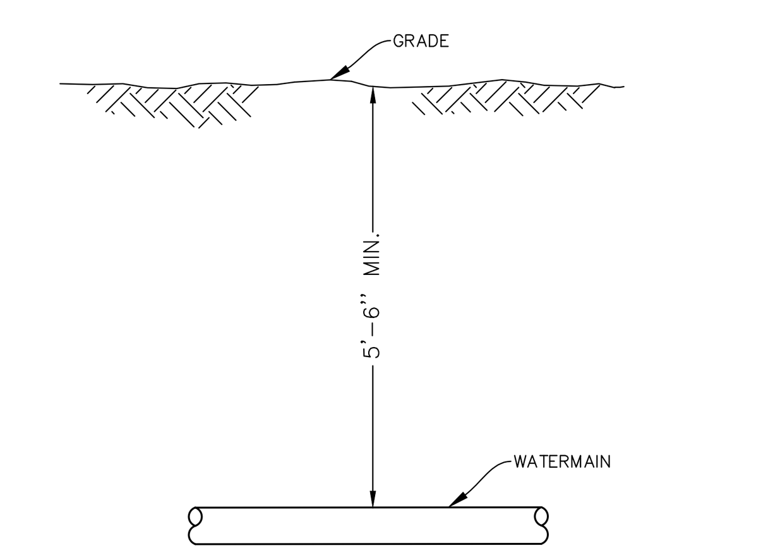
WATER MAIN BELOW SEWER LINE WITH 18" MINIMUM VERTICAL SEPERATION.



NOTE: "S" = THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING SEWER LINE.

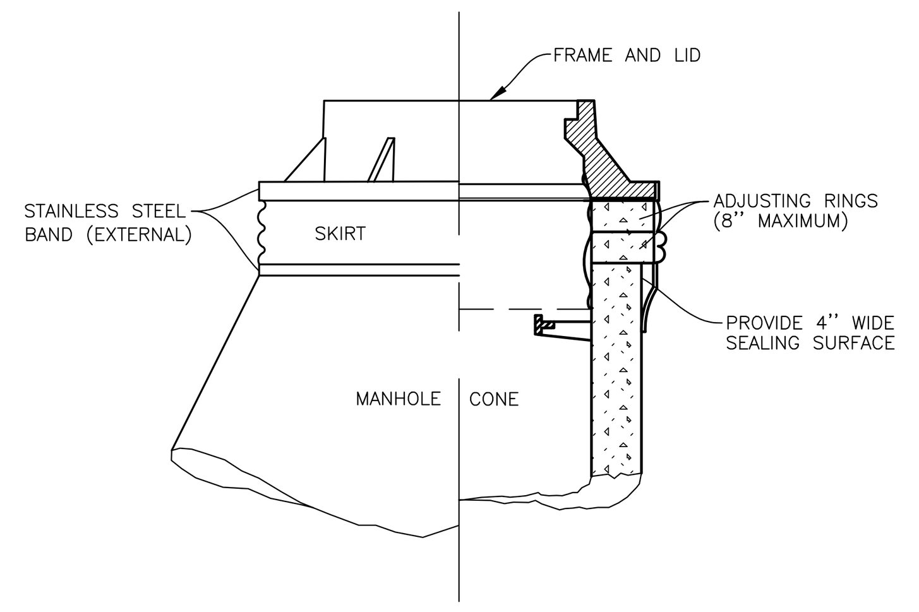
GUIDELINES:
1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L" FEET.
2. IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF SEWER LINE TRENCH AND REPLACE WITH SELECT SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. PROVIDE ADEQUATE SUPPORT FOR SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
4. USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF WATER MAIN AND SEAL ENDS OF CASING.

06–01–15
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S–WM–SEP–VERTICAL–2



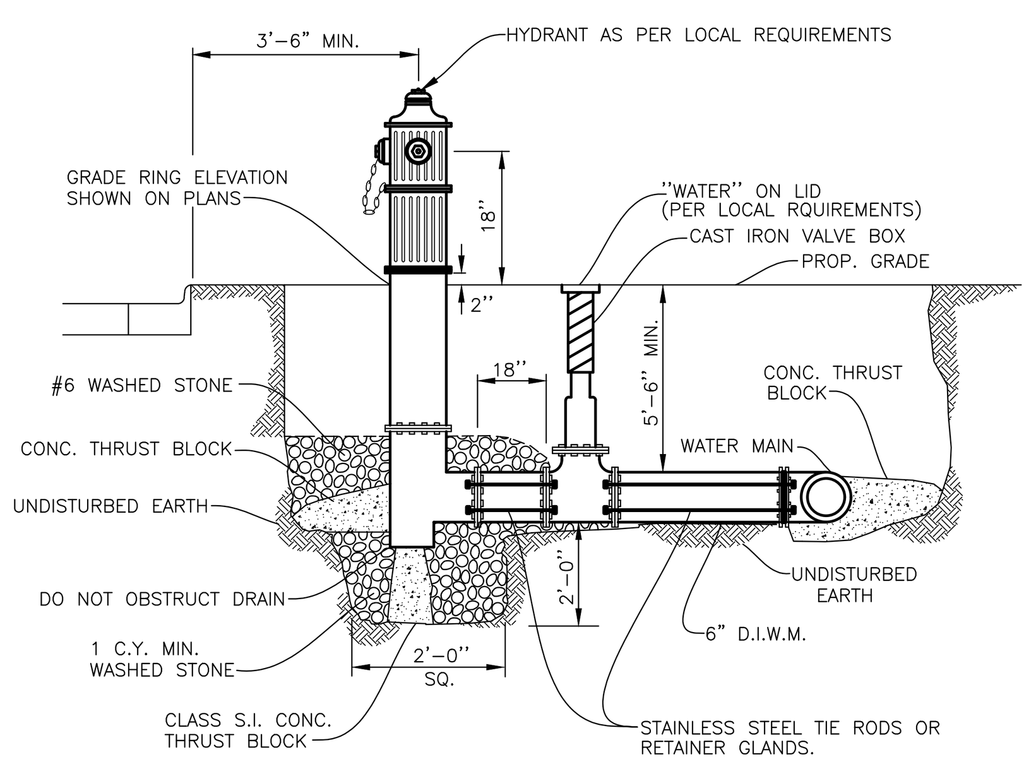
NOTES:
1. ALL WATERMAINS MUST BE WRAPPED IN V–BIO POLYETHYLENE USING ALTERNATE MODIFIED METHOD A.
2. ALL JOINTS MST BE MEGALUGS (EBAA IRON) ONLY (NO CONCRETE THRUST BLOCKS)

06–01–15
TYPICAL WATERMAIN DETAIL
S–WM–SEP–VERTICAL–3



NOTES:
1. ELASTOMERIC BANDS (CHIMNEY SEALS) SHALL BE INSTALLED ON ALL SANITARY SEWAGE SYSTEM MANHOLES.
2. ''CRETEX'' EXTERNAL OR INTERNAL SEALS ARE RECOMMENDED; OTHER PRODUCTS OR OTHER DESIGN SOLUTIONS SHALL REQUIRE THE APPROVAL OF THE JURISDICTIONAL GOVERNING ENTITY.
3. (ELASTOMERIC BANDS) CHIMNEY SEALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

DATE?
ELASTOMERIC BAND DETAIL
JOB–CODE?



NOTES:
1. ALL HYDRANTS SHALL BE EAST JORDAN WATER MASTER 5BR250, WITH 6" PLAIN–END SHOE WITH ATTACHED 6" RESILIENT WEDGE MECHANICAL JOINT VALVE, AND MUST INCLUDE STORZ PUMPER CONNECTION ALONG WITH TWO 2–1/2" HOSE CONNECTIONS.
2. VALVES MUST BE AMERICAN FLOW OR EAST JORDAN (FLOWMASTER). ALL SIZES SHOULD BE RESILIENT–SEALED GATE VALVES.
3. ALL HYDRANTS TO FACE STREET AND LOCATED MINIMUM 3'–6" FROM BACK OF CURB TO THE CENTERLINE OF HYDRANT.
4. HYDRANTS TO BE PAINTED IN ACCORDANCE WITH LOCAL REQUIREMENTS.
5. PICTURE OF DETAIL IS FOR REFERENCE ONLY AND IS NOT TO BE USED IN ROMEOVILLE

06–01–15
FIRE HYDRANT DETAIL
S–WM–HYDRANT

DUCTILE IRON JOINT RESTRAINT TABLE

JOINT RESTRAINT TABLE – Unless additional pipe restraint is shown on the plans, the restrained length measured from the fitting joint to the end of the last restrained joint pipe for pipe fittings shall be equal or exceed those tabulated below:

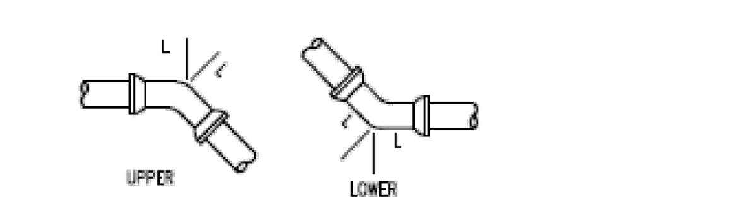
RESTRAINED LENGTH – FEET
FITTINGS
( ) = Restrained lengths increased by 75% when using polyethylene wrapped pipe.

Pipe Size (inches)	Tee Branch	90 Elbow	45 Elbow	22.5 Elbow	11.25 Elbow	Dead End
4	9 (16)	10 (18)	5 (9)	2 (3)	1 (2)	15 (26)
6	17 (29)	14 (25)	6 (11)	3 (5)	2 (3)	21 (37)
8	24 (42)	18 (32)	8 (14)	4 (7)	2 (3)	27 (47)
10	30 (52)	22 (39)	10 (18)	5 (9)	3 (5)	33 (58)
12	36 (63)	26 (46)	11 (19)	6 (11)	3 (5)	38 (67)
14	42 (74)	29 (51)	12 (21)	6 (11)	3 (5)	44 (77)
16	48 (84)	33 (58)	14 (25)	7 (12)	4 (7)	49 (86)
18	53 (93)	37 (65)	16 (28)	8 (14)	4 (7)	54 (95)
20	58 (102)	40 (70)	17 (29)	8 (14)	4 (7)	60 (105)
24	104 (182)	71 (124)	30 (52)	15 (26)	8 (14)	105 (184)
30	125 (219)	86 (151)	36 (63)	18 (32)	9 (16)	126 (200)
36	146 (256)	99 (173)	42 (74)	21 (37)	10 (18)	147 (257)

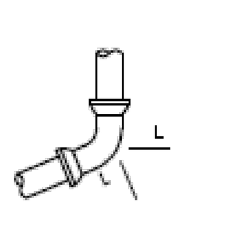
TEST PRESSURES BASED ON 150 PSI

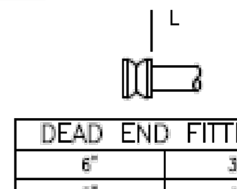
Village of Romeoville - Minimum chlorination standards:

a. Gas chlorine must be used for disinfection.
b. The chlorination contractor must call 815-886-1870 a minimum of 24-hours in advance to schedule chlorination.
c. Only Village of Romeoville employees shall operate water system valves and turn on/off sampling whips while samples are being collected.
d. All chlorination and safety equipment must meet or exceed the standards and recommendations set by The Chlorine Institute, Inc.
e. The chlorinator must be a licensed plumber or certified Illinois water operator with a minimum of 5 years experience working with chlorine disinfection of water supply lines.
f. The chlorination contractor must have two people present to chlorinate. One to monitor the cylinder and one to monitor in the field.
g. The chlorination contractor must be bonded and insured, and have proof of both on file with the Village.
h. The chlorination contractor must have updated 24-hour emergency phone numbers on file with the Village.
i. The chlorination contractor must comply with state and federal regulations regarding transportation and handling of chlorine cylinders:
   - Shipping and emergency papers for every job location
   - Proof of insurance for hauling and handling chlorine gas
   - Commercial driver's license with Hazmat endorsement and medical card
   - Copy of Emergency Response Guidebook in vehicle
   - Hazmat certificate of registration
   - Hazardous materials placard displayed on vehicle
   - Cylinder strapped upright in truck
j. Under no circumstances will chlorine contractors be allowed to apply heat to the chlorine cylinder (i.e. hot baths, propane torches, etc.). While the cylinder is being used it must be in a vertical position, as well as being affixed to a solid object.
k. Prior to chlorination, the chlorination contractor must provide a detailed written chlorination and flushing plan to the Village for review and written approval.
l. At any time, the Village or its authorized representative may ask for proof of any or all of the above information. Please contact the Village of Romeoville Public Works Department (815-886-1870) with any questions.



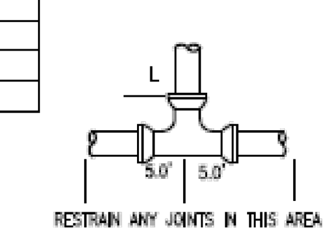
VERTICAL FITTINGS		
	45° UPPER	45° LOWER
6"	13'	11'
8"	16'	14'
12"	23'	19'





DEAD END FITTINGS	
6"	30'
8"	40'
12"	56'

HORIZONTAL FITTINGS			
	22.5°	45°	90°
6"	13'	11'	11'
8"	16'	14'	14'
12"	23'	19'	19'



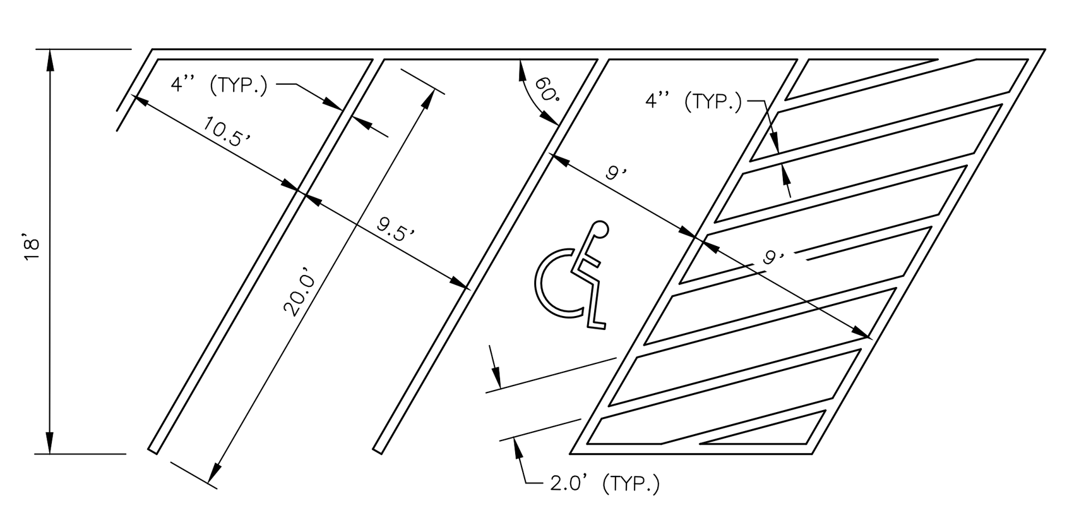
REDUCER	
12"X6"	41'
12"X8"	30'
8"X6"	17'

TEES		
	LATERAL/BRANCH	RESTRAINED JOINTS ON BRANCH
6"	6"	1'
8"	6"	1'
8"	8"	5'
12"	6"	1'
12"	8"	1'
12"	12"	21'

* NOTE: EVERY JOINT ON ANY FITTING SHALL BE RESTRAINED

ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH VILLAGE STANDARD SPECIFICATIONS FOR IMPROVEMENTS.

