Addenda

rosemann & ASSOCIATES P.C.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

Date: April 19, 2024

Project: Wilshire Hills III

Addenda No.: 3

Project No.: 23034

Attach the following to the Specifications. These items now become incorporated into the work defined by the Contract Documents effective as of the date of this Addenda.

ITEM NO. 1.
Construction Documents, GENERAL SHEETS: Please replace sheet G-001 dated 03/14/24 with sheet G-001 dated 04/19/24. *Updated sheet index. New G-001 sheet has been attached to this Addendum #1.*

ITEM NO. 2.
Construction Documents, GENERAL SHEETS: Please replace sheet G-100 dated 12/15/23 with sheet G-100 dated 04/19/24. *Door fire ratings updated per city comments. New G-100 has been attached to this Addendum #1.*

ITEM NO. 3.
Construction Documents, GENERAL SHEETS: Please replace sheet G-101 dated 10/30/23 with sheet G-101 dated 04/19/24. *Door fire ratings updated per city comments. New G-102 has been attached to this Addendum #1.*

ITEM NO. 4.
Construction Documents, CIVIL SHEETS: *Please replace sheet C0.02 dated 12/15/23 with sheet C0.02 dated 02/22/24. Fire notes updated per city comments. Set attached to this Addendum #3 is the current full set as of 04/19/24.*

ITEM NO. 5.
Construction Documents, ARCHITECTURAL SHEETS: Please replace sheet A-600 dated 12/15/23 with sheet A-600 dated 04/19/24. Room Finish schedule & *Door schedule fire ratings updated. New A-600 sheet has been attached to this Addendum #1.*

END OF ADDENDA

WILSHIRE HILLS III

Lee's Summit, MO

MHDC Project No. #22-057 MT

PRINTS ISSUED

10/30/23 PERMIT SUBMITTAL

REVISIONS:

1	12/15/23	Addendum 1 - Response to City Comments
2	03/14/24	Addendum 2
3	04/19/24	Addendum 3 - Response to City Comments #2

PROJECT CERTIFICATION

I, **David E. Hendrikse**, hereby specify pursuant to the governing requirements of the state, that the documents intended to be authenticated by my seal are limited to:

G-001	G-201	G-302	A-201	A-410
G-002	G-202	G-303	A-300	A-411
G-003	G-203	AS-101	A-301	A-500
G-004	G-204	A-101	A-302	A-501
G-005	G-205	A-102	A-303	A-502
G-006	G-206	A-103	A-304	A-503
G-007	G-207	A-104	A-400	A-600
G-100	G-208	A-120	A-401	A-700
G-101	G-209	A-121	A-402	
G-102	G-300	A-122	A-403	
G-200	G-301	A-200	A-404	

and I hereby disclaim any responsibility for all other plans, specifications, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

SEAL

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7365
REGISTERED ARCHITECT

04/19/24

DAVID E. HENDRIKSE, AIA

REGIONAL MAP



VICINITY MAP



WILSHIRE HILLS III
LEE'S SUMMIT, MISSOURI

N

SHEET INDEX

GENERAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	10/30/23	G-001	TITLE SHEET	3	04/19/24
■	10/30/23	G-002	GENERAL INFORMATION		
■	10/30/23	G-003	PLAN GENERAL NOTES		
■	10/30/23	G-004	GENERAL INFORMATION		
■	10/30/23	G-005	GENERAL INFORMATION		
■	10/30/23	G-006	GENERAL INFORMATION		
■	10/30/23	G-007	GENERAL INFORMATION		
■	10/30/23	G-100	CODE ANALYSIS	3	04/19/24
■	10/30/23	G-101	CODE PLANS	3	04/19/24
■	10/30/23	G-102	ASSEMBLIES - PARTITION, CEILING, ROOF	1	12/15/23
■	10/30/23	G-200	UL ASSEMBLIES		
■	10/30/23	G-201	UL ASSEMBLIES		
■	10/30/23	G-202	UL ASSEMBLIES		
■	10/30/23	G-203	UL ASSEMBLIES		
■	10/30/23	G-204	UL ASSEMBLIES		
■	10/30/23	G-205	UL ASSEMBLIES		
■	10/30/23	G-206	UL ASSEMBLIES		
■	10/30/23	G-207	UL ASSEMBLIES		
■	10/30/23	G-208	UL ASSEMBLIES		
■	12/15/23	G-209	UL ASSEMBLIES	1	12/15/23
■	10/30/23	G-300	ACCESSIBILITY STANDARDS		
■	10/30/23	G-301	ACCESSIBILITY STANDARDS		
■	10/30/23	G-302	ACCESSIBILITY STANDARDS		
■	10/30/23	G-303	ACCESSIBILITY STANDARDS		

CIVIL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	06/30/23	C0.01	COVER	1	02/22/24
■	06/30/23	C0.02	GENERAL NOTES	1	02/22/24
■	06/30/23	C1.01	OVERALL PLAN	1	02/22/24
■	06/30/23	C2.01	SITE PLAN	1	02/22/24
■	06/30/23	C3.01	JOINT PLAN	1	02/22/24
■	06/30/23	C4.01	GRADING & DRAINAGE PLAN	1	02/22/24
■	06/30/23	C5.01	STORM SEWER PLAN	1	02/22/24
■	06/30/23	C6.01	STORM SEWER PROFILES	1	02/22/24
■	06/30/23	C7.01	UTILITY PLAN & PROFILE	1	02/06/24
■	06/30/23	C8.01	ACCESSIBILITY PLAN	1	02/22/24
■	06/30/23	C8.02	ACCESSIBILITY PLAN	1	02/22/24
■	06/30/23	C8.03	ACCESSIBILITY PLAN	1	02/22/24
■	06/30/23	C9.01	INITIAL EROSION CONTROL PLAN		
■	06/30/23	C9.02	FINAL EROSION CONTROL PLAN		
■	06/30/23	C10.01	SITE DETAILS		
■	06/30/23	C10.02	SITE DETAILS		
■	06/30/23	C10.03	SITE DETAILS		
■	06/30/23	C11.01	STORM SEWER DETAILS		
■	06/30/23	C11.02	STORM SEWER DETAILS		
■	06/30/23	C12.01	SANITARY SEWER DETAILS		
■	06/30/23	C13.01	WATER DETAILS	1	02/22/24
■	06/30/23	C14.01	EROSION CONTROL DETAILS		
■	06/30/23	C14.02	EROSION CONTROL DETAILS		
■	06/30/23	C14.03	EROSION CONTROL DETAILS		
■	06/30/23	C15.01	STORM SEWER DRAINAGE AREA MAP		
■	09/28/23	L1.01	LANDSCAPE PLAN	1	02/22/24
■	09/28/23	L1.02	LANDSCAPE PLAN	1	02/22/24
■	09/28/23	L1.03	LANDSCAPE PLAN	1	02/22/24
■	09/28/23	L1.04	LANDSCAPE PLAN		
■	09/28/23	L1.05	LANDSCAPE PLAN		
■	07/13/23	RW1.01	RETAINING WALL PLAN	1	02/22/24
■	07/13/23	RW2.01	RETAINING WALL DETAILS	1	02/23/24

STRUCTURAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	10/30/23	S-001	STRUCTURAL GENERAL NOTES	1	12/15/23
■	10/30/23	S-002	STRUCTURAL GENERAL NOTES		
■	10/30/23	S-003	SPECIAL INSPECTIONS		
■	10/30/23	S-100	SLAB DIMENSION PLAN		
■	10/30/23	S-101	FOUNDATION PLAN		
■	10/30/23	S-102	2ND FLOOR FRAMING PLAN		
■	10/30/23	S-103	3RD FLOOR FRAMING PLAN		
■	10/30/23	S-104	ROOF FRAMING PLAN		
■	10/30/23	S-500	STRUCTURAL DETAILS		
■	10/30/23	S-501	STRUCTURAL DETAILS		
■	10/30/23	S-502	STRUCTURAL DETAILS		
■	10/30/23	S-503	STRUCTURAL DETAILS		

ARCHITECTURAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	10/30/23	AS-101	ARCHITECTURAL SITE AMENITIES		
■	10/30/23	A-101	FIRST FLOOR PLAN		
■	10/30/23	A-102	SECOND FLOOR PLAN		
■	10/30/23	A-103	THIRD FLOOR PLAN		
■	10/30/23	A-104	ROOF PLAN		
■	10/30/23	A-120	FIRST FLOOR REFLECTED CEILING PLAN		
■	10/30/23	A-121	SECOND FLOOR REFLECTED CEILING PLAN		
■	10/30/23	A-122	THIRD FLOOR REFLECTED CEILING PLAN		
■	10/30/23	A-200	EXTERIOR ELEVATIONS		
■	10/30/23	A-201	EXTERIOR ELEVATIONS		
■	10/30/23	A-300	OVERALL BUILDING SECTION		
■	10/30/23	A-301	WALL SECTIONS		
■	10/30/23	A-302	ELEVATOR SECTION & DETAILS		
■	10/30/23	A-303	STAIR SECTION & DETAILS		
■	10/30/23	A-304	FRONT CANOPY PLAN / ELEV. / SECTION / & DETAILS		
■	10/30/23	A-400	ONE BEDROOM UNIT PLAN - TYPE A		
■	10/30/23	A-401	ONE BEDROOM UNIT PLAN - TYPE B		
■	10/30/23	A-402	TWO BEDROOM UNIT PLAN - TYPE A		
■	10/30/23	A-403	TWO BEDROOM UNIT PLAN - TYPE B		
■	10/30/23	A-404	TWO BEDROOM CORNER UNIT PLAN - TYPE B		
■	10/30/23	A-410	ENLARGED FLOOR PLANS - COMMON AREAS	1	12/15/23
■	10/30/23	A-411	ENLARGED FLOOR PLANS - COMMON AREAS	1	12/15/23
■	10/30/23	A-500	DETAILS		
■	10/30/23	A-501	DETAILS		
■	10/30/23	A-502	DETAILS		
■	10/30/23	A-503	SUSPENDED CEILING DETAILS		
■	10/30/23	A-600	WINDOW / DOOR / FINISH SCHEDULES	3	04/19/24
■	10/30/23	A-700	INTERIOR ELEVATIONS	1	12/15/23

MECHANICAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	10/30/23	MEP000	MEP COVER SHEET		
■	10/30/23	MEP101	MEP SITE PLAN	1	12/15/23
■	10/30/23	MEP200	MEP PENETRATION DETAILS		
■	10/30/23	MEP201	MEP PENETRATION DETAILS		
■	10/30/23	M101	FIRST FLOOR HVAC PLAN	1	12/15/23
■	10/30/23	M102	SECOND FLOOR HVAC PLAN		
■	10/30/23	M103	THIRD FLOOR HVAC PLAN		
■	10/30/23	M201	ENLARGED UNIT PLANS - HVAC	1	12/15/23
■	10/30/23	M301	MECHANICAL SCHEDULES	1	12/15/23
■	10/30/23	M401	MECHANICAL DETAILS		

PLUMBING

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	10/30/23	P101	FIRST FLOOR PLUMBING PLAN	1	12/15/23
■	10/30/23	P102	SECOND FLOOR PLUMBING PLAN		
■	10/30/23	P103	THIRD FLOOR PLUMBING PLAN		
■	10/30/23	P201	ENLARGED UNIT PLANS - PLUMBING		
■	10/30/23	P301	PLUMBING SCHEDULES		
■	10/30/23	P302	PLUMBING DETAILS	1	12/15/23

ELECTRICAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	10/30/23	E101	FIRST FLOOR LIGHTING PLAN		
■	10/30/23	E102	SECOND FLOOR LIGHTING PLAN		
■	10/30/23	E103	THIRD FLOOR LIGHTING PLAN		
■	10/30/23	E111	ENLARGED UNIT PLANS - LIGHTING		
■	10/30/23	E201	FIRST FLOOR POWER PLAN	1	12/15/23
■	10/30/23	E202	SECOND FLOOR POWER PLAN		
■	10/30/23	E203	THIRD FLOOR POWER PLAN		
■	10/30/23	E211	ENLARGED UNIT PLANS - POWER		
■	10/30/23	E301	ELECTRICAL RISER DIAGRAM	1	12/15/23
■	10/30/23	E302	ELECTRICAL SCHEDULES		
■	10/30/23	E303	ELECTRICAL SCHEDULES		
■	10/30/23	E401	ELECTRICAL SCHEDULES/DETAILS		
■	10/30/23	E402	ELECTRICAL DETAILS		
■	10/30/23	SL100	SITE PHOTOMETRICS		

SOLID FILL INDICATES INCLUSION IN ISSUE

SHEET ISSUE DATE

■ 10 / 10/ 2020 | A-000 SHEET NAME | - | 10 / 10/ 2020

SHEET NUMBER AND NAME

CURRENT REVISION NUMBER & REVISION DATE ON SHEET

SHEET INDEX LEGEND

PROJECT DATA

PROJECT DESIGN INFORMATION

NEW CONSTRUCTION: YES

ZONING: MU - MIXED USE ZONING

CODE:

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE
2009 ACCESSIBILITY CODE ICC/ANSI 117.1
2018 IECC ENERGY CODE

OCCUPANCY GROUP: R-2

TYPE OF CONSTRUCTION: TYPE V-A

NOTE: MHDC FORM 1200 FOR DESIGN/CONSTRUCTION COMPLIANCE GUIDELINES ARE UTILIZED IN THE DESIGN OF THE PROJECT

BUILDING SUMMARY:

ONE (1) TOTAL BUILDINGS
HEIGHT: 46' - 8"

SQUARE FOOTAGES:	GROSS	NET
3-STORY		
FIRST FLOOR	17,860 S.F.	17,437 S.F.
SECOND FLOOR	17,860 S.F.	17,437 S.F.
THIRD FLOOR	17,860 S.F.	17,437 S.F.
TOTAL	**53,580 S.F.**	**52,311 S.F.**

ENERGY CONSERVATION: SEE CODE ANALYSIS

UNIT SUMMARY: OVERALL UNIT TOTAL (3-STORY) = **50**

3-STORY (BLDG) UNITS

TYPE "A" UNITS (5% OF TOTAL)	(5) UNITS - TWO BEDROOM
	(3) UNITS - ONE BEDROOM
HI/VI UNITS (2% OF TOTAL)	(1) UNITS - TWO BEDROOM
	(1) UNITS - ONE BEDROOM
STANDARD UNITS	(26) UNITS - TWO BEDROOM
	(14) UNITS - ONE BEDROOM
TOTAL UNITS	**(50) UNITS**

SQUARE FOOTAGE:	GROSS	NET
TYPE "A" - 2 BEDROOM	880 S.F.	822 S.F.
TYPE "B" - 2 BEDROOM	880 S.F.	822 S.F.
TYPE "A" - 1 BEDROOM	711 S.F.	660 S.F.
TYPE "B" - 1 BEDROOM	711 S.F.	660 S.F.
TYPE "B" - 2 BEDROOM	1004 S.F.	935 S.F.