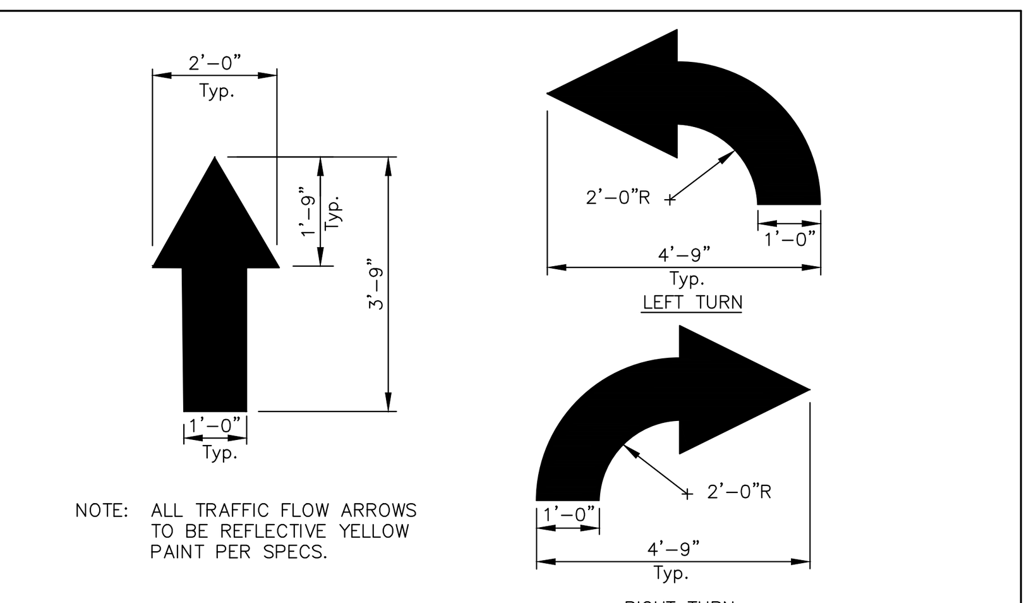
REQUIRED PIPE LENGTH FOR RESTRAINED JOINTS



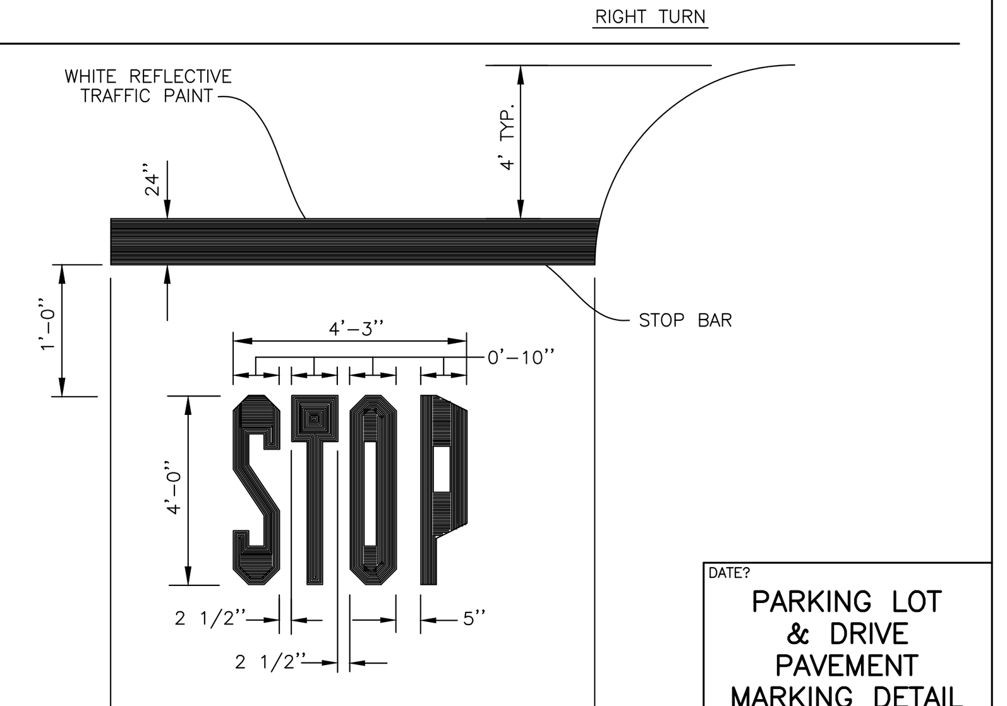
60° STALL

NOTE:
1. ACCESSIBLE PARKING STALLS TO BE STRIPED WITH YELLOW PAINT, MANUFACTURED SPECIFICALLY FOR PAVEMENT STRIPING.
2. THE PREFERRED COLOR FOR NON–ADA STALL PAINT IS A HIGH QUALITY WHITE PAINT, MANUFACTURED SPECIFICALLY FOR PAVEMENT STRIPING

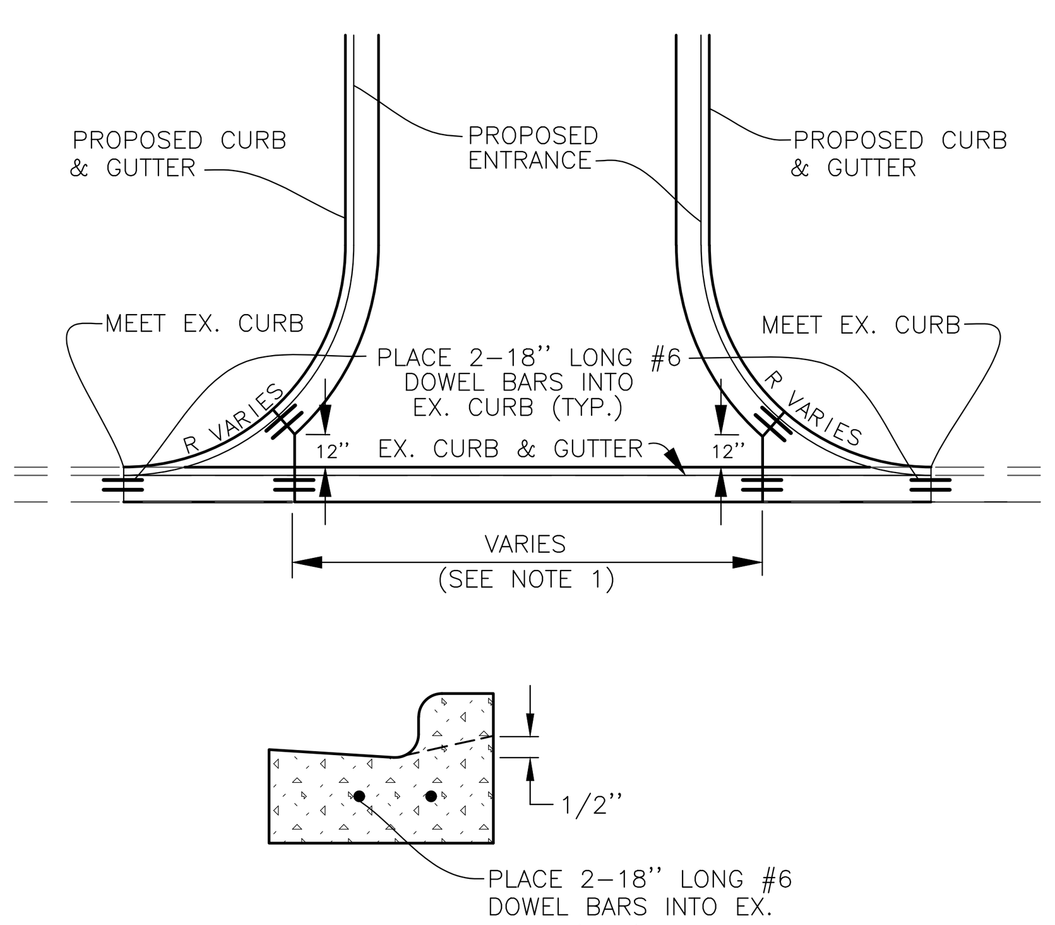
DATE?
TYPICAL 60° PARKING STRIPING DETAIL
JOB–CODE?



NOTE: ALL TRAFFIC FLOW ARROWS TO BE REFLECTIVE YELLOW PAINT PER SPECS.



DATE?
PARKING LOT & DRIVE PAVEMENT MARKING DETAIL
JOB–CODE?



NOTE:
THE CONTRACTOR SHALL SAWCUT, REMOVE AND REPLACE THE EXISTING CURB AND GUTTER WITH A DEPRESSED CURB AND GUTTER SECTION AND SHALL REMOVE THE EXISTING PAVEMENT AS NEEDED SO AT TO PROVIDE A SMOOTH TRANSITION.

DATE?
COMMERCIAL DRIVEWAY ENTRANCE DETAIL
JOB–CODE?

Final Acceptance and Testing of Sanitary Sewer

Before final acceptance, the sanitary sewers shall be tested in accordance with Section 31-1.11 of the "Standard Specifications for Water and Sewer Main Construction in Illinois". Specifically, all pipelines constructed of flexible materials shall be subject to air exfiltration tests, televising test, and deflection test. The deflection test shall be performed no sooner than thirty (30) days of the backfilling operation and shall consist of measuring the pipe for vertical ring deflection. Maximum ring deflection of the pipeline under load shall be limited to five (5) percent of the internal pipe diameter. All pipe exceeding this deflection shall be considered to have reached the limit of its serviceability and shall be re-laid or replaced by the developer. Deflection testing shall be accomplished by pulling a mandrel, sphere, or pin-type "go / no-go" device, with a diameter equal to ninety-five (95) percent of the undeflected inside diameter of the flexible pipe, through the pipeline. In addition, all sanitary sewer having a diameter of eight (8) inches or greater shall be televised. Copies of all video tapes must be submitted to the Village of Romeoville.

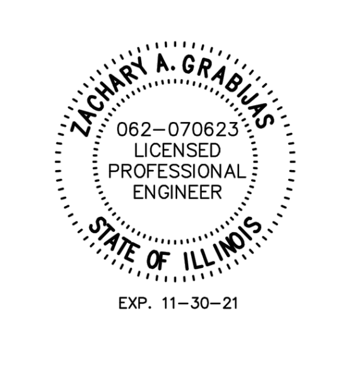
Final Testing of Sanitary Sewer Manholes

Vacuum Testing shall be carried out immediately after assembly and prior to backfilling of manholes that are up to seventy-two (72) inches in diameter. All lift holes shall be plugged with a non-shrink grout, or rubber plug. The manhole frame and adjusting rings and chimney seals shall be in place before testing. No grout shall be placed in the horizontal joints. All pipes entering the manhole shall be plugged, taking care to securely brace the plugs from being drawn into the manhole with the vacuum testing. Vacuum testing shall test all manholes for leakage. A vacuum of ten (10) inches of mercury shall be placed on the manhole and the time measured for the vacuum to drop to nine (9) inches of mercury. The vacuum drop shall not exceed the requirements shown in Table 1 of ASTM C1244-02. If testing fails, developer shall seal all leaks and retest until acceptable. The testing shall be completed prior to backfilling (whenever possible) so that any leaks can be found and fixed externally, and to give the horizontal manhole joints an opportunity to tighten.

Flow Monitoring prior to Acceptance

The developer will be required to monitor the flowrate from the site for a period of two months (encompassing at least two major storm events) to identify any excessive inflow/infiltration occurring in the system. The data must be submitted to the Village of Romeoville prior to acceptance of the public improvements.

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



EXP. 11–30–21

SEAL

DATE	REVISIONS	DRAWN BY
07–09–21	REVISED PER VILLAGE COMMENTS	

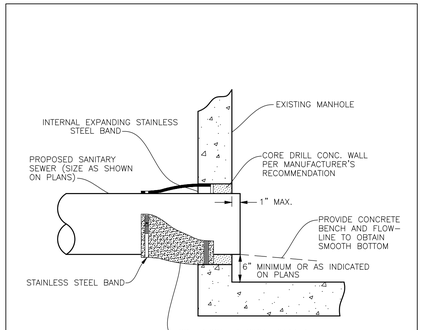
Manhard CONSULTING LTD
One Overlook Point, Suite 290, Lincolnshire, IL 60069 ph:847.634.5550 fx:847.634.0095 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD
CONSTRUCTION DETAILS

PROJ. MGR.: ZAG
PROJ. ASSOC.: EAF
DRAWN BY: EAF
DATE: 4–30–21
SCALE: N.T.S.

SHEET 9 OF 11
TAD.RVIL02

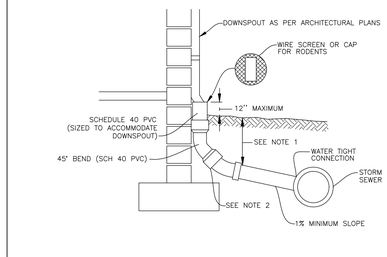
ISSUE FOR PERIT - NOT FOR CONSTRUTION



DATE?

PIPE TO EXISTING SANITARY MANHOLE CONNECTOR DETAIL

JOB-CODE?

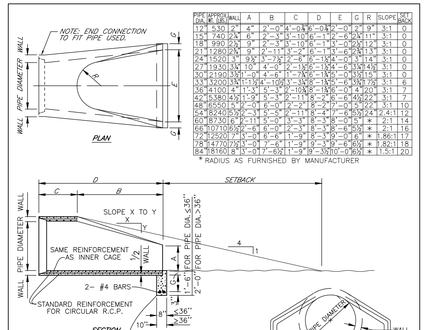


NOTES:
1. FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
2. A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.

DATE?

DOWNSPOUT COLLECTOR DETAIL

JOB-CODE?



PIPE DIA. (IN.)	WALL	A	B	C	D	E	G	R	SLOPE	QTY BLOCK
12	530	12"	4"	2'-0"	1'-0"	0'-8"	0'-3"	0'-1"	4 : 1	9
15	740	12"	6"	2'-0"	1'-10"	0'-8"	0'-3"	0'-2"	3 : 1	11
18	990	12"	9"	2'-3"	1'-10"	0'-8"	0'-3"	0'-2"	3 : 1	14
21	1280	12"	9"	2'-3"	1'-11"	0'-8"	0'-3"	0'-2"	3 : 1	15
24	1520	13"	9"	2'-3"	2'-0"	0'-8"	0'-3"	0'-2"	3 : 1	14
27	1930	13"	10"	2'-3"	2'-0"	0'-8"	0'-3"	0'-2"	3 : 1	14
30	2190	13"	10"	2'-4"	2'-0"	0'-8"	0'-3"	0'-2"	3 : 1	15
33	3000	15"	13"	2'-4"	2'-0"	0'-8"	0'-3"	0'-2"	3 : 1	16
36	4100	14"	13"	2'-5"	2'-0"	0'-8"	0'-3"	0'-2"	4 : 1	20
42	5380	14"	19"	2'-5"	2'-0"	1'-8"	0'-3"	0'-2"	5 : 1	7
48	6500	15"	20"	2'-6"	2'-0"	1'-8"	0'-3"	0'-2"	5 : 1	10
54	8240	16"	21"	2'-5"	2'-0"	1'-8"	0'-3"	0'-2"	4 : 1	12
60	8730	16"	21"	2'-5"	2'-0"	1'-8"	0'-3"	0'-2"	*	2 : 1 14
66	10710	16"	22"	2'-6"	2'-0"	1'-8"	0'-3"	0'-2"	*	2 : 1 16
72	12620	16"	24"	2'-6"	2'-0"	1'-8"	0'-3"	0'-2"	*	3 : 1 17
78	14770	16"	24"	2'-6"	2'-0"	1'-8"	0'-3"	0'-2"	*	3 : 1 18
84	18160	16"	24"	2'-6"	2'-0"	1'-8"	0'-3"	0'-2"	*	3 : 1 20

* RADIUS AS FURNISHED BY MANUFACTURER

NOTES:
1. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-170 CLASS III, WALL B REINFORCED CONCRETE PIPE.
2. PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
3. THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE CONSTRUCTED IN ACCORDANCE WITH IDOT STANDARD SPECIFICATIONS
4. ALL FLARED END SECTIONS SHALL HAVE GRATINGS AS PER IDOT STANDARD.
5. PROVIDE CLAY DAM UNDER COLLAR AND AROUND UPSTREAM END OF FES AND FIRST PIPE THE FULL WIDTH OF TRENCH AND 10 FEET LONG AT LOCATIONS WHERE THEY DISCHARGE INTO A DETENTION BASIN.
6. PROVIDE SETBACK FROM NORMAL WATER LEVEL OR TOE OF SIDE SLOPE ON DRY BASINS, STREAMS OR CHANNELS FOR PIPE 33" AND LARGER.

DATE?

CONCRETE FLARED END SECTION DETAIL

JOB-CODE?

RIP-RAP

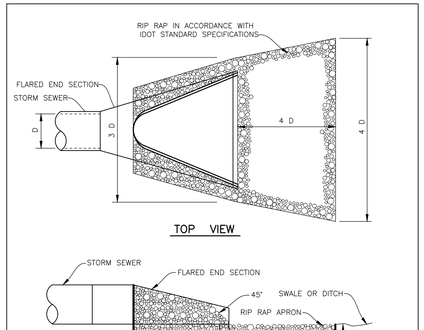
PIPE DIAMETER (IN.) D	STONE RIP-RAP							BEDDING
	QUALITY DESIGNATION	GRADATION NUMBER RR	MINIMUM THICKNESS (IN.) A	MINIMUM LENGTH (FT.) 4D	WEIGHT RANGE (#)	WEIGHT AVERAGE (#)	SIZE AVERAGE (IN.)	MINIMUM THICKNESS (IN.)
12"	B	3	8"	4'	1-50	10	4.5"	N/A
15"	B	3	8"	5	1-50	10	4.5"	N/A
18"	B	4	16"	6'	1-150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

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

DATE?

STONE RIP RAP DETAIL

JOB-CODE?



DATE?

RIP RAP DETAIL (DISCHARGE TO DITCH)

JOB-CODE?

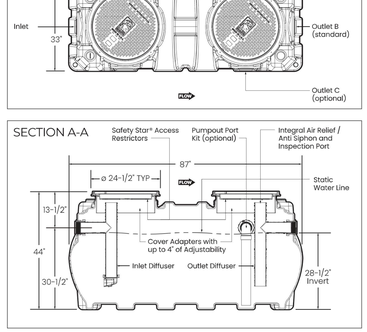
SPECIFICATIONS

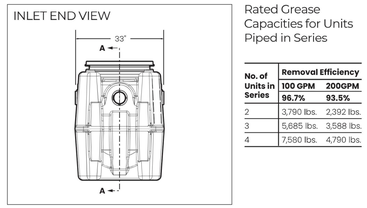
NOTES
1. 4" FPT with 4" plain end adapters, single inlet and triple outlet
2. Unit weight - w/cast iron covers: 376 lbs.; w/composite covers: 266 lbs. (For wet weight add 2,310 lbs.)
3. Maximum operating temperature: 150° F continuous
4. Capacities - Liquid: 277 gal.; @100 GPM - Grease: 1,895 lbs. @200 GPM - Grease: 1,196 lbs. Solids: 69 gal.
5. This unit does not require flow control for 100 GPM applications. Built-in Flow control is provided for 200 GPM applications. For series installations, only install flow control on the first unit in the series if necessary.
6. For gravity drainage applications only.
7. Do not use for pressure applications.
8. Cover placement allows full access to tank for proper maintenance.
9. Vent not required unless per local code.
10. Engineered inlet and outlet diffusers are removable to inspect / clean piping.
11. Integral air relief / Anti-siphon / Sampling access.
12. Adjustable cover adapters provide up to 4" of additional height.
13. Fixed outlet models (-FO) have inlet and outlet permanently welded at the factory in the straight-through (B) positions.
14. Flow rates are based on 2-minute drain time.
15. Safety Star®, access restrictor built into each cover adapter, prevents accidental entry to tanks (450 lb rating).

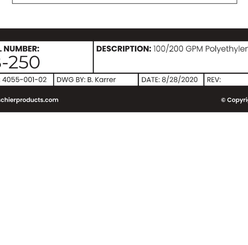
DIFFUSION FLOW TECHNOLOGY
The inlet diffuser reduces turbulence, creates laminar flow and allows the entire tank volume to be utilized for efficient grease separation and minimal disturbance to existing grease and sediment layers. The inlet diffuser can be attached to any of the three inlets provided to ease job site piping layouts. The integral air relief / anti-siphon at the outlet diffuser top allows pressure stabilization within the unit during operation. The outlet diffuser can easily be attached to any of the three outlets provided to ease job site piping layouts.

ENGINEER SPECIFICATION GUIDE
Schier Great Basin™ grease interceptor model # GB-250 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene. Interceptor shall be furnished for above or below grade installation. Interceptor shall be certified to ASME A112.14.3 (Type D for 100 GPM, type C for 200 GPM) and CSA B481.1, with adjustable cover adapters, Safety Star® access restrictor built into each cover adapter, built-in flow control (for 200 GPM only) and three outlet options. Interceptor flow rate shall be 100 or 200 GPM. Interceptor grease capacity shall be 1,895 lbs. @ 100 GPM or 1196 GPM @ 200 GPM. Cover shall provide water/ gas-tight seal and have minimum 16,000 lbs. load capacity.

CERTIFIED PERFORMANCE
Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.







Rated Grease Capacities for Units Piped in Series

No. of Units in Series	Removal Efficiency 100 GPM 96.7%	200GPM 93.5%
2	3,790 lbs.	2,392 lbs.
3	5,685 lbs.	3,588 lbs.
4	7,580 lbs.	4,790 lbs.

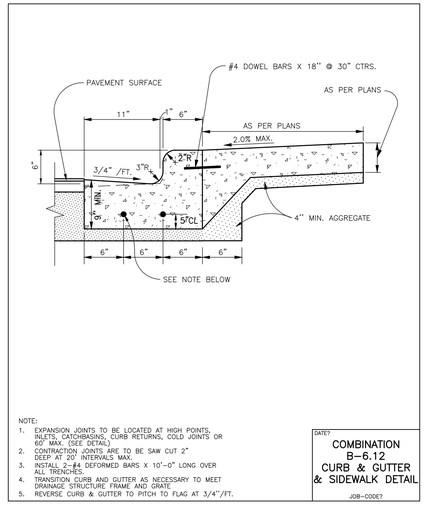
SCHIER

MODEL NUMBER: GB-250

DESCRIPTION: 100/200 GPM Polyethylene Grease Interceptor

PART #: 4055-001-02 | DWG BY: B. Karrer | DATE: 8/28/2020 | REV: | ECO:

9500 Woodend Road | Edwardsville, KS 66111 | 913-951-3300 | schierproducts.com

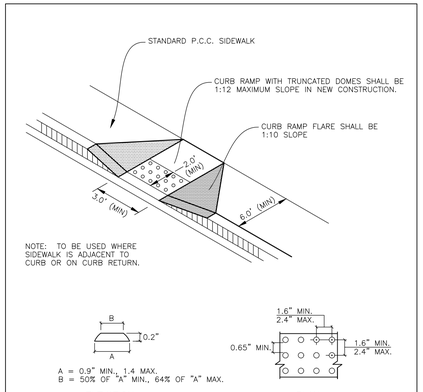


NOTE:
1. EXPANSION JOINTS TO BE LOCATED AT HIGH POINTS, INLETS, CATCHBASINS, CURB RETURNS, COLD JOINTS OR 60' MAX. (SEE DETAL)
2. CONTRACTION JOINTS ARE TO BE SAW CUT 2" DEEP AT 20' INTERVALS MAX.
3. INSTALL 2-#4 DEFORMED BARS X 10'-0" LONG OVER ALL TRENCHES.
4. TRANSITION CURB AND GUTTER AS NECESSARY TO MEET DRAINAGE STRUCTURE FRAME AND GRATE
5. REVERSE CURB & GUTTER TO PITCH TO FLAG AT 3/4"/FT.

DATE?

COMBINATION B-6.12 CURB & GUTTER & SIDEWALK DETAIL

JOB-CODE?

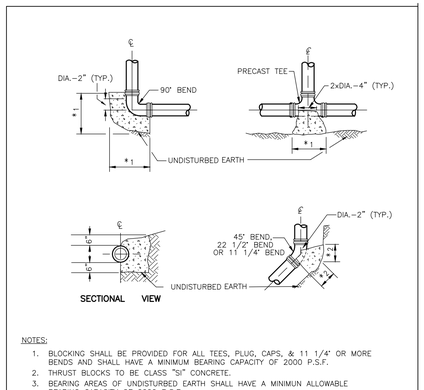


NOTES:
1. DETECTABLE WARNINGS SHALL COMPLY WITH CHAPTER 7, SECTION 705 OF THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. DETECTABLE WARNINGS REQUIRED FULL WIDTH & DEPTH OF RAMP
3. WARNING SURFACE SHALL BE EAST JORDAN INSERTS
4. SURFACE SHALL BE BRICK RED POWDER COATING RAL3016

DATE?

HANDICAPPED RAMP DETAIL

JOB-CODE?



NOTES:
1. BLOCKING SHALL BE PROVIDED FOR ALL TEES, PLUG, CAPS, & 11 1/4° OR MORE BENDS AND SHALL HAVE A MINIMUM BEARING CAPACITY OF 2000 P.S.F.
2. THRUST BLOCKS TO BE CLASS "B" CONCRETE.
3. BEARING AREAS OF UNDISTURBED EARTH SHALL HAVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 P.S.F.
4. BEARING AREA OF SOIL BASED ON 65 P.S.I. WATER MAIN PRESSURE.

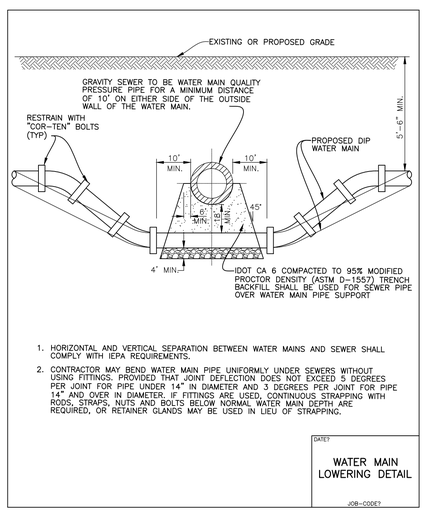
*1. 1'-9" MIN. FOR 12" OR SMALLER DIA.
2'-9" MIN. FOR 16" DIA.
4'-0" MIN. FOR 24" DIA.

*2. 1'-3" MIN. FOR 12" OR SMALLER DIA.
2'-0" MIN. FOR 16" DIA.
2'-10" MIN. FOR 20" DIA.

DATE?

THRUST BLOCKING DETAIL

JOB-CODE?



1. HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER SHALL COMPLY WITH IEPA REQUIREMENTS.
2. CONTRACTOR MAY BEND WATER MAIN PIPE UNIFORMLY UNDER SEWERS WITHOUT USING FITTINGS. PROVIDED THAT JOINT DEFLECTION DOES NOT EXCEED 5 DEGREES PER JOINT FOR PIPE UNDER 14" IN DIAMETER AND 3 DEGREES PER JOINT FOR PIPE 14" AND OVER IN DIAMETER. IF FITTINGS ARE USED, CONTINUOUS STRAPPING WITH RODS, STRAPS, NUTS AND BOLTS BELOW NORMAL WATER MAIN DEPTH ARE REQUIRED, OR RETAINER GLANDS MAY BE USED IN LIEU OF STRAPPING.

DATE?

WATER MAIN LOWERING DETAIL

JOB-CODE?

DRAWN BY | REVISIONS | DATE

Manhard CONSULTING LTD
116 West Illinois, 7th Floor, Chicago, IL 60654 ph:312.824.3801 fx:847.634.0095 manhard.com
Civil Engineers | Surveyors | Water Resource Engineers | Water & Waste Water Engineers
Construction Managers | Environmental Scientists | Landscape Architects | Planners

PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD
CONSTRUCTION DETAILS

ISSUE FOR PERIT - NOT FOR CONSTRUTION

PROJ. MGR.: ZG
PROJ. ASSOC.: ME
DRAWN BY: ----
DATE: 4-30-21
SCALE: 1"=XX'

SHEET 10 OF 11
TAD.RVL02

July 23, 2021 - 12:42 Dwg Name: P:\Tadrvl02\Data\Engrs\Detail Drawings\Plan Sets\08-09-DETAILS.dwg Updated By: dcary

06-01-16

MANHARD CONSULTING, LTD.
STANDARD SPECIFICATIONS

GENERAL CONDITIONS

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

DEFINITION OF TERMS

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

INTENT OF THE PLANS AND SPECIFICATIONS

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

INTERPRETATION OF PLANS AND SPECIFICATIONS

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

GOVERNING BODIES

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

LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

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

It shall be the CONTRACTOR's responsibility prior to construction, to notify all Utility Companies of the intent to begin construction and to verify the actual location of all such facilities and utilities. The CONTRACTOR shall also obtain from the respective Utility Companies the working schedules for removing or adjusting these facilities.

UNSUITABLE SOILS

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

PROTECTION OF TREES

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

NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

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

TRAFFIC CONTROL

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

WORK AREA

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

UTILITY POLES

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

RESTORATION

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

CLEANING UP

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

ROAD CLEANING

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

SAFETY AND PROTECTION

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

HOLD HARMLESS

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

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

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

INSURANCE

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

THIRD PARTY BENEFICIARY

Manhard Consulting, Ltd., the ENGINEER, is intended to be a third party beneficiary of this willing agreement and requirement.

Note: These Specifications are for Northern Illinois.

DETAILED SPECIFICATIONS

I. DEMOLITION

The CONTRACTOR shall coordinate with respective utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility company concerning portions of work which may be performed by the Utility Company's forces and any fees which are to be paid to the utility company for their services. The CONTRACTOR is responsible for paying for all fees and charges.

Should removal and/or relocation activities damage features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the contract documents. Except for materials designed to be relocated on this plan, all other construction materials shall be new.

Prior to demolition occurring, all erosion control devices are to be installed.