SITE SUMMARY: SEE CIVIL

NOTE: SQUARE FOOTAGE

-GROSS - COMMON SPACE CALCULATION: OUTSIDE PERIMETER OF STUD (ENTIRE BUILDING) LESS THE TOTAL OF THE GROSS UNIT SQUARE FOOTAGE PER FLOOR.
-GROSS - UNIT CALCULATION: CENTERLINE OF PARTY WALL TO OUTSIDE OF EXTERIOR STUD WALL AND/OR OUTSIDE OF CORRIDOR STUD WALL.
-NET - PAINT-TO-PAINT AT PERIMETER,TAKEN FROM INSIDE OF DEMISING, EXTERIOR, AND CORRIDOR WALLS.

PROJECT TEAM

OWNER

WILSHIRE HILLS III, L.P.
ADDRESS: 206 PEACH WAY
COLUMBIA, MO 65203

CONTACT: **BRIAN KIMES**
EMAIL: bkimes@jesmith.com
PHONE: 573.443.2021

ARCHITECT

ROSEMANN & ASSOCIATES, P.C.
ADDRESS: 1526 Grand Boulevard
Kansas City, MO 64108

CONTACT: **MICHAEL GAILLARD**
EMAIL: mgaillard@rosemann.com
PHONE: 816.472.1448

CONTRACTOR

FAIRWAY CONSTRUCTION CO., INC.
ADDRESS: 206 PEACH WAY
COLUMBIA, MO 65203

CONTACT: **DEVIN BROWN**
EMAIL: dbrown@fairwayconstruction.net
PHONE:

STRUCTURAL ENGINEER

ROSEMANN & ASSOCIATES, P.C.
ADDRESS: 1526 Grand Boulevard
Kansas City, MO 64108

CONTACT: **Scott Rosemann**
EMAIL: srosemann@rosemann.com
PHONE: 816.472.1448

MECHANICAL, ELECTRICAL, PLUMBING ENGINEER

PEARSON KENT MCKINLEY RAAF ENGINEERS LLC
ADDRESS: 13300 W. 98TH STREET
LENEXA, KS 66215

CONTACT: **MIKE RAAF**
EMAIL: mike.raaf@pkmreng.com
PHONE: 913.492.2400

CIVIL ENGINEER

ENGINEERING SURVEYS & SERVICES
ADDRESS: 802 EL DORADO DRIVE
JEFFERSON CITY, MO 65101

CONTACT: **SARAH THOMPSON**
EMAIL: sthompson@ess-inc.com
PHONE: 573.449.2646

BUILDING OFFICIAL

Company Name
ADDRESS: Address Line 1
Address Line 2

CONTACT: **Name**
EMAIL: Email
PHONE: Phone

SIGNATURE BLOCK

OWNER:

WILSHIRE HILLS III, L.P.
206 PEACH WAY
COLUMBIA, MO 65203

BY: _____ DATE: _____
NAME

CONTRACTOR:

FAIRWAY CONSTRUCTION CO., INC.
206 PEACH WAY
COLUMBIA, MO 65203

BY: _____ DATE: _____
NAME

ARCHITECT:

ROSEMANN & ASSOCIATES, P.C.
1526 GRAND BOULEVARD
KANSAS CITY, MO 64108-1404

BY: _____ DATE: _____
DAVID E. HENDRIKSE, AIA

BONDING COMPANY:

OWNER NAME
ADDRESS
CITY, ST ZIP

BY: _____ DATE: _____
NAME

MISSOURI HOUSING DEVELOPMENT COMMISSION

920 MAIN STREET, SUITE 1400
KANSAS CITY, MO 64105

BY: _____ DATE: _____
NAME

rosemann & ASSOCIATES P.C.
ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING
1526 Grand Boulevard
Kansas City, MO 64108-1404
p: 816.472.1448
w: www.rosemann.com

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WILSHIRE HILLS III
LEE'S SUMMIT, MISSOURI
MHDC Project No. #22-057 MT

SHEET TITLE
TITLE SHEET

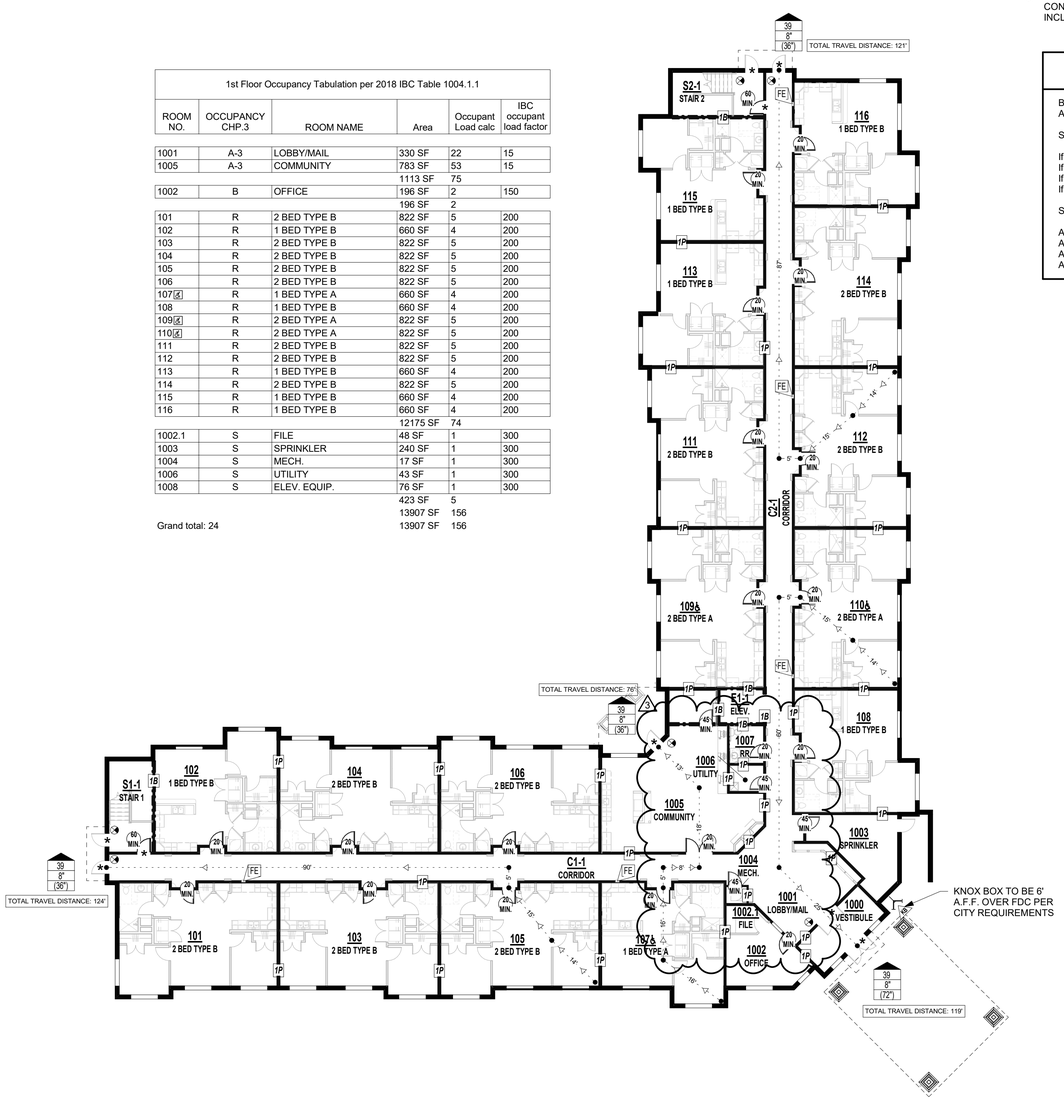
PROJECT NUMBER: 23034

SHEET NUMBER:

G-001

1st Floor Occupancy Tabulation per 2018 IBC Table 1004.1.1					
ROOM NO.	OCCUPANCY CHP.3	ROOM NAME	Area	Occupant Load calc	IBC occupant load factor
1001	A-3	LOBBY/MAIL	330 SF	22	15
1005	A-3	COMMUNITY	783 SF	53	15
			1113 SF	75	
1002	B	OFFICE	196 SF	2	150
			196 SF	2	
101	R	2 BED TYPE B	822 SF	5	200
102	R	1 BED TYPE B	660 SF	4	200
103	R	2 BED TYPE B	822 SF	5	200
104	R	2 BED TYPE B	822 SF	5	200
105	R	2 BED TYPE B	822 SF	5	200
106	R	2 BED TYPE B	822 SF	5	200
107 ⚿	R	1 BED TYPE A	660 SF	4	200
108	R	1 BED TYPE B	660 SF	4	200
109 ⚿	R	2 BED TYPE A	822 SF	5	200
110 ⚿	R	2 BED TYPE A	822 SF	5	200
111	R	2 BED TYPE B	822 SF	5	200
112	R	2 BED TYPE B	822 SF	5	200
113	R	1 BED TYPE B	660 SF	4	200
114	R	2 BED TYPE B	822 SF	5	200
115	R	1 BED TYPE B	660 SF	4	200
116	R	1 BED TYPE B	660 SF	4	200
			12175 SF	74	
1002.1	S	FILE	48 SF	1	300
1003	S	SPRINKLER	240 SF	1	300
1004	S	MECH.	17 SF	1	300
1006	S	UTILITY	43 SF	1	300
1008	S	ELEV. EQUIP.	76 SF	1	300
			423 SF	5	
			13907 SF	156	
			13907 SF	156	

Grand total: 24



A1 1ST FLOOR CODE PLAN
1/16" = 1'-0"

CODE PLAN GENERAL NOTES:

1. FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS WITH FIRE EXTINGUISHERS THROUGHOUT AT ACCESSIBLE HEIGHT.
2. SIGNS IDENTIFYING FIRE PROTECTION EQUIPMENT, CONTROLS FOR AIR CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES, OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR THE USE OF THE FIRE DEPARTMENT PER 2018 IBC. SIGNAGE SHALL ALSO MEET 2018 IFC REQUIREMENTS FOR HEIGHT AND LETTERING. GC TO COORDINATE WITH AUTHORITY HAVING JURISDICTION ON ALL SIGNAGE.
3. KNOX BOX QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION.
4. ANNUNCIATOR PANEL AND FACP QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALL.
5. ALL DIMENSIONS ARE APPROXIMATE ON CODE PLAN. ACTUAL ARCHITECTURAL DIMENSIONS PER ARCHITECTURAL AND STRUCTURAL PLAN.
6. PROJECT COMPLIES WITH 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) - COMCHECK REPORT INCLUDED IN THE SPECIFICATIONS.

AREA INCREASE

BASED ON TYPE V-A CONSTRUCTION WITH AN ALLOWABLE SF OF 12,000 SF

SECTION 506.2 (EQUATION 5-2)

If = [F/P - 0.25] W/30
If = [830/830 - 0.25] 30/30
If = [0.75] 1
If = 0.75

SECTION 506.2 (EQUATION 5-1)

Aa = {At + [At x If] + [At x Is]}
Aa = {12,000 + [12,000 x 0.75] + [12,000 x 0]}
Aa = {12,000 + [9,000] + 0}
Aa = 21,000 SF

CODE REVIEW

PROJECT NAME:	WILSHIRE HILLS III
PROJECT LOCATION:	LEE'S SUMMIT, MO
CODE:	2018 IBC
CODE REVIEW COMPLETED BY:	SARAH BURDIEK

CHAPTER THREE

SECTION 302 CLASSIFICATION:	R-2

CHAPTER FOUR

SECTION 402 COVERED MALL BUILDINGS:	N/A
SECTION 403 HIGH RISE BUILDINGS:	N/A
SECTION 404 ATRIUMS:	N/A
SECTION 405 UNDERGROUND BUILDINGS:	N/A
SECTION 406 MOTOR-VEHICLE-RELATED OCCUP:	N/A
SECTION 407 GROUP I-2:	N/A
SECTION 408 GROUP I-3:	N/A
SECTION 409 MOTION PICTURE PROJECTION ROOMS:	N/A
SECTION 410 STAGES AND PLATFORMS:	N/A
SECTION 411 SPECIAL AMUSEMENT BUILDINGS:	N/A
SECTION 412 AIRCRAFT RELATED OCCUP:	N/A
SECTION 413 COMBUSTIBLE STORAGE:	N/A
SECTION 414 HAZARDOUS MATERIALS:	N/A
SECTION 415 GROUPS H-1, H-2, H-3, H-4, H-5:	N/A

CHAPTER FIVE

TABLE 504.3 ALLOWABLE HT IN FEET ABOVE GRADE:	R S13R: 60'
SECTION 504.4 ALLOWABLE # OF STORIES ABOVE GRADE:	R-2 TYPE V-A; 4 STORIES
506.2 ALLOWABLE AREA/FLOOR:	R-2 TYPE V-A: 12,000 SF
SECTION 504 HEIGHT MODIFICATIONS:	NONE TAKEN
SECTION 506.2.3 AREA MODIFICATIONS:	ALLOWABLE 12,000 SF / ACTUAL 17,860 SF
506.2 FRONTAGE INCREASE:	SEE AREA INCREASE CALCULATION
SECTION 507 UNLIMITED AREA BUILDINGS:	N/A
TABLE 508.2 ACCESSORY OCCUPANCIES:	MAX 10% AREA / FLOOR MAX 12,000 SF TOTAL
TABLE 508.3.3 REQUIRED SEPARATION OF OCCUPANCIES:	1 HR SEPARATION ACCESSORY OCCUPANCIES ONLY
TABLE 509 INCIDENTAL USE AREAS:	N/A

CHAPTER SIX

TABLE 601 FIRE RESISTANCE REQUIREMENTS FOR BUILDING ELEMENTS (HOURS):	
STRUCTURAL FRAME:	V-A - 1 HR
BEARING WALLS, EXTERIOR:	V-A - 1 HR
BEARING WALLS, INTERIOR:	V-A - 1 HR
NONBEARING WALLS AND PARTITIONS, INTERIOR:	0 HOUR
FLOOR CONSTRUCTION:	V-A - 1 HR
ROOF CONSTRUCTION:	V-A - 1 HR
TABLE 602 FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE:	R-2 VA 10 </= 1 HR, 0 HR >30 FEET

CHAPTER SEVEN

SECTION 704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS:	1 HR RE: 601
TABLE 705.8 MAX AREA EXTERIOR WALL OPENINGS:	(UNPROTECTED)
SECTION 706 FIRE WALLS:	V-A - 2 HR (NONE REQ'D)
SECTION 707 FIRE BARRIERS:	1 HR
SECTION 708 FIRE PARTITIONS:	1 HR
SECTION 709 SMOKE BARRIERS:	DAMPERS REQUIRED
SECTION 710 SMOKE PARTITIONS:	0 HR
SECTION 711 HORIZONTAL ASSEMBLIES:	1 HR
SECTION 712 VERTICAL OPENINGS:	1 HR R-2
SECTION 713 SHAFT ENCLOSURES:	1 HR (< 3 STORIES)
SECTION 714 PENETRATIONS:	VARIES
SECTION 715 FIRE-RESISTANT JOINT SYSTEMS:	1 HR (TO MATCH SYSTEMS)
SECTION 716 OPENING PROTECTIVES:	CORRIDOR - 20 MIN., EXTERIOR - 3/4 HR CORRIDOR TO STAIR - 1 HR
SECTION 717 DUCTS AND AIR TRANSFER OPENINGS:	1.5 HOUR DAMPER RATING
SECTION 718 CONCEALED SPACES:	NONE