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

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

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

Electrical, telephone, cable, water, fiber optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company.

CONTRACTOR must protect the public at all times with fencing, barricades, enclosures, and other appropriate best management practices.

Continuous access shall be maintained for surrounding properties at all times during demolition.

All fire access lanes within the project area shall remain in service, clean of debris, and accessible for use by emergency vehicles.

The CONTRACTOR shall coordinate water main work with the Fire Department and the JURISDICTIONAL GOVERNING ENTITY to plan the proposed improvements and to ensure adequate fire protection is available to the facility and site throughout this specific work and through all phases of construction. CONTRACTOR shall be responsible for any required water main shut offs with the JURISDICTIONAL GOVERNING ENTITY during construction. Any costs associated with water main shut offs will be the responsibility of the CONTRACTOR and no extra compensation will be provided.

CONTRACTOR shall maintain all existing parking areas, sidewalks, drives, etc. clear and free from any construction activity and/or material to ensure easy and safe pedestrian and vehicular traffic to and from the site. CONTRACTOR shall coordinate/phase all construction activity within proximity of the building and utility interruptions with the facility manager to minimize disturbance and inconvenience to facility operations.

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

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

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

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

The CONTRACTOR shall be responsible for the disconnection of utility services to the existing buildings prior to demolition of the buildings.

Any material containing asbestos found within existing structures shall be removed from the site and disposed of off-site by the CONTRACTOR in accordance with County, State and Federal regulations.

CONTRACTOR shall develop and implement a daily program of dust control and shall submit and obtain JURISDICTIONAL GOVERNING ENTITY approval of dust control procedures prior to demolition of any structures. Modification of dust control procedures shall be performed by the CONTRACTOR to the satisfaction of the JURISDICTIONAL GOVERNING ENTITY as requested.

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

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

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

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

II. EARTHWORK

STANDARDS

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

SOIL BORING DATA

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction site, should be made available by the CLIENT to the CONTRACTOR. These borings are presented for whatever purpose the CONTRACTOR chooses to make of them. The ENGINEER makes no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different than indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations and observations to determine soil and groundwater conditions.

EARTHWORK CALCULATIONS AND CROSS SECTIONS

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

CLEARING, GRUBBING AND TREE REMOVAL

The site shall be cleared, grubbed, and trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage.

TOPSOIL STRIPPING

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

TOPSOIL RESPREAD

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

SEEDING

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

SODDING

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

EXCAVATION AND EMBANKMENT

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

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

The CONTRACTOR shall be responsible for the excavation of all swales and ditches and for the excavation or filling of the roads, building pads and parking lots within the work limits to lines & grades shown on the plans. He shall be responsible for obtaining compaction in accordance with the minimum values listed in the table below for all embankments unless more stringent values are listed in the soils report or are approved by the CLIENT, and to use any method approved by the CLIENT necessary to obtain this compaction (i.e., soil fabric or any undercutting that may be required).

Type Material	Percent Compaction Standard	Pavement & Floor Slabs	Grass Areas
Sandy Soils	Modified Proctor	95%	90%
Clayey Soils	Standard Proctor	95%	90%

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

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

For purposes of definition, unsuitable material shall be as follows unless determined otherwise by the Soils Engineer:

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

Upon completion of excavation and shaping of the water retention areas intended to maintain a permanent pool of water, all silt seams and granular or sandy soils shall be removed to a minimum depth of three feet below the subgrade and replaced with an impermeable clay liner, including adjacent to and under storm sewer inlets and outlets. It is the intent of these PLANS and SPECIFICATIONS that the CONTRACTOR shall prepare the lake bottoms, side slopes, and compaction thereof such that the lakes will maintain the proposed normal water level and that leakage does not exceed ½ inch per week.

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

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

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

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

EROSION CONTROL

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

UNDERCUTTING DURING EARTHWORK

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

MISCELLANEOUS CONTRACT ITEMS

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

(1) **GEOTEXTILE FABRIC**

Geotextile fabric or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY where proper compaction of embankments over existing soft soils is not possible. Geotextile fabric shall meet the material specifications of and shall be installed in accordance with the above standards.

(2) **EROSION CONTROL BLANKET**

Erosion control blanket or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY for the stabilization of disturbed areas. Erosion control blanket shall meet the material specifications of and shall be installed in accordance with the above standards, the Illinois Urban Manual and/or the details shown on the PLANS.

III. UNDERGROUND IMPROVEMENTS

A. GENERAL

STANDARDS

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

SELECTED GRANULAR BACKFILL

Selected Granular Backfill shall be required for all sewer and water main trenches lying under existing or proposed streets, driveways, parking lots and within 24" thereof, and where noted on PLANS. All material placed in such trenches shall be in accordance with the above standards.

MANHOLES, CATCH BASIN, INLETS & VALVE VAULTS

All Manholes, Catch Basins, Inlets, and Valve Vaults shall be constructed of reinforced precast concrete ring construction with tongue and groove joints in conformance with the latest revision of ASTM designation C-478. All joints between sections and frames (except sanitary manholes, see Section IIIB Manholes, below) shall be sealed with mastic type bituminous jointing compound. CONTRACTOR shall remove all excess mastic on inside of structure and butter joints with mortar. Manholes are to have offset cones except that no cone shall be used on storm manholes 6'-0" deep or less in which case a reinforced concrete flat top section shall be used, and Valve Vaults shall have concentric cones. Only concrete adjustment rings will be permitted where necessary and shall be limited to two adjustment rings totaling not more than 8" in height. All manholes and catch basin steps shall be copolymer polypropylene with continuous ½" steel reinforcement as manufactured by MA Industries, or approved equal.

***AUGER/BORING AND CASING** INTENTIONALLY OMITTED

***AUGER (OPEN BORE)** INTENTIONALLY OMITTED

HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS

Horizontal and vertical separation of water and sewer mains shall be in accordance with Standard Specifications for Water and Sewer Construction in Illinois Section 41-2.01A and 41-2.01B and Standard Drawing 18, 19, 20, 21, 22, 23 and 24.

STRUCTURE ADJUSTMENTS

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

B. SANITARY SEWERS AND APPURTENANCES

***SANITARY SEWER PIPE**

Sanitary sewer pipe including building services, shall conform to the following:

(1) Polyvinyl Chloride (PVC) Sewer Pipe shall conform to ASTM D3034 (4-inch thru 15-inch) or ASTM F679 (18-inch thru 48-inch) minimum SDR 26 with flexible elastomeric seal gasket gasketed joints conforming to ASTM D3212 and F477.

(2) Ductile Iron Sewer Pipe shall conform with ANSI/AWWA C151/A21.51 Class 50, cement lined with push on type joints conforming to ANSI/AWWA C111/A21.11.

Sanitary sewers shall include bedding and backfilling.

MANHOLES

All sanitary manhole castings, adjustment rings and manhole section shall be set in butyl rope or approved equal. Each manhole cone and barrel section joint shall also be externally sealed with a 6" wide sealing band or rubber and mastic. The band shall have an outer layer of rubber or polyethylene with an under layer of rubberized mastic meeting the requirement of ASTM C-877-02 (Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections). Pipe connection to new and existing manholes through openings (cast or core-drilled) shall be provided with a flexible rubber watertight connectpr conforming to ASTM C-923 (Standard Specification for Resilient Connections Between Reinforced Concrete Manhole Structures and Pipes).

FOUNDATION, BEDDING AND HAUNCHING

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

TESTING

Sanitary sewers shall be air tested and tested for deflection in accordance with the requirements of Section 31-1.12 "TESTING AND INSPECTION FOR ACCEPTANCE OF SANITARY SEWERS" of the Standard Specifications for Water and Sewer Construction in Illinois or the JURISDICTIONAL GOVERNING ENTITY, whichever is more restrictive. In addition, a televised inspection of the completed sanitary sewers shall be conducted and a copy of the videotape and report furnished to the JURISDICTIONAL GOVERNING ENTITY.

All sanitary manholes are to be tested for water tightness in accordance with ASTM C969 "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines", or ASTM C1244 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test".

SERVICES

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

***RISERS** INTENTIONALLY OMITTED

***DROP MANHOLE CONNECTIONS** INTENTIONALLY OMITTED

***SANITARY SEWER FORCE MAIN** INTENTIONALLY OMITTED

TELEVISION INSPECTION

Upon completion of construction a television inspection of the sanitary sewer system shall be performed on all portions of the sewer if required by the JURISDICTIONAL GOVERNING ENTITY. Videotapes and written report of all television inspections shall be provided to the CLIENT. The form of report and type and format of the videotape shall be approved by the JURISDICTIONAL GOVERNING ENTITY.

All sewers and appurtenances shall be cleaned prior to inspection and testing required by this section.

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

MISCELLANEOUS

All floor drains shall be connected to the sanitary sewer.

C. WATER MAINS AND APPURTENANCES

WATER MAIN PIPE (3" AND LARGER)

Water main pipe shall conform to the following:

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

(2) Polyvinyl Chloride Pipe (PVC) conforming to the latest revision of ANSI/AWWA C900 (4-inch thru 12-inch) or ANSI/AWWA C905 (14-inch thru 48-inch) with a pressure rating of 235 psi, SDR 18 in accordance with ASTM D2241. Joints shall be pressure rated in accordance with ASTM D3139 with elastomeric seals in accordance with ASTM F477.

Installation shall be in accordance with ANSI/AWWA C600 (Ductile Iron) or ANSI/AWWA C605 (PVC). All water main shall have mechanical joint cast iron or ductile iron fittings in accordance with ANSI/AWWA C110/A21.10 or compact ductile iron fittings in accordance with ANSI/AWWA C153/A21.53 with 250 psi working pressure.

Poured or monolithic concrete thrust blocks are required to brace all tees, plugs, caps, and bends of 11 1/4 degree deflection or greater. Minimum cover for all water mains, including services, shall be 5'-6" from the finished grade. Water main shall include bedding and backfilling.

WATER VALVES

All valves shall be resilient wedge gate valves conforming to the latest revision of ANSI/AWWA C515, with a rated working pressure of 200 psi in accordance with JURISDICTIONAL GOVERNING ENTITY requirements, except that butterfly valves conforming to ANSI/AWWA C504 shall be constructed on all water mains 16" diameter and larger. Valves shall be non-rising stem and shall close by turning clockwise.

VALVE VAULTS

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

* **VALVE BOXES** *INTENTIONALLY OMITTED

FIRE HYDRANTS

Fire Hydrants shall be per JURISDICTIONAL GOVERNING ENTITY requirements. All fire hydrants shall be located as shown on the PLANS and shall be painted in a manner acceptable to the JURISDICTIONAL GOVERNING ENTITY after installation and shall be adjusted to final grade.

TAP, STOPS AND BOX

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

* **SMALL WATER SERVICES (2" DIAMETER OR LESS) *INTENTIONALLY OMITTED**

DISINFECTION

Disinfections shall meet all of the requirements of the State of Illinois, Environmental Protection Agency, Public Water Supplies Division. The safe quality of the water supply shall be demonstrated by bacteriological analysis of samples collected at sampling taps on at least two consecutive days following disinfection of the mains and copies of the said report submitted to the JURISDICTIONAL GOVERNING ENTITY and the CLIENT.

PRESSURE TEST

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

PRESSURE CONNECTION TO EXISTING WATER MAIN

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

* **DRY CONNECTION TO EXISTING WATER MAIN *INTENTIONALLY OMITTED**

POLYETHYLENE ENCASEMENT (FOR DUCTILE IRON WATER MAIN ONLY)

The CLIENT, or JURISDICTIONAL GOVERNING ENTITY may request that portions of the water main be enclosed in a polyethylene encasement in accordance with ANSI/AWWA C105/A21.5 should soil conditions so warrant its use.

FOUNDATION, BEDDING AND HAUNCHING

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

TRACER WIRE

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

For open cut construction, using PVC pipe, a continuous, insulated, 12 gauge copper wire suitable for direct burial shall be taped on top of all piping to provide for locating following construction. This wire shall be securely terminated inside every valve vault on stainless steel hardware with an exposed lead of at least 12". A mechanically secure and soldered connection shall be provided for all wire splices. Where construction is by directional drilling or similar trenchless technology the tracer wire shall be 3/16" 7x19 PVC coated stainless steel aircraft cable with minimum breaking strength of 3,700 lbs (Lexco, Chicago, IL). Or Trace-Safe water blocking tracerwire RT series 19 gauge conductor (RT 1802W water, RT 1803W sewer).

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

D. STORM SEWERS AND APPURTENANCES

STORM SEWER PIPE

Storm sewer pipe shall conform to the following:

(1) Reinforced concrete pipe minimum Class IV in conformance with the latest revision of ASTM designation C76 with C361 or C443 flexible gasket joints, except that bituminous mastic joints may be used in grass areas.

(2) Polyvinyl Chloride (PVC) Pipe: ASTM D3034 (4-inch thru 15-inch) or ASTM F679 (18-inch thru 36-inch), rated SDR 35, continually marked with manufacturer's name, pipe size, cell classification, SDR rating. Joints shall be flexible elastomeric seals conforming to ASTM D3212.

Precast tees, bends, and manholes may be used if permitted by the JURISDICTIONAL GOVERNMENTAL ENTITY.

Storm sewers may be constructed with reinforced concrete pipe using only flexible gasket joints (ASTM 361 or 443) for water main crossings.

Storm sewer shall include bedding and trench backfill.

MANHOLES, INLETS & CATCH BASINS

Manholes, Inlets and Catch Basins shall be constructed in conformance with Section IIIA Manholes, etc. above. The space between connecting pipes and the wall of the manhole shall be completely filled with non-shrink hydraulic cement mortar. Frames and lids shall be Neenah or approved equal unless specified otherwise on the PLANS. All frames and grates shall be provided such that the flange fully covers the opening plus 2" of the structure as a minimum. * Provide **"Vane"** Type frame & grate for all structures located in curb where gradient exceed 2.0%. Manholes shall include steps, frame & grate, bedding and trench backfill.

FLARED END SECTION

Flared end sections shall be pre-cast reinforced concrete flared end section with an end block cast separate as per the Illinois Department of Transportation Standard 542301 and shall be installed where shown on the PLANS. All flared end sections for storm sewers 12" in diameter and larger shall be installed with a grating per Standard 542311 and/or as detailed on the PLANS. Work shall include end block.

RIP RAP

Stone rip rap consisting of pieces of "A" quality stone 4" to 8" in diameter shall be furnished and installed in accordance with IDOT Specifications and shall be placed where shown on the plans, to a minimum thickness of 12" and a width as indicated on the plans. Broken concrete or concrete blocks will not be acceptable.

FOUNDATION, BEDDING AND HAUNCHING

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

***UNDERDRAINS** INTENTIONALLY OMITTED

MISCELLANEOUS

(1) All existing field drainage tile or storm sewers encountered or damaged during construction shall either be restored to their original condition, properly rerouted and/or connected to the storm sewer system.

(2) Footing drains shall be connected to sump pumps or discharged directly into storm sewers. Footing drains or drainage tile shall not be connected to the sanitary sewer.

CONNECTION FOR STORM SERVICE TO STORM MAIN

Connections of storm sewer services to storm sewer mains should be made with manufactured tees when available. Availability of manufactured tees will be a function of the storm sewer material and pipe diameter size of the service sewer and main. If manufactured tees are not reasonably available, connections should be made in accordance with manufacturer's recommendations for all storm sewer other than concrete pipe. For concrete pipe connections without manufactured tees the storm sewer main shall be machine cored and the service sewer connected using non-shrink grout for the void between pipes. The service sewer shall be cut flush with the inside wall of the sewer main and not extend into the inside flow area of the main or otherwise impede flow.

IV. ROADWAY AND PARKING LOT IMPROVEMENTS

STANDARDS

Work shall be completed in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition (hereinafter referred to collectively as the "Standard Specifications") except as modified below and except that payment will be defined as detailed in the contract documents between the CLIENT and the CONTRACTOR. Supplementing the Standard Specifications shall be the applicable sections of the latest editions of the "Supplemental Specifications and Recurring Special Provisions", the "Manual on Uniform Traffic Control Devices for Streets and Highways" and the Illinois Supplement thereto, (hereinafter referred to collectively as the "MUTCD"). Any references to "ENGINEER" in the "Standard Specifications" shall be interpreted as the CLIENT or CLIENT's Construction Representative.

SUBGRADE PREPARATION

The CONTRACTOR shall be responsible for all subgrade compaction and preparation to the lines and grades shown on the plans.

AGGREGATE BASE COURSE TYPE 'B'

Aggregate Base Course Type B shall be limited to CA-6 or CA-10 gradation. Aggregate base courses shall be proof rolled as outlined below.

PROOF ROLL

The CONTRACTOR shall proof roll the subgrade with either a 2-axle truck loaded to 27,000 lbs. Or a 3-axle truck loaded to 45,000 lbs. or as specified by the JURISDICTIONAL GOVERNING ENTITY. The CLIENT and JURISDICTIONAL GOVERNING ENTITY shall observe and approve the proof rolling of the subgrade and the base course. Proof rolling tolerances shall be a maximum deflection of 1" for the subgrade and ½" for the base course. The above criteria is intended as a maximum deflection standard and that proof rolling of a majority of the area will have less deflection than specified above. In any case of deficiency, the subgrade and/or base course shall be repaired and retested before proceeding with the pavement construction.

Pavement subgrade material shall not be removed, placed or disturbed after proof roll testing has been completed prior to the pavement construction. Additional testing will be required if the pavement subgrade is disturbed and/or material is removed from or placed on the pavement subgrade after proof rolling approval.

Trucks or heavy equipment shall not travel on any pavement subgrade after final testing prior to pavement construction.

***HOT-MIX ASPHALT BASE COURSE** INTENTIONALLY OMITTED

HOT-MIX ASPHALT BINDER AND SURFACE COURSE

HMA binder and surface courses, shall be constructed to the compacted thickness as shown on the PLANS. The base course shall be cleaned and primed in accordance with the JURISDICTIONAL GOVERNING ENTITY. The surface course shall be placed after the base and courses have gone through one winter season, or as directed by the CLIENT. Before applying the surface course, the binder course shall be thoroughly cleaned and primed in accordance with the JURISDICTIONAL GOVERNING ENTITY. Prior to the placement of the surface course, the JURISDICTIONAL GOVERNING ENTITY shall examine the completed pavement, including curb and gutter, and all failures shall be corrected by the CONTRACTOR.

CONCRETE PAVEMENTS

Concrete pavements shall be constructed in accordance with American Concrete Institute Standard ACI330R-08 and as shown on the PLANS.

Slabs and driveway aprons shall be constructed with 6" x 6" - W1.4 x W1.4 welded wire fabric positioned on steel chair supports. Placing fabric during the concrete pouring operation will not be allowed.

Sawing of joints shall commence as soon as the concrete has cured and hardened sufficiently to permit sawing without excessive raveling, but no later than eight hours after the concrete has been placed. All joints shall be sawed to a depth equal to 1/3 of the pavement thickness before uncontrolled shrinkage cracking take place. If necessary, the sawing operation shall occur during the day or at night, regardless of weekends, holidays or weather conditions. The CONTRACTOR shall be aware of jurisdictional noise ordinances and holiday restrictions for scheduling purposes.

The CONTRACTOR is responsible to guard fresh concrete until it sets and hardens sufficiently to prevent people from writing, walking, riding bicycles or otherwise permanently marking, defacing or causing depressions of any type in the concrete. Any concrete so marked will be removed and replaced by the CONTRACTOR at the CONTRACTOR's expense.

The CONTRACTOR shall protect the pavement against all traffic, including that of their own employees or other workers, until test specimens have attained the specified strength.

SIDEWALKS

Concrete sidewalks shall be constructed to width and thickness as shown on the PLANS. Sidewalks shall be thickened to a minimum of 6" at all driveways. All sidewalks shall be IDOT Class SI concrete, on aggregate base as shown on the detail. A ¾" expansion joint shall be provided when meeting existing sidewalk.

CURB AND GUTTER

Curb and gutter shall be as per the detail shown on the PLANS, which shall include compacted aggregate base course under the curb and gutter. All contraction and expansion joints shall be constructed as per the detail.

CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT

The CONTRACTOR shall saw cut and remove the existing concrete curb where shown on the PLANS and install a curb of similar cross section and pavement to that removed (or depressed curb and gutter if shown on the PLANS). Upon completion of the curb and gutter any voids between the existing pavement and the new curb shall be filled with concrete to within 2" of the final surface, which is to be filled with bituminous pavement. The area behind the curb shall be filled and compacted with embankment material within 6" of the top of the new curb. The CONTRACTOR shall then restore the remaining 6" to its original condition (i.e., sod, gravel, topsoil). Where proposed curb connects to an existing curb, the existing curb shall be saw cut and then two 18" long x ¾" (#6) dowel bars shall be drilled and installed 9" into the existing and proposed curb. Bars shall be installed in a location similar to the expansion joint in the curb.

FRAME ADJUSTMENTS

The road contractor shall be responsible for making final adjustments and the setting on a bituminous mastic jointing compound all castings located in the roadway, sidewalks, and parking areas prior to construction of any curbing, sidewalk, or final surface. Any structures that need to be lowered, or raised in excess of 4" shall be completed and the work backcharged against the underground contractor. This Contractor shall also be responsible for cleaning all of the above structures immediately upon completion of his phase of work. This work shall be incidental to the cost of the pavement.

PAVEMENT MARKING - PAINT

The CONTRACTOR shall furnish and apply painted marking lines, letters & symbols of the patterns, sizes and colors where shown on the PLANS. Paint pavement marking shall be applied in accordance with the IDOT Standard Specifications.

PAVEMENT MARKING - THERMOPLASTIC

The CONTRACTOR shall furnish and apply extruded thermoplastic pavement marking lines, letters and symbols of the patterns, sizes and colors where shown on the PLANS. Thermoplastic pavement marking shall be installed in accordance with the IDOT Standard Specifications.

QUALITY CONTROL

The CONTRACTOR shall provide all testing necessary to ensure improvements are in accordance with the project specifications and provide testing documentation that specifications were met.

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

DATE	REVISIONS	DRAWN BY
07-09-21	REVISED PER VILLAGE COMMENTS	

Manhard™ CONSULTING LTD
One Overlook Point, Suite 290, Lincolnshire, IL 60069 ph:847.634.5550 fx:847.634.0095 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD
CONSTRUCTION SPECIFICATIONS

ZACHARY A. GRABIJAS
062-070623
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXP. 11-30-21
SEAL

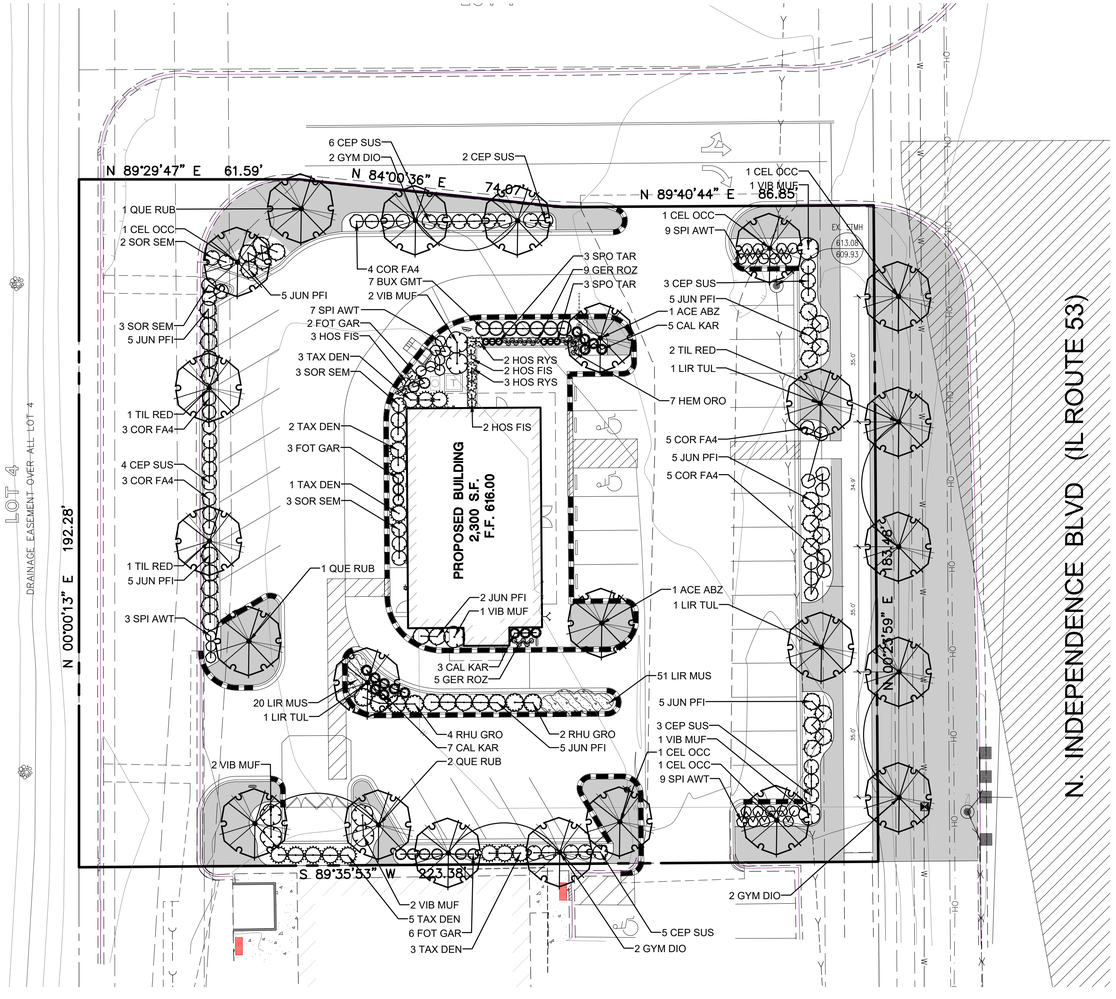
PROJ. MGR.: ZAG
PROJ. ASSOC.: EAF
DRAWN BY: EAF
DATE: 4-30-21
SCALE: N.T.S.

ISSUE FOR PERIT - NOT FOR CONSTRUTION

July 12, 2021 – 12:41 Dwg Name: P:\Tadrvil02\dwg\Eng\Final Drawings\Plan Set\10-SPECS.dwg Updated By: DCory

Landscape Notes:

1. Seed/ Sod limit line is approximate. Seed/ Sod to limits of grading and disturbance. Contractor responsible for restoration of any unauthorized disruption outside of designated construction area.
2. Contractor responsible for erosion control in all seeded/ sodded areas.
3. Tree mulch rings in turf areas are 5' diameter. Contractor shall provide a mulch ring around all existing trees within the limits of work. Remove all existing grass from area to be mulched and provide a typical spade cut edge. Landscape Fabric shall not be installed under mulch.
4. Bedlines are to be spade cut to a minimum depth of 3". Curved bedlines are to be smooth and not segmented.
5. All planting, beds shall receive top dressing of mulch. Landscape fabric shall not be installed under mulch.
6. Do not locate plants within 10' of utility structures or within 5' horizontally of underground utility lines unless otherwise shown on plans. Consult with Landscape Architect if these conditions exist.
7. For Lump Sum Contracts, plants and other materials are quantified and summarized for the convenience of the Owner and jurisdictional agencies only. Confirm and install sufficient quantities to complete the work as drawn and specified. No additional payments will be made for materials required to complete the work as drawn and specified.
8. For Unit Price Contracts, payments will be made based on actual quantities installed as measured in place by the Owner's Representative.
9. It is the responsibility of the contractor to locate and provide plant material as specified on this plan. The contractor may submit a request to provide substitutions for the specified plant material under the following conditions:
   a. Any substitutions proposed shall be submitted to the project owner's representative within two weeks of the award of contract. Substitutions must meet equivalent design and functional goals of the original materials as determined by the owner's representative. Any changes must have the approval of the owner's representative,
   b. The request will be accompanied by at least three notices from plant material suppliers that the plant material specified is not available and will not be available prior to construction.
10. Verify site conditions and information on drawings. Promptly report any concealed conditions, mistakes, discrepancies or deviations from the information shown in the Contract Documents. The Owner is not responsible for unauthorized changes or extra work required to correct unreported discrepancies. Commencement of work shall constitute acceptance of conditions and responsibility for corrections
11. A minimum of two working days before performing any digging, call underground service alert for information on the location of natural gas lines, electric cables, telephone cables, etc. The contractor shall be responsible for location and protection of all utilities, and repair of any damage resulting from his work at no additional cost to the owner.
12. Contractor shall promptly repair all damages to existing site at no cost to owner.
13. Refer to landscape specifications for additional conditions, standards, and notes.



1 Final Landscape Plan

1" = 20-0"

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NORTH

JULIE
ILLINOIS ONE-CALL SYSTEM
Simply Call 811

LICENSED LANDSCAPE ARCHITECT
JON BRADLEY DETHLOFF
157-001632
STATE OF ILLINOIS
SEAL
Date: 07/07/2021

Jon Bradley Dethloff, ASLA, PLA
Illinois Registered Landscape Architect # 157-001632
Expires 08/31/2021

PLANT SCHEDULE							
DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
ACE ABZ	2	Acer x freemanii 'Jeffsred' TM	Autumn Blaze Freeman Maple	2.5" Cal.	B&B		
CEL OCC	5	Celtis occidentalis	Common Hackberry	2.5" Cal.	B&B		
GYM DIO	6	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	2.5" Cal.	B&B		
LIR TUL	3	Liriodendron tulipifera	Tulip Poplar	2.5" Cal.	B&B		
QUE RUB	4	Quercus rubra	Red Oak	2.5" Cal.	B&B		
TIL RED	4	Tilia americana 'Redmond'	Redmond American Linden	2.5" Cal.	B&B		
DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
BUX GMT	7	Buxus x 'Green Mountain'	Green Mountain Boxwood	5 gal.			
CEP SUS	23	Cephalanthus occidentalis 'SMCOSS' TM	Sugar Shack Buttonbush	5 gal.			
COR FA4	20	Cornus sericea 'Farrow' TM	Arctic Fire Red Twig Dogwood	5 gal.			
FOT GAR	11	Fothergilla gardenii	Dwarf Fothergilla	5 gal.			
RHU GRO	6	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal.			
SOR SEM	11	Sorbaria sorbifolia `Sem`	Sem Ash Leaf Spirea	5 gal.			
SPI AWT	28	Spiraea x bumalda 'Anthony Waterer'	Anthony Waterer Bumald Spiraea	5 gal.			
VIB MUF	9	Viburnum dentatum 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	5 gal.			
EVERGREEN SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
JUN PFI	37	Juniperus chinensis 'Kallays Compact'	Kallay Compact Pfitzer Juniper	5 gal.			
TAX DEN	14	Taxus x media 'Densiformis'	Dense Anglo-Japanese Yew	5 gal.			
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
CAL KAR	15	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal.			
SPO TAR	6	Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	1 gal.			
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
GER ROZ	14	Geranium x 'Rozanne'	Rozanne Cranesbill	1 gal.			
HEM ORO	7	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	1 gal.			
HOS FIS	7	Hosta x 'Fire Island'	Fire Island Hosta	1 gal.			
HOS RYS	5	Hosta x 'Royal Standard'	Royal Standard Hosta	1 gal.			
GROUNDCOVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
LIR MUS	71	Liriope muscari	Lilyturf	1 gal.			