CHAPTER NINE

SECTION 903 AUTOMATIC SPRINKLER SYSTEM:	REQUIRED, NFPA 13R
SECTION 905 STANDPIPE SYSTEM:	REQUIRED
SECTION 907 FIRE ALARM & DETECTION SYSTEM:	REQUIRED, NFPA 72
SECTION 909 SMOKE CONTROL SYSTEM:	NOT REQUIRED

CHAPTER TEN

TABLE 1004.1.1 MAX FLOOR AREA ALLOW/OCCUP:	200 GROSS - RESIDENTIAL
SECTION 1005.3 EGRESS WIDTH/ OCCUP SERVED:	STAIRS 0.3/OCC, OTHER EGRESS 0.2/OCC.
SECTION 1006.2.1 COMMON PATH OF TRAVEL:	125' COMMON PATH 20 OCC. MAX. SINGLE EXIT
SECTION 1006.3.2 NUMBER OF EXITS & EXIT PER STORY	> 500 OCCUPANTS: 2 EXITS
SECTION 1009 ACCESSIBLE EGRESS:	1 / 30x48 SPACE / 200 OCC.
SECTION 1014 HANDRAIL HEIGHTS:	34" MIN. - 38" MAX.
TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE:	250' SPRINKLED
TABLE 1019.3 STAIRWELL EGRESS:	3 STORIES - RE: 713
TABLE 1020.1 CORRIDOR FIRE RESISTANCE RATING:	RE: 708: 0.5 HR

CHAPTER ELEVEN

TABLE 1106.1 ACCESSIBLE PARKING SPACES:	AS PER CIVIL

CHAPTER TWELVE

1203.5 NATURAL VENTILATION:	4% VENTILATION
1205.2 NATURAL LIGHT:	NOT LESS THAN 8% FLOOR AREA SERVED

CHAPTER TWENTY NINE

TABLE 2902.1 PLUMBING FAC. NO.	1 WC / UNIT; 1 LAVATORY / UNIT

2018 IECC

CLIMATE ZONE: 4A CONST. TYPE: V-A CHAPTER 4-RESIDENTIAL ENERGY EFFICIENCY

PROJECT COMPLYING WITH 2018 IECC VIA PERFORMANCE METHOD; REFERENCE COMCHECK.

MEETS 2018 IECC SECTION R402.1.2 PER PRELIMINARY COMCHECK.

BELOW ARE GENERAL GUIDELINES:

TABLE 402.1.2- BUILDING ENVELOPE REQUIREMENTS
FENESTRATION U-FACTOR = 0.32
SKYLIGHT U-FACTOR = 0.55
GLAZED FENESTRATIONS SHGC = 0.40
CEILING R-VALUE = 49
WOOD FRAME WALL R-VALUE = 20
MASS WALL R-VALUE = 8/13
FLOOR R-VALUE = 19
BASEMENT WALL R-VALUE = 10/13
SLAB R-VALUE = 10, 2 ft.

ALL OF IECC 2018 APPLIES, HOWEVER PARTICULAR NOTE SHALL BE TAKEN OF THE FOLLOWING. ADDITIONALLY, GC TO PROVIDE INSULATION, FENESTRATION, AND OTHER REQUIREMENTS PER BELOW:

1. AIR LEAKAGE PER SECTION R402.4
2. AIR BARRIER PENETRATIONS PER R402.4.1.1
3. AIR LEAKAGE OF FENESTRATION PER SECTION R402.4.3
4. BUILDING MECHANICAL SYSTEM REQUIREMENTS PER SECTION R403
5. DUCT/PLENUM INSULATION AND SEALING PER R403.3
6. PIPING INSULATION PER R403.4
7. SERVICE WATER HEATING PER SECTION R403.5
8. LIGHTING ELECTRICAL SYSTEMS PER SECTION R404

CODE PLAN LEGEND

- 100 / 20' / (72') — NUMBER OF OCCUPANTS EXITING; REQUIRED EXIT WIDTH; EXIT WIDTH PROVIDED BY DESIGN
- EXT. - RATED PARTITION (IBC CH. 6) SEE ASSEMBLY SHEET FOR MORE INFO ON EXTERIOR RATED WALLS
- NON - RATED PARTITION
- 1P — 1P — 1 HR RATED PARTITION (IBC 708)
- 1B — 1B — 1 HR RATED BARRIER (IBC 707)
- 1000 / Room Name — ROOM NUMBER
- FE — FIRE EXTINGUISHER CABINET OR SURFACE MTD. AT CONC.
- KB — FIRE DEPARTMENT KNOX BOX (DEFER SUBMITTAL FOR LOC.)
- FIRE DEPARTMENT CONNECTION
- (60/S) — DOOR RATING
- * — DOOR WITH PANIC HARDWARE (SEE DOOR SCHEDULE)
- EXIT SIGNAGE; SEE ELECTRICAL
- EGRESS STARTING POINT
- EGRESS DISTANCE OF TRAVEL
- EGRESS DIRECTION OF TRAVEL

PRINTS ISSUED
10/30/23 PERMIT SUBMITTAL

REVISIONS:
1 12/15/23 Addendum 1 - Response to City Comments
3 04/19/24 Addendum 3 - Response to City Comments #2

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ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING
1526 Grand Boulevard
Kansas City, MO 64108-1404
p: 816.472.1448
w: www.rosemann.com
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSEN
NUMBER A-7365
REGISTERED ARCHITECT
04/19/24