Village of Romeoville Required Landscaping

Legend

Turf Grass Areas with Seed and Blanket

Sight Triangle Area

PARKWAY TREES

Requirement: One (1) parkway tree per 40 linear feet; Trees are not to be placed in sight line triangles due to vision hindrance.

183.5 linear feet / 40 = (4.58) = 5 Parkway Trees

Required - 5 Parkway Trees
On Plan - 5 Parkway Trees

FOUNDATION PLANTING REQUIREMENT

Requirement: A landscaping area not less than 10' in width shall be located around the perimeter of all buildings except were impractical. Foundation landscaping consists of shade and ornamental trees, evergreens, shrubbery, hedges and/or other live planting materials.

Required - As Noted Above
On Plan - Meets Ordinance Requirements

INTERIOR PARKING LOT LANDSCAPING REQUIREMENT

Requirement: Two (2) tree per full parking lot island and one (1) tree per half parking lot island.

Interior Parking Lot Islands = 8 half parking lot islands
Required - 8 Trees
On Plan - 8 Proposed Trees

PERIMETER PARKING LOT REQUIREMENTS

PARKING LOT PERIMETER - FRONT YARD LANDSCAPING REQUIREMENT - (EAST)

Requirement: 7 evergreen/deciduous shrubs per 35 linear feet in cluster 60% across the parking lot areas.

Front Yard Parking Lot Perimeter: 183.48 linear feet
183.48 x 0.60 = 110.1 / 35 = 3.15 x 7 = (22.05) =
22 evergreen/deciduous shrubs

Required - 22 evergreen/deciduous shrubs
On Plan - 30 evergreen/deciduous shrubs

PARKING LOT PERIMETER - REAR AND SIDE YARD LANDSCAPING REQUIREMENT - (NORTH)

Requirement: 7 evergreen/deciduous shrubs per 35 linear feet in cluster 50% across the parking lot areas.

Side Yard Parking Lot Perimeter: 157.22 linear feet
157.22 x 0.50 = 78.61 / 35 = 2.25 x 7 = (15.75) =
16 evergreen/deciduous shrubs

Required - 16 evergreen/deciduous shrubs
On Plan - 16 evergreen/deciduous shrubs

PARKING LOT PERIMETER - REAR AND SIDE YARD LANDSCAPING REQUIREMENT - (WEST)

Requirement: 7 evergreen/deciduous shrubs per 35 linear feet in cluster 50% across the parking lot areas.

Side Yard Parking Lot Perimeter: 144.15 linear feet
144.15 x 0.50 = 72.08 / 35 = 2.06 x 7 = (14.42) =
14 evergreen/deciduous shrubs

Required - 14 evergreen/deciduous shrubs
On Plan - 20 evergreen/deciduous shrubs

PARKING LOT PERIMETER - REAR AND SIDE YARD LANDSCAPING REQUIREMENT - (SOUTH)

Requirement: 7 evergreen/deciduous shrubs per 35 linear feet in cluster 50% across the parking lot areas.

Side Yard Parking Lot Perimeter: 163.44 linear feet
163.44 x 0.50 = 81.72 / 35 = 2.33 x 7 = (16.31) =
16 evergreen/deciduous shrubs

Required - 16 evergreen/deciduous shrubs
On Plan - 16 evergreen/deciduous shrubs

BUFFER YARD PLANTING REQUIREMENTS

NORTH BUFFER YARD PLANTING REQUIREMENT

Requirement: One (1) shade tree per 75'
222.51' / 75 = (2.97) = 3 Shade Trees

Required - 3 Shade Trees
On Plan - 3 Shade Trees

EAST BUFFER YARD PLANTING REQUIREMENT

Requirement: One (1) shade tree per 75'
183.48' / 75 = (2.44) = 2 Shade Trees

Required - 2 Shade Trees
On Plan - 2 Shade Trees

SOUTH BUFFER YARD PLANTING REQUIREMENT

Requirement: One (1) shade tree per 75'
223.38' / 75 = (2.97) = 3 Shade Trees

Required - 3 Shade Trees
On Plan - 3 Shade Trees

WEST BUFFER YARD PLANTING REQUIREMENT

Requirement: One (1) shade tree per 75'
192.28' / 75 = (2.56) = 3 Shade Trees

Required - 3 Shade Trees
On Plan - 3 Shade Trees

DATE	REVISIONS	DRAWN BY
07/07/21	REVISED PER VILLAGE COMMENTS	JBD

Manhard CONSULTING LTD
One Overlook Point, Suite 250, Lincolnshire, IL 60069 ph 847.634.5500 fx 847.634.5599 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

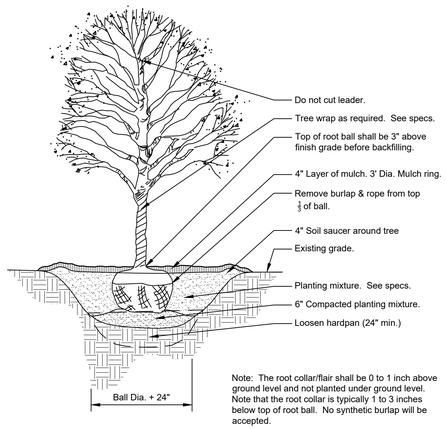
PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD, ROMEOVILLE, ILLINOIS
FINAL LANDSCAPE PLAN

ISSUED FOR PERMIT - NOT FOR CONSTRUCTION

PROJ. MGR.:	ZG
PROJ. ASSOC.:	ME
DRAWN BY:	JBD
DATE:	05/21/21
SCALE:	1"=XX'

SHEET
L1 OF L3
TAD.RVIL02

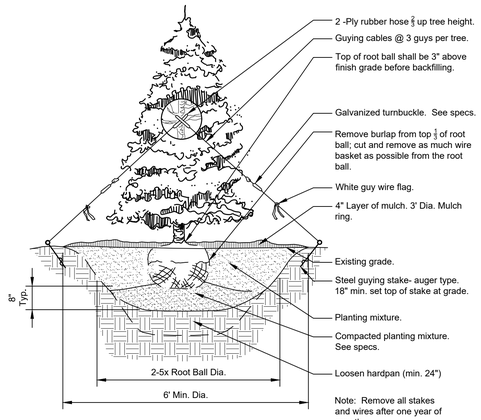
July 12, 2021 - 13:51 Dwg. Name: P:\Tad\ro03\Uses\Landdocs\02-Final\Final LA Plan 7-7-21.dwg Updated By: jbethloff



Note: The root collar/flair shall be 0 to 1 inch above ground level and not planted under ground level. Note that the root collar is typically 1 to 3 inches below top of root ball. No synthetic burlap will be accepted.

1 DECIDUOUS TREE PLANTING

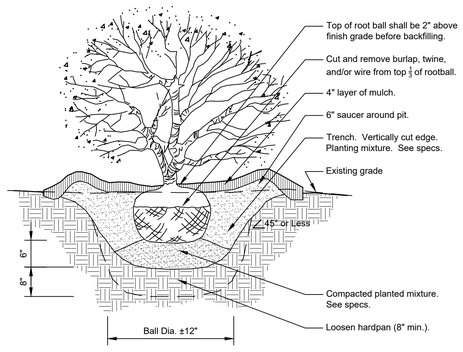
1/4" = 1'-0" 329343.33-20



Note: Remove all stakes and wires after one year of growth.

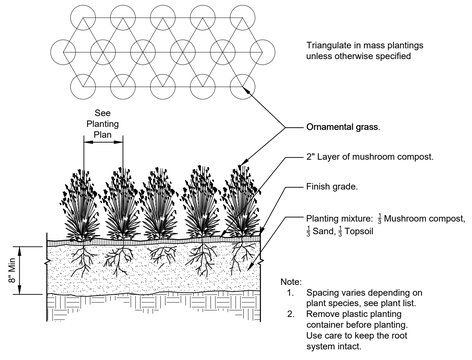
2 CONIFER TREE PLANTING

1/4" = 1'-0" 329343.46-01



3 SHRUB PLANTING DETAIL

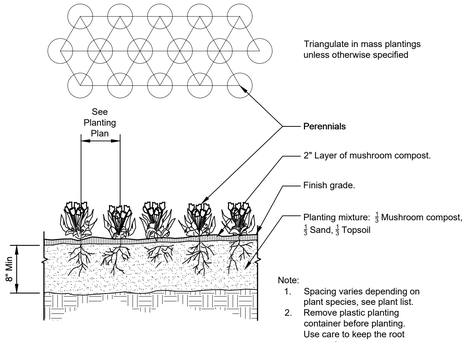
3/4" = 1'-0" 329333.16-05



Note:
1. Spacing varies depending on plant species, see plant list.
2. Remove plastic planting container before planting. Use care to keep the root system intact.

4 ORNAMENTAL GRASS PLANTING

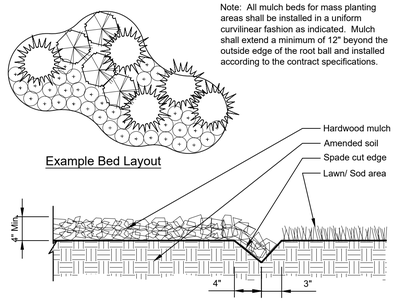
1" = 1'-0" 329313-01



Note:
1. Spacing varies depending on plant species, see plant list.
2. Remove plastic planting container before planting. Use care to keep the root system intact.

5 PERENNIAL / ANNUAL PLANTING

1" = 1'-0" 329313-02



Note: All mulch beds for mass planting areas shall be installed in a uniform curvilinear fashion as indicated. Mulch shall extend a minimum of 12" beyond the outside edge of the root ball and installed according to the contract specifications.

6 CONTINUOUS MULCH EDGING

1" = 1'-0" 329113.26-01

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Rockford 4909 Colonial Circle, Suite 200, Rockford, IL 61107 tel: 815.484.4000
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DATE	REVISIONS	DRAWN BY
07/07/21	REVISED PER VILLAGE COMMENTS	JBD

PROPOSED STARBUCKS

470-480 N. INDEPENDENCE BOULEVARD, ROMEOVILLE, ILLINOIS

LANDSCAPE DETAILS

PROJ. MGR.: ZC
PROJ. ASSOC.: ME
DRAWN BY: JBD
DATE: 05/21/21
SCALE: 1"=XX'

SHEET L2 OF L3

TAD.RVIL02

ISSUED FOR PERMIT - NOT FOR CONSTRUCTION

GENERAL PLANTING SPECIFICATIONS:

PART 1 - GENERAL

1-01 DESCRIPTION:

A. Provide trees, shrubs, perennials and groundcovers as shown and specified. This work includes:
   1. Spreading of topsoil or soil preparation
   2. Trees, shrubs, perennials and groundcovers
   3. Planting mixes
   4. Mulch and planting accessories
   5. Fertilizer and herbicide
   6. Maintenance
   7. Warranty of plant material

B. The Contractor shall verify all existing conditions and dimensions in the field prior to bidding and report any discrepancies to the Owner or his/her representative.

1-02 QUALITY ASSURANCE:

A. Comply with site work requirements

B. Plant names indicated must comply with 'Standardized Plant Names' as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties which are not listed should conform with those generally accepted by the nursery trade. Stock should be legibly tagged.

C. All plant materials shall conform to the 'American Standards for Nursery Stock' (ASNS), latest edition, published by the American Association of Nurserymen, Washington, D.C.

D. All plant material shall be grown and supplied within a 50 mile radius of the project for a minimum of two full growing seasons.

E. Adhere to sizing requirements as listed in the plant list and/or bid form for the project. A plant shall be measured in its natural standing position.

F. Stock that is furnished shall be at least the minimum size shown. With permission of the landscape architect, substitution from the specified plant list will be accepted only when satisfactory evidence in writing is submitted to the landscape architect, showing that the plant specified is not available. Requests for approval of substitute plant material shall include common and botanical names and size of substitute material. Only those substitutions of at least equivalent size and character to that of the specified material will be approved. Stock which is larger than that which is specified is acceptable with permission of the landscape architect, providing there is no additional cost and that the larger plant material will not be cut down in order to conform to the size indicated.

G. All shrubs shall be dense in form. Shrub liners do not meet these specifications. Shrubs specified by height shall have a spread that is equal to the height measurement. Shrubs which are specified by spread shall exhibit the natural growth habit of the plant by having a greater spread than height.

H. All plant materials are subject to inspection and approval. The landscape architect and Owner reserve the right to select and tag all plant material at the nursery prior to planting. The landscape architect and Owner reserve the right to inspect plant material for size and condition of root systems, the presence of insects and diseases, injuries and latent defects (due to Contractor negligence or otherwise), and to reject unacceptable plant material at any time during progress of the project.

I. Container grown deciduous and/or evergreen shrubs will be acceptable in lieu of balled and burlapped shrubs subject to specified limitations for container grown stock. Size of container grown material must conform to size/height requirements of plant list.

1-03 DELIVERY, STORAGE & HANDLING:

A. Fertilizer shall be delivered in original, unopened and undamaged packaging. Containers shall display weight, analysis and manufacturer's name. Store fertilizer in a manner that will prevent wetting and deterioration.

B. Take all precautions customary concerning proper trade practice in preparing plants for transport. Plants shall be dug, packed and transported with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival, the certificate shall be filed with the landscape architect . All plants must be protected from drying out. If plant material cannot be planted immediately upon delivery, said material should be properly protected in a manner that is acceptable to the landscape architect . Heeled-in plants must be watered daily. No plant shall be bound with rope or wire in a manner that could strip bark or break or shear branches.

C. Plant material transported on open vehicles should be covered with a protective covering to prevent wind burn.

D. Dry, loose topsoil shall be provided for planting bed mixes. Muddy or frozen topsoil is unacceptable as working with medium in this condition will destroy its structure, making root development more difficult.

1-04 PROJECT CONDITIONS:

A. Notify landscape architect at least seven (7) working days prior to installation of plant material.

B. It shall be the Contractor's responsibility to locate and protect all existing above and below ground utilities. Utilities can be located and marked (in Illinois) by calling J.U.L.I.E. at (800)892-0123.

C. The Contractor shall provide, at his/her own expense, protection against trespassing and damage to seeded areas, planted areas, and other construction areas until the preliminary acceptance. The Contractor shall provide barricades, temporary fencing, signs, and written warning or policing as may be required to protect such areas. The Contractor shall not be responsible for any damage caused by the Owner after such warning has been issued.

D. The Contractor shall be responsible for the protection of crowns, trunks and roots of existing trees, plus shrubs, lawns, paved areas and other landscaped areas that are to remain intact. Existing trees, which may be subject to construction damage, shall be boxed, fenced or otherwise protected before any work is started. The Owner desires to preserve those trees within and adjacent to the limits of construction except those specifically indicated to be removed on the Drawings. The contractor shall erect protective tree fencing and tree armor at locations indicated on the drawings and around all trees on site which are to be preserved. Protective fencing shall be erected between the limits of construction and any tree preservation areas shown on the Drawings.

E. A complete list of plants including a schedule of sizes, quantities and other requirements is shown on the Drawings and on the bid form. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.

1-05 PRELIMINARY ACCEPTANCE:

A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include, but is not limited to: mowing and edging turf, pulling weeds, watering turf and plant material and annual flower maintenance.

1-06 WARRANTY:

A. All plant material (excluding annual color), shall be warranteed for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative. Plant materials will be warranteed against defects including death and unsatisfactory growth, except for defects resulting from abuse or damage by others, or unusual phenomena or incidents which are beyond the control of the Contractor. The warranty covers a maximum of one replacement per item.

PART 2 - PRODUCTS

2-01 PLANT MATERIALS:

A. Plants: Provide typical of their species or variety, with normal, densely developed branches and vigorous, fibrous root systems. Only sound, healthy, vigorous plants which are free from sunscald injuries, disfiguring knots, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation shall be provided. All plants shall have a fully developed form without voids and open patches.
   1. Balled and burlapped plants shall have a firm natural ball of earth of sufficient diameter and depth to encompass a root system necessary for a full recovery of the plant. Root ball sizes shall comply with the latest edition of the 'American Standards for Nursery Stock' (ASNS). Root balls that are cracked or mushroomed are unacceptable.
   2. Container grown stock should be grown for an amount of time that is of sufficient length for the root system to have developed enough to hold its soil togehter, firm and whole. Plants will not be loose in their containers, nor shall they be pot-bound and all container grown stock will comply with the sizes stated on the plant list.
   3. No evidence of wounds or pruning cuts shall be allowed unless approved by the Landscape Architect.
   4. Evergreen trees shall be branched to the ground. The height of evergreen trees are determined by measuring from the ground to the first lateral branch closest to the top. Height and/or width of other trees are measured by the mass of the plant not the very tip of the branches.
   5. Shrubs and small plants shall meet the requirements for spread and/or height indicated in the plant list. The height measurement shall be taken from ground level to the average height of the top of the plant, not the longest branch. Single stem or thin plants will not be accepted. Side branches shall be flushed with growth and have good form to the ground. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

2-02 ACCESSORIES:

A. Topsoil:
   1. Topsoil shall be fertile, natural topsoil of a loamy character, without admixture of subsoil material. Topsoil shall be reasonably free from clay, lumps, coarse sand, stones, plants, roots, sticks and other foreign materials with a pH between 6.5 to 7.0.

B. Topsoil for seed areas shall be a minimum of 6".

C. Soil amendments shall be as follows:
   1. For trees and shrubs the plant pit will be backfilled with pulverized black dirt.
   2. For perennials and ornamental grasses the soil mixture will be as follows: CM-63 General Purpose Peat Based Mix as supplied by Midwest Trading. Top beds with 8" of CM-63 and till into existing beds to a depth of 8". Soil mixtures are available from Midwest Trading. Midwest Trading, St. Charles, IL 60174 (630) 365-1990

D. Fertilizer:
   1. For trees and shrubs use: 14-4-6 briquettes 17 g or equivalent available from Arthur Clesen, Inc. Follow manufacturer's recommendation for application. Arthur Clesen, Inc. 543 Diens Drive, Wheeling, IL 60090 (847)537-2177
   2. For turf areas use 6-24-16 Clesen Fairway with micronutrients with minor elements 3.0 % S, .02% B, .05% Cu, 1.0% Fe, .0006% Mo, .10% Mn available from Arthur Clesen or approved equal.

E. Herbicide:
   1. Round-Up or approved equal

F. Mulch:
   1. Bark mulch shall be finely shredded hardwood bark which has been screened and is free of any green foliage, twigs, rocks, sawdust, wood shavings, growth or germination inhibiting ingredients, or other foreign materials. Bark mulch is available from Midwest Trading.
   2. Mushroom compost as available from Midwest Trading.

G. Water:
   1. Water service will be available on the site, with the cost of water being paid by the Owner. Transporting of the water from the source to the work areas shall be the responsibility of the Landscape Contractor. All necessary hose, piping, tank truck, etc. shall be supplied by the Landscape Contractor.

H. Guying:
   1. Stakes: 5/8" x 40" steel eye anchor with 4" helix
   2. Cable:
      a. Trees under 5": flexible 1/8" galvanized aircraft cable, 7x7 strand or approved equal
      b. Trees 5" and over: flexible 3/16" galvanized aircraft cable, 7x7 strand or approved equal.
   3. Turnbuckles: 5/16", eye and eye, with 4" takeup.
   4. Hose: new two-ply reinforced rubber hose, minimum 1/2" I.D.

I. Tree wrap: Burlap tree wrap 4" wide.

J. Twine: Soft nursery jute.

PART 3 - INSTALLATION OF PLANT MATERIAL

3-01 FIELD VERIFICATION:

A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

3-02 PREPARATION:

A. All planting techniques and methods shall be consistent with the latest edition of 'Horticulture Standards of Nurserymen, Inc.' and as detailed on these Drawings.

B. Planting shall be performed by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.

C. All underground utilities must be located and marked clearly.

D. Apply Round-Up or approved equivalent to kill any existing vegetation in all areas to be planted. Confirm length of waiting period between chemical application and plant installation with manufacturer. Do not begin planting operations until prescribed post-application waiting period has elapsed. Take extreme care to avoid chemical drift to adjoining properties of landscape plantings.

E. Prior to all planting, rototill all areas to be landscaped to prepare for plant installation to a minimum depth of 12". Eliminate uneven areas and low spots. Maintain lines, levels, profiles and contour. Changes in grade are to be gradual. Blend slopes into level areas. Remove all debris, weeds and undesirable plants and their roots from areas to be planted. Remove all concrete slag larger than 2" in diameter.

F. Topsoil shall be spread over the site at a minimum depth of 6". For those areas which are indicated as prairie or natural areas on the Drawings, a topsoil depth of 18" is recommended where possible.

G. It shall be the responsibility of the landscape contractor to prepare all seeded areas by disking and raking prior to planting seed. Soil shall be loosened and scarified to a minimum depth of 6". Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

H. Locate all plant material as indicated or as approved in the field by the Landscape Architect. If obstructions are encountered which are not shown on the drawings, then do not proceed with planting operations until alternate plant locations have been selected.

I. Planting holes shall be constructed as shown on the planting details. Holes shall be hand dug or machine dug. Great care will be taken to not excavate the hole deeper than the root ball and the diameter shall be a minimum of two times the root ball width. Remove any materials encountered in excavation that may be injurious to plant growth, including stones larger than 2" in diameter or other debris. Soil to be used as backfill should be pulverized.

J. Provide pre-mixed planting mixture for use around root systems and root balls of the plants. The mixtures are outlined in section B of part 2-02.

K. Prior to planting, provide additional topsoil to all planting beds to bring the finish grade of the bed to 2" above lawn grade and to finish grade of adjacent hard surface grades.

L. Add 2" thickness of mushroom compost to all annual, perennial and groundcover beds. Finish grade bed and install plants.

3-03 PLANTING PROCEDURES:

A. Set plant material in the planting hole to proper grade and alignment. Set plants upright and plumb. Set plant material 2" above the adjacent finish grade. Remove burlap from top 1/3 of root ball. Remove treated burlap (green). Cut and remove or cut and fold down upper half of wire basket, dependent upon tree size. Backfill hole by firmly tamping soil to avoid any air pockets or voids.

B. Set balled and burlapped plants in the planting hole and compact 8" of soil around the base of the ball. Backfill remaining space with planting mixture. Water plants immediately after planting to eliminate all voids and thoroughly soak the plant root ball.

C. Space groundcover plants according to dimensions given on the plans. Adjust spacing as necessary to evenly fill planting bed with indicated number of plants. Plant to within 18" of the trunks of trees and shrubs or at the edge of the plant ball, whichever is closest. Plant to within 12" of edge of bed.

D. Mulching:
   1. Install 4" depth of mulch around all tree and shrub beds as indicated on drawings or planting details. Mulch shrub planting areas as continuous beds. Do not place mulch directly against tree trunk; form mulch to create an inverted cone around trunk.
   2. Mulch perennial, groundcover and annual planting beds with 2" mushroom compost. Water mulched areas thoroughly after placing mulch.

E. Tree wrapping is not required, unless the Contractor feels it is necessary due to characteristics of a particular species or past experience with the species. The landscape architect will be notified as to which trees are to be wrapped and shall inspect the trunk(s) before wrapping. Tree wrap will not be used to cover damage or defects. When wrapping is done, trunks will be wrapped spirally with approved tree wrapping tape that is not less than 4" wide, and securely tied with suitable cord at the top, bottom and 2" intervals along the trunk. Wrap from ground to the height of the first branch.

F. Staking and guying of trees is optional. If the Contractor chooses to stake all or part of the trees, he/she shall use the method specified in the planting details. One (1) stake is to be used on trees of 1" caliper and under, or 4' height and under. Two (2) stakes are to be used on trees of 1" to 2 3/4" caliper. Guy trees of 3" caliper or larger at three (3) per tree. The root ball will not be pierced with a stake. Stakes are to be driven at least eighteen (18) inches into subsoil below the planting hole. Stakes and wire attachments shall be removed after three months for spring planted material and by the following May for fall planted stock by the Contractor. Staking and guying should be done immediately after lawn seeding or sodding operations.

G. Seeding of specified lawn areas on plans will be treated as follows:
   1. Topsoil shall be spread over all areas to be seeded to a minimum depth of 6" when compacted (to be performed by others).
   2. Seed mixture and application rate - use Premium seed mix as supplied by Arthur Clesen, Inc. Apply at a rate of 5 lbs./1000 s.f.
   3. Apply fertilizers and conditioners at the rate specified per soil test findings. In lieu of soil test results, apply two (2) tons of ground agricultural limestone and 1000 lbs. 10-10-10 or equivalent analysis fertilizer per acre. At least 40% of the fertilizer nitrogen shall be of an organic origin.
   4. Soil preparation areas where vehicular traffic has compacted the soil shall be loosened/scarified to a minimum depth of 6" before fertilizing and seeding. Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".
   5. Watering seeded areas shall be done to ensure proper germination. Once seeds have germinated, watering may be decreased but the seedlings must never be allowed to dry out completely. Frequent watering should be continued approximately four (4) weeks after germination or until grass has become sufficiently established to warrant watering on an 'as needed' basis.
   6. Turf is being established on a variety of slope conditions. It shall be the Contractor's responsibility to determine and implement whatever procedures he/she deems necessary to establish the turf as part of his/her work. Seeded areas will be accepted when all areas show a uniform stand of the specified grass in healthy condition and at least 90 days have elapsed since the completion of this work. The Contractor shall submit with his/her bid a description of the methods and procedures he/she intends to use.

H. Erosion Control Blanket
   1. Erosion Control Blanket shall be installed per manufacturer's recommendation in all areas shown on the plan.
   2. Install S-75 Erosion Control Blanket as manufactured by North American Green or approved equal.
   3. Blanket should be premarked with staple pattern.
   4. Staples should be 8" wire staples, applied at two (2) per square yard minimum.
   5. Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

I. Sodding of specified lawn areas on plans will be completed as follows:
   1. Rake soil surface to receive sod to completely remove any soil crust no more than one day prior to laying sod.
   2. Moisten prepared surface immediately prior to laying sod. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
   3. Sod shall be laid within 24 hours from the time of stripping. Do not plant dormant sod or if the ground is frozen.
   4. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent sod.
   5. Place top elevation of sod 1/2 inch below adjoining edging or paving.
   6. Water sod thoroughly with a fine spray immediately after planting.
   7. After sod and soil have dried, roll seeded areas to ensure a good bond between the sod and soil, and to remove minor depressions and irregularities.
   8. Sodded slopes 3:1 or greater shall be staked to prevent erosion and washout.
   9. Warranty sodding for a period of one (1) year from the end of the 90 day maintenance period. If sod fails or lacks vigor and full growth as determined by the Landscape Architect, the Contractor will repeat site preparation operations and re-sod affected areas at the Contractor's expense.
   10. Note: Sod shall be a premium Kentucky Bluegrass blend, and is required in all areas indicated on the plans as well as areas which have been affected by construction. Sod can be placed as long as water is available and the ground surface can be properly prepared. Sod shall not be laid on frozen or snow-covered ground. Sod shall be strongly rooted, not less than two (2) years old and free of weeds and undesirable native grasses. Sod should be machine cut to pad thickness of 3/4" (plus or minus 1/4"), excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant). Provide sod of uniform pad sizes with maximum 5% deviation in either length or width. Broken pads or pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on the upper 10% of pad will not be accepted.

J. Timing of plant material and seeding operations:
   1. Seeding of specified areas shall occur when the soil temperature is above 55° F. No seed shall be sown during periods of high winds, or when the ground is not in proper condition for seeding (see section 3-02 (G)). Seeding operations for the specified mixes shall occur in the spring time frame of April 15 through June 30 and in the summer time frame of August 15 through December 1. The mixes containing bluegrass and fescue seed must have six weeks to harden off for winter survival.
   2. Sod shall be installed when the ground is not frozen or snow covered and temperatures are less than 80° F. It shall not be placed during a period of extended drought.
   3. Herbaceous ornamental plants shall be planted between May 1 and June 15 or between August 15 and December 1.
   4. Spring planting of woody ornamental plants shall be performed from the time the soil can be easily worked until June 1, except that evergreen planting shall end on May 15. Oak, hawthorn and red maple species will only be planted during this spring planting period. Fall planting will begin August 15 and will continue until the ground cannot be worked satisfactorily, except that evergreen planting shall be performed between August 15 and December 1.

3-04 MAINTENANCE:

A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include but is not limited to: mowing and edging turf, pulling weeds, watering turf areas and plant material plus annual flower maintenance. The Contractor will reset settled plants to proper grade and position. Dead material will be removed. Stakes and guy wires will be tightened and repaired as required.

3-04 ACCEPTANCE:

A. All plant material (excluding annual color), shall be warranteed for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative.

3-06 SITE CLEAN-UP:

A. The Contractor shall protect the property of the Owner and the work of other contractors. The Contractor shall also be directly responsible for all damage caused by the activities and for the daily removal of all trash and debris from his/her work area to the satisfaction of the landscape architect .