WILSHIRE HILLS III
LEE'S SUMMIT, MISSOURI
MHDC Project No. #22-057 MT

SHEET TITLE
CODE ANALYSIS

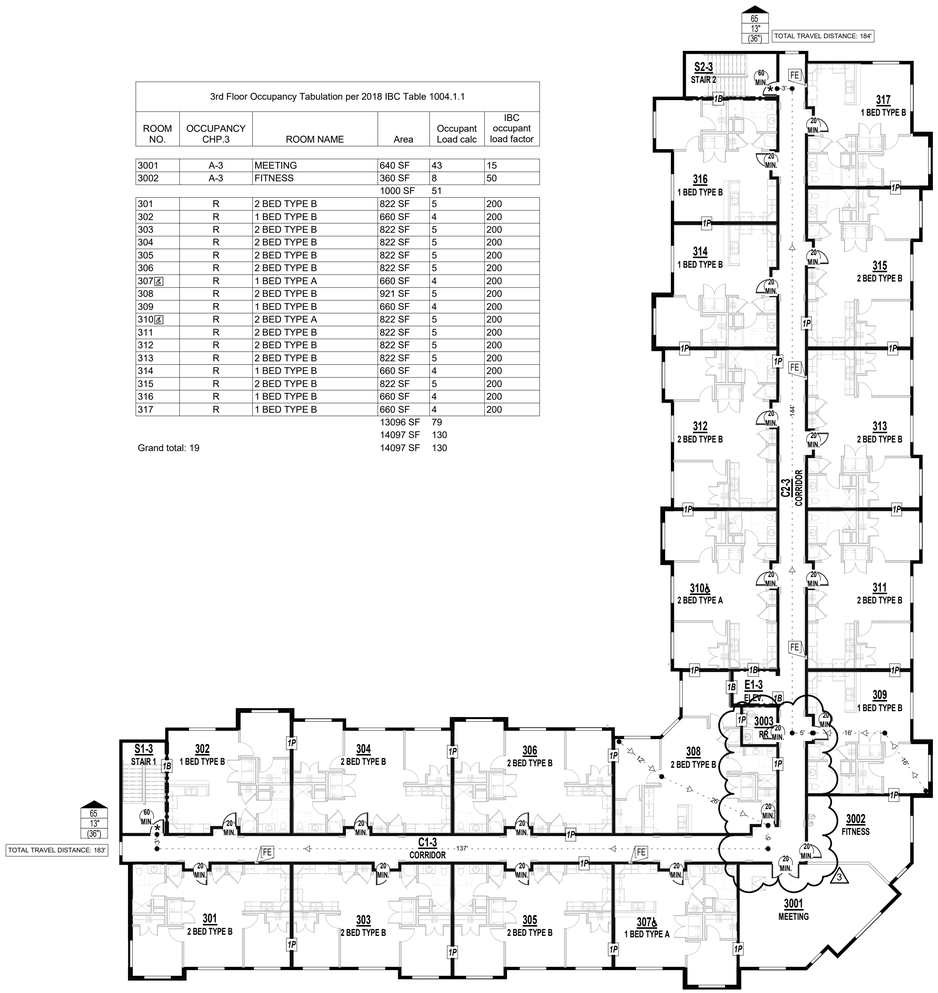
PROJECT NUMBER: 23034

SHEET NUMBER:
G-100

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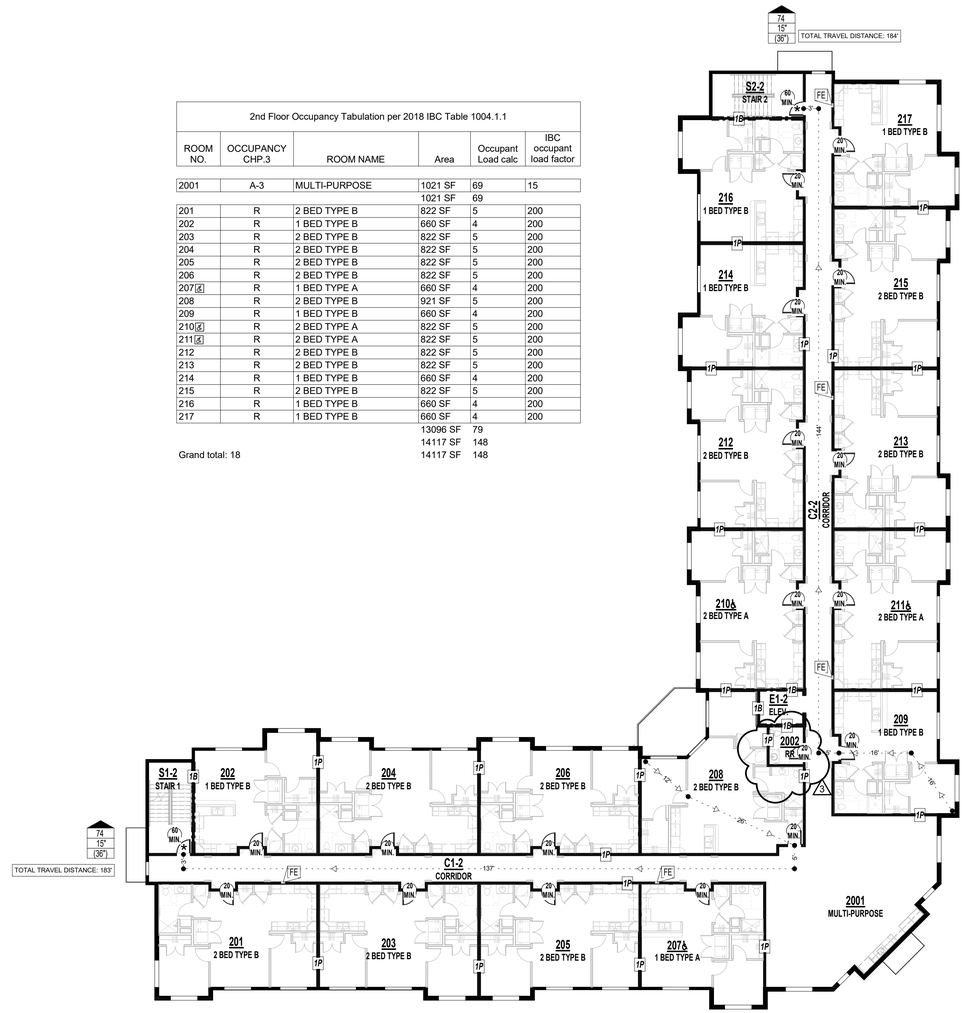
REFERENCE G-003 FOR GENERAL NOTES
REFERENCE G-100 FOR CODE LEGEND

3rd Floor Occupancy Tabulation per 2018 IBC Table 1004.1.1					
ROOM NO.	OCCUPANCY CHP.3	ROOM NAME	Area	Occupant Load calc	IBC occupant load factor
3001	A-3	MEETING	640 SF	43	15
3002	A-3	FITNESS	360 SF	8	50
			1000 SF	51	
301	R	2 BED TYPE B	822 SF	5	200
302	R	1 BED TYPE B	660 SF	4	200
303	R	2 BED TYPE B	822 SF	5	200
304	R	2 BED TYPE B	822 SF	5	200
305	R	2 BED TYPE B	822 SF	5	200
306	R	2 BED TYPE B	822 SF	5	200
307⊿	R	1 BED TYPE A	660 SF	4	200
308	R	2 BED TYPE B	921 SF	5	200
309	R	1 BED TYPE B	660 SF	4	200
310⊿	R	2 BED TYPE A	822 SF	5	200
311	R	2 BED TYPE B	822 SF	5	200
312	R	2 BED TYPE B	822 SF	5	200
313	R	2 BED TYPE B	822 SF	5	200
314	R	1 BED TYPE B	660 SF	4	200
315	R	2 BED TYPE B	822 SF	5	200
316	R	1 BED TYPE B	660 SF	4	200
317	R	1 BED TYPE B	660 SF	4	200
			13096 SF	79	
			14097 SF	130	
Grand total: 19			14097 SF	130	



A2 THIRD FLOOR PLAN
1/16" = 1'-0"

2nd Floor Occupancy Tabulation per 2018 IBC Table 1004.1.1					
ROOM NO.	OCCUPANCY CHP.3	ROOM NAME	Area	Occupant Load calc	IBC occupant load factor
2001	A-3	MULTI-PURPOSE	1021 SF	69	15
			1021 SF	69	
201	R	2 BED TYPE B	822 SF	5	200
202	R	1 BED TYPE B	660 SF	4	200
203	R	2 BED TYPE B	822 SF	5	200
204	R	2 BED TYPE B	822 SF	5	200
205	R	2 BED TYPE B	822 SF	5	200
206	R	2 BED TYPE B	822 SF	5	200
207⊿	R	1 BED TYPE A	660 SF	4	200
208	R	2 BED TYPE B	921 SF	5	200
209	R	1 BED TYPE B	660 SF	4	200
210⊿	R	2 BED TYPE A	822 SF	5	200
211⊿	R	2 BED TYPE A	822 SF	5	200
212	R	2 BED TYPE B	822 SF	5	200
213	R	2 BED TYPE B	822 SF	5	200
214	R	1 BED TYPE B	660 SF	4	200
215	R	2 BED TYPE B	822 SF	5	200
216	R	1 BED TYPE B	660 SF	4	200
217	R	1 BED TYPE B	660 SF	4	200
			13096 SF	79	
			14117 SF	148	
Grand total: 18			14117 SF	148	