DATE	REVISIONS	DRAWN BY
07/07/21	REVISED PER VILLAGE COMMENTS	JBD

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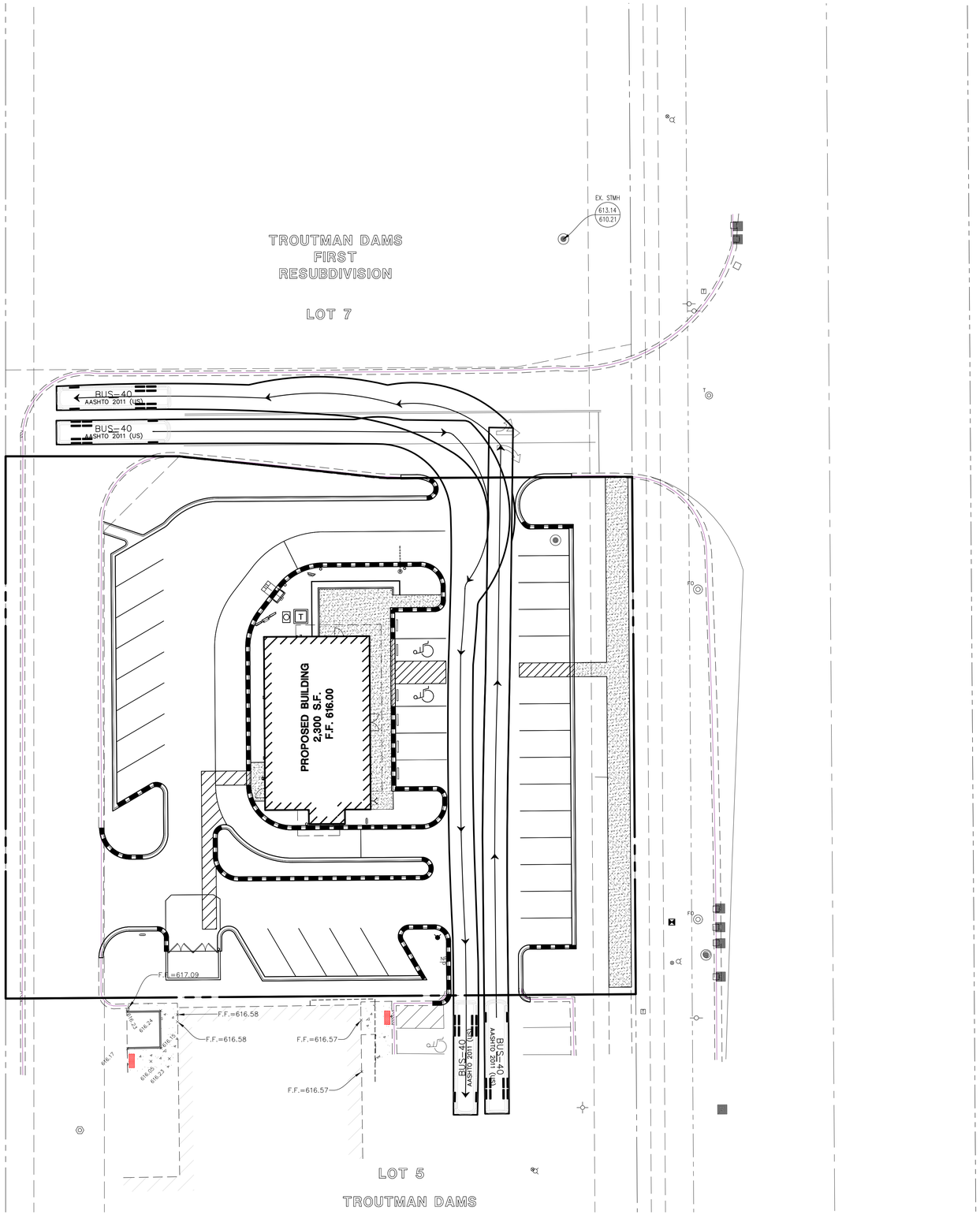
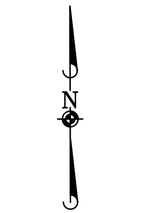
PROPOSED STARBUCKS
470-480 N. INDEPENDENCE BOULEVARD, ROMEOVILLE, ILLINOIS
LANDSCAPE SPECIFICATIONS

PROJ. MGR.:	ZG
PROJ. ASSOC.:	MF
DRAWN BY:	JBD
DATE:	05/21/21
SCALE:	1"=XX'

SHEET
L3 OF L3
TAD.RVIL02

ISSUED FOR PERMIT - NOT FOR CONSTRUCTION





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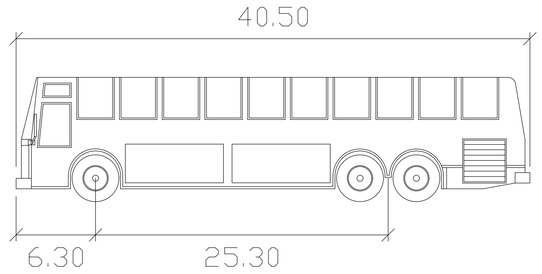

BUS-40

	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 37.5

DRAWN BY	REVISIONS	DATE
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PROPOSED STARBUCKS

470-480 N. INDEPENDENCE BOULEVARD

AUTOTURN B40 EXHIBIT

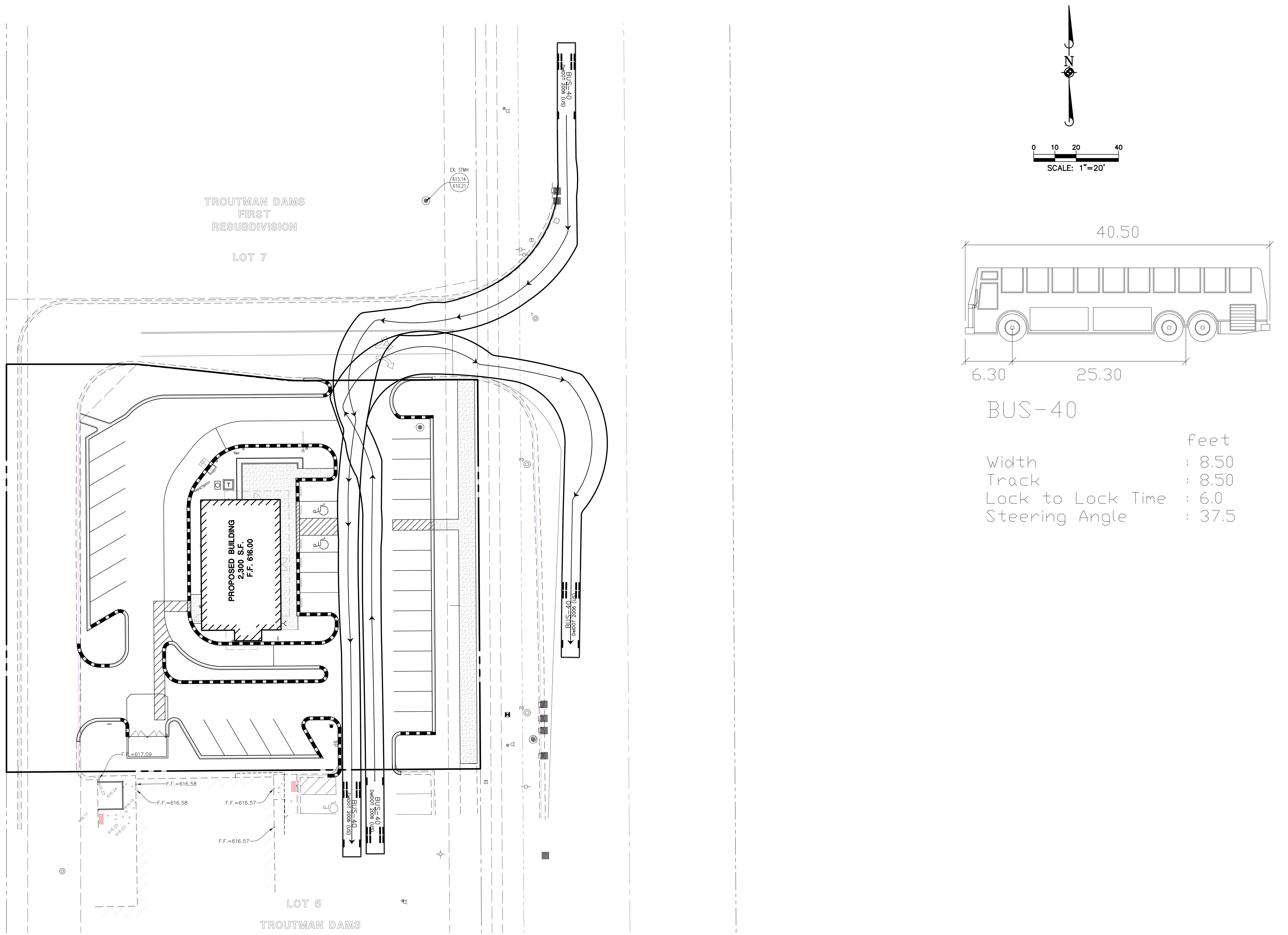
PROJ. MGR.:	ZAG
PROJ. ASSOC.:	EAF
DRAWN BY:	DBC
DATE:	07-09-21
SCALE:	1"=20'

SHEET

1 OF 2

TAD.RVIL02

July 9, 2021 - 11:15 Dwg Name: P:\Projects\025\Dwg\Engr\Civil Drawings\Exhibits Engr\AUTOTURN_EXHIBIT 2.dwg Updated By: DBC



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PROPOSED STARBUCKS

470-480 N. INDEPENDENCE BOULEVARD

AUTOTURN B40 EXHIBIT

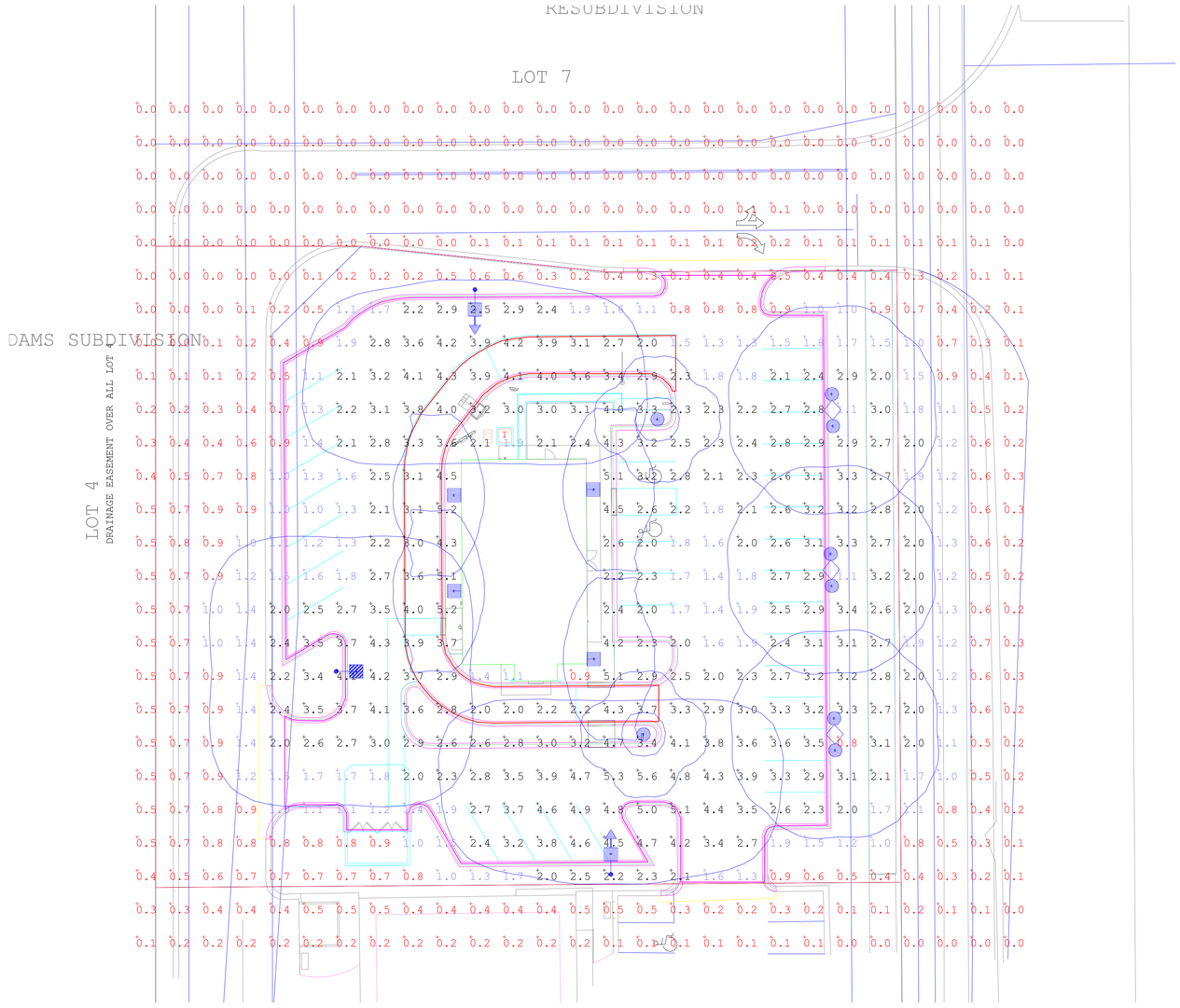
PROJ. MGR.: ZAG
PROJ. ASSOC.: EAF
DRAWN BY: DBC
DATE: 07-09-21
SCALE: 1"=20'

SHEET 2 OF 2

TAD.RVIL02

July 9, 2021 – 11:15 Dwg Name: P:\Tadrvil02\dwg\Eng\Final Drawings\Exhibits Eng\AUTOTURN EXHIBIT.dwg Updated By: DCory

REVISIONS		
Rev #	Date	BY:
1	5/20/21	J.P.
2	7/21/21	J.P.
3	7/23/21	J.P.



Calculation Summary								
Label	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpcLr	PtSpcTb
DRIVE THRU	Fc	3.39	5.2	1.5	2.26	3.47	10	10
PARKING	Fc	2.67	5.6	0.8	3.34	7.00		

Luminaire Schedule						
WLS13713 STARBUCKS VILLAGE OF ROMEOVILLE, IL PM: HOLLY PLEASE EMAIL US FOR PRICING AT HOLLY@WLSLIGHTING.COM						
Symbol	Qty	Label	Lum. Lumens	LLF	Description	Lum. Watts
	2	A	15715	0.950	WLS-CLXM-LED-24L-SIL-FT-40-70CRI-IL-SLW 25' MOUNTING HEIGHT	188.8
	1	B	23667	0.950	WLS-CLXM-LED-24L-SIL-5W-40-70CRI-SLW 25' MOUNTING HEIGHT	188.8
	3	C	4593	0.950	WLS-310-5-LED-50W-4K 15' POLE	52
	2	D	4593	0.950	WLS-310-5-LED-50W-4K 15' POLE	52
	4	E	4282	0.950	WLS-WP-B-WM-3ME-4L-40K-SLW 15' MOUNTING HEIGHT	31.5

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine applicability of the layout to existing or future field conditions.

This lighting pattern represents illumination levels calculated from laboratory data taken under controlled conditions utilizing current industry standard lamp ratings in accordance with Illuminating Engineering Society approved methods. Actual performance of any manufacturer's luminaire may vary due to variation in electrical voltage, tolerance in lamps and other variable field conditions.

WLS LIGHTING
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FORT WORTH, TX 76126
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800-633-8711

SHEET 1 OF 1

BY: J.P.

PM:HOLLY

STARBUCKS
VILLAGE OF ROMEOVILLE, IL

SCALE: 1"=20'

DATE -5/13/21

WLS-13713