A1 2ND FLOOR CODE PLAN
1/16" = 1'-0"

PRINTS ISSUED
10/30/23 PERMIT SUBMITTAL

REVISIONS:

3	04/19/24	Addendum 3 - Response to City Comments #2

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1526 Grand Boulevard
Kansas City, MO 64108-1404
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w: www.rosemann.com
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSEN
NUMBER A-7365
REGISTERED ARCHITECT
04/19/24

WILSHIRE HILLS III
LEE'S SUMMIT, MISSOURI
MHDC Project No. #22-057 MT

SHEET TITLE
CODE PLANS

PROJECT NUMBER: 23034

SHEET NUMBER:

G-101

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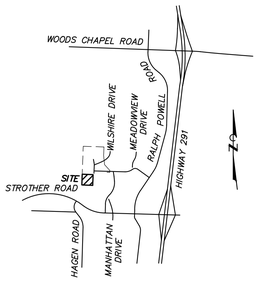
WILSHIRE HILLS PHASE III

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE PLAN

JUNE 30, 2023

REVISED: APRIL 17, 2024



VICINITY MAP

NOT TO SCALE

LEGEND

E	PROPERTY LINE
E	ELECTRIC LINE
T	TELECOMMUNICATIONS LINE
UE	UNDERGROUND ELECTRIC LINE
UT	UNDERGROUND TELECOMMUNICATIONS LINE
UFO	UNDERGROUND FIBER OPTIC LINE
S	SANITARY SEWER LINE
SS	STORM SEWER LINE
G	GAS LINE
W	WATER LINE
X	FENCE
	TREE & BRUSH LINE
	DRAINAGE SWALE
750	EXISTING CONTOUR
	ANCHOR
	TEST BORING
	IRON
CP#	CONTROL POINT
EM	ELECTRIC METER
FES	FLARED END SECTION
FH	FIRE HYDRANT
FL	FLOW LINE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PVC	POLYVINYL CHLORIDE PIPE
TW	TOP OF WALL
UP	UTILITY POLE
WM	WATER METER
WV	WATER VALVE
YL	YARD LIGHT
	SILT FENCE
	TEMPORARY DIVERSION DIKE
	TREE PRESERVATION BARRIER
750	FINISH CONTOUR
750	FINISH GRADE CONTOUR
50.0	TOP OF CURB ELEVATION
49.5	TOP OF PAVEMENT ELEVATION
49.5	FINISH GRADE ELEVATION
S	PROPOSED SANITARY SEWER LINE
W	PROPOSED WATER LINE
UE	PROPOSED UNDERGROUND ELECTRIC
UT	PROPOSED UNDERGROUND TELECOMMUNICATIONS
	PROPOSED STORM SEWER
S	EXISTING SANITARY SEWER LINE
W	EXISTING WATER LINE
UE	EXISTING UNDERGROUND ELECTRIC
UT	EXISTING UNDERGROUND TELECOMMUNICATIONS
	EXISTING STORM SEWER
	PROPOSED WATER VALVE
	PROPOSED FIRE HYDRANT & VALVE
	THRUST BLOCK
	THRUST COLLAR
	STANDARD DUTY CONCRETE
	HEAVY DUTY CONCRETE

UTILITY NOTES

THE LOCATIONS, SIZES, AND MATERIAL TYPES OF UNDERGROUND UTILITIES INDICATED ON THE PLAT, NOT VISIBLE OR APPARENT FROM THE SURFACE, ARE SHOWN IN THEIR APPROXIMATE LOCATIONS FROM A MISSOURI ONE CALL SYSTEM LOCATE, OR UTILITY COMPANY RECORDS AND WERE NOT VERIFIED IN THE FIELD.

WATER
JACKSON COUNTY PWSD #14
CITY OF LEE'S SUMMIT
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
CONTACT: PUBLIC WORKS DEPARTMENT 816-969-1800
12" DI ALONG THE NORTH SIDE OF MEADOWVIEW DRIVE.
30" PCCP ALONG THE WEST PROPERTY LINE.

SANITARY SEWER
CITY OF LEE'S SUMMIT
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
CONTACT: WES OWEN 816-969-1955
AS SHOWN

STORM SEWER
CITY OF LEE'S SUMMIT
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
CONTACT: SHAWN GRAFF 816-969-1800
AS SHOWN

ELECTRIC
EVERGY
1300 SE HAMBLEN ROAD
LEE'S SUMMIT, MISSOURI 64081
CONTACT: 888-471-5275

FIBER OPTIC
GOOGLE FIBER
2812 WEST 47TH STREET
KANSAS CITY, KS 66103
CONTACT: CRAIG YOUNG 870-219-5630

GAS
MISSOURI GAS ENERGY
3025 SE CLOVER ROAD
LEE'S SUMMIT, MISSOURI 64081
CONTACT: BECCA ORR 816-969-2230

TELECOM
AT&T
215 N. SPRING STREET, 2nd FLOOR
INDEPENDENCE, MO 64050
CONTACT: MARK MANION 816-275-2341
AS SHOWN

TIME WARNER CABLE
CONTACT: ROY BELLIS 913-643-1914
AS SHOWN

COMCAST CABLE COMMUNICATIONS
3400 NW DUNCAN ROAD
BLUE SPRINGS, MO 64015
CONTACT: BARBARA BROWN 816-795-2255
AS SHOWN

Call BEFORE you DIG
TOLL FREE
1-800-DIG-RITE
MISSOURI ONE-CALL SYSTEM, INC.

SURVEY CONTROL POINTS

MODIFIED STATE PLANE COORDINATES
NAD 83, MISSOURI CENTRAL ZONE, NAVD 88, U.S. SURVEY FEET

POINT #	NORTH	EAST	ELEVATION	DESCRIPTION
CP1	1021333.86	2826648.68	929.50	PK
CP176	1021358.38	2827317.26	923.23	DH
CP177	1020927.07	2826507.36	951.74	IR
CP178	1021669.21	2826691.72	922.55	IR
CP179	1021367.58	2826896.04	922.38	IR
CP500	1021193.58	2826970.42	921.04	IR
CP501	1020639.36	2827222.04	925.57	DH

ENTERPRISE GREEN COMMUNITIES NOTE

CONSTRUCTION SHALL ADHERE TO ALL ENTERPRISE GREEN COMMUNITIES REQUIREMENTS. ALL MANDATORY ITEMS LISTED BELOW:

1. LOCATION AND NEIGHBORHOOD FABRIC
   - 2.1 – SENSITIVE SITE PROTECTION (CIVIL)
     - 2.1.1 – NO SENSITIVE AREAS ONSITE. NO FLOODPLAINS ONSITE, NO AQUATIC ECOSYSTEMS (I.E. WETLANDS OR DEEPWATER HABITATS) ONSITE, NO ENDANGERED SPECIES (NO ENDANGERED SPECIES ONSITE AND THUS NO DESTRUCTION OF HABITAT), AND NO AGRICULTURAL SOILS ONSITE
   - 2.2 – CONNECTIONS TO EXISTING DEVELOPMENT AND INFRASTRUCTURE (CIVIL)
     - 2.2.1 – >25% OF THE SURROUNDING SITE IS DEVELOPED AND HAS ACCESS TO EXISTING ROAD, WATER, AND SEWER
     - 2.2.2 – NEW DRIVEWAYS AND SIDEWALKS WERE PROVIDED TO GIVE ACCESS TO THE EXISTING PEDESTRIAN NETWORKS ALONG NE WILSHIRE DRIVE.
     - 2.2.3 – SITE LESS THAN 5 ACRES
   - 2.3 – COMPACT DEVELOPMENT (CIVIL)
     - 2.3.1 – 50 UNITS/2.54 AC = 19.68 UNITS/AC > 3.01 (PER CENTER FOR NEIGHBORHOOD TECHNOLOGY "RESIDENTIAL DENSITY OF A LOCATION" CALCULATOR)
     - 2.3.2 – 19.68 UNITS/AC > 15 UNITS PER ACRE FOR MULTI-FAMILY BUILDINGS GREATER THAN 2 STORIES
   - 2.5 – PROXIMITY TO SERVICES AND COMMUNITY RESOURCES (CIVIL)
     - 2.5.1 – GREATER THAN FOUR SERVICES AND/OR COMMUNITY RESOURCES ARE LOCATED WITHIN A HALF MILE OF THE PROJECT SITE.
   - 2.6 – PRESERVATION OF AND ACCESS TO OPEN SPACE FOR RURAL/TRIBAL/SMALL TOWN
     - 2.6.1 – GREATER THAN 10% OF THE PROJECT ACREAGE HAS BEEN SET ASIDE AS ACCESSIBLE OPEN SPACE FOR ALL RESIDENTS TO USE.
   - 2.15 – ACCESS TO BROADBAND: BROADBAND READY (CIVIL)
     - 2.15.1 – SITE WILL HAVE BROADBAND INFRASTRUCTURE INSTALLED AND INTERNET SERVICE WILL BE PROVIDED THROUGHOUT THE BUILDING
2. SITE IMPROVEMENTS
   - 3.1 – ENVIRONMENTAL REMEDIATION (CIVIL)
     - 3.1.1 – NO HAZARDOUS MATERIAL IS FOUND ON THE SITE. IT HAS BEEN MASS GRADED AND PAD READY BEFORE CONSTRUCTION.
   - 3.2 – MINIMIZATION OF DISTURBANCE DURING STAGING AND CONSTRUCTION (CIVIL)
     - 3.2.1 – SWPPP AND ESC PLANS WERE CREATED TO BE IMPLEMENTED DURING THE CONSTRUCTION PHASE PROCESS OF THIS PROJECT.
   - 3.3 – ECOSYSTEM SERVICES/LANDSCAPE (CIVIL)
     - 3.3.1 – NO INVASIVE PLANT SPECIES WERE USED IN THE LANDSCAPE PLAN. ALL PLANT SPECIES ARE SUSCEPTIBLE TO THE PLANTING REGION AND SHALL BE WELL SUITED WITHIN THE ENVIRONMENT. ALL DISTURBED AREAS WILL BE PLANTED, SEEDED OR XERISCAPED.
   - 3.4 – SURFACE STORMWATER MANAGEMENT
     - 3.4.1 – ONSITE RUNOFF HAS BEEN TREATED FOR THE WATER QUALITY STORM EVENT USING AN ONSITE REGIONAL DETENTION BASIN.
   - 3.6 – EFFICIENT IRRIGATION AND WATER REUSE (IRRIGATION CONTRACTOR)

BUILDING & PARKING NOTE (1)

LOT SIZE = 110,478 SQ. FT.

BUILDING AREA
BUILDING FOOTPRINT = 17,860 SQ. FT.
TOTAL SQ. FT. = 53,580 SQ. FT.

FLOOR AREA RATIO = 1:0.67

NUMBER OF DWELLING UNITS = 50 UNITS

NUMBER OF BEDS = 82

IMPERVIOUS COVERAGE = 76,230 SQ. FT.

REQUIRED PARKING

1 SPACE PER 2 BEDS	= 50 SPACES
1 SPACE PER EMPLOYEE ON MAX SHIFT	= 2 SPACES
TOTAL REQUIRED	= 52 SPACES

PROVIDED PARKING

STANDARD	= 48 SPACES
ACCESSIBLE	= 11 SPACES
TOTAL PROVIDED	= 59 SPACES

IMPERVIOUS AREA

PRE PROJECT

PERVIOUS	= 0.00 ACRE
IMPERVIOUS	= 2.54 ACRE
TOTAL	= 2.54 ACRE

POST PROJECT

PERVIOUS	= 1.29 ACRE
IMPERVIOUS	= 1.25 ACRE
TOTAL	= 2.54 ACRE

MDNR PERMIT

MDNR PERMIT NO.

PROPERTY DESCRIPTION

PROPOSED LOT 5 OF WILSHIRE HILLS – 5TH PLAT

BENCH MARK

BM – MISSOURI DEPARTMENT OF TRANSPORTATION VRS NETWORK.

PROPERTY OWNER

JEFFREY E. SMITH INVESTMENT CO, LLC
206 PEACH WAY
COLUMBIA, MISSOURI 65203

ZONING NOTE

THIS PROPERTY IS ZONED "P-MIX" PLANNED MIXED USE DISTRICT

FLOODPLAIN NOTE

THIS PROPERTY IS LOCATED IN ZONE X "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD" AS SHOWN BY FIRM COMMUNITY PANEL NUMBER 29095C0430G, DATED JANUARY 20, 2017.

SHEET INDEX

	C0.01	COVER
	C0.02	GENERAL NOTES
	V1.01–V1.02	BOUNDARY & TOPOGRAPHIC SURVEY
	C1.01	OVERALL PLAN
	C2.01	SITE PLAN
	C3.01	JOINT PLAN
	C4.01	GRADING & DRAINAGE PLAN
	C5.01	STORM SEWER PLAN
	C6.01	STORM SEWER PROFILES
	C7.01	UTILITY PLAN & PROFILE
	C8.01–C8.03	ACCESSIBILITY PLAN
	C9.01	INITIAL EROSION CONTROL PLAN
	C9.02	FINAL EROSION CONTROL PLAN
	C10.01–C10.03	SITE DETAILS
	C11.01–C11.02	STORM SEWER DETAILS
	C12.01	SANITARY SEWER DETAILS
(2)	C13.01–C13.02	WATER DETAILS
	C14.01–C14.03	EROSION CONTROL DETAILS
	C15.01	PRE-DEVELOPMENT DRAINAGE AREA MAP
	C15.02	POST DEVELOPMENT DRAINAGE AREA MAP
	C15.03	STORM SEWER DRAINAGE AREA MAP
	L1.01–L1.05	LANDSCAPE PLAN
	RW1.01	RETAINING WALL PLAN
	RW2.01	RETAINING WALL DETAILS

WILSHIRE HILLS PHASE III

CONSTRUCTION DOCUMENTS

Engineering Surveys & Services
DELIVERING YOUR VISION ™
1113 Fay Street, Columbia, MO 65201
573 - 449 - 2646
802 El Dorado Drive, Jefferson City, MO 65101
573-636-3303
1775 West Main Street, Sedalia, MO 65301
660-826-8618
www.ess-inc.com
MO Engineering Corp. # 2004005018

WILSHIRE HILLS PHASE III
3200 NE MANHATTAN DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

4/17/2024
STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date
JUNE 30, 2023

Revised
(1) FEBRUARY 6, 2024
(2) APRIL 17, 2024

Design: ST Drawn: MJS

COVER

Sheet
C0.01

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E—JES—WILSHIRE HILLS—3—ENG\CAD\15925 COVER & DETAILS.DWG 4/19/2024

SEQUENCE OF EVENTS

1. PRIOR TO CONSTRUCTION, COORDINATE AND HAVE A PRE–CONSTRUCTION MEETING REGARDING SWPPP TRAINING WITH CONSTRUCTION PERSONNEL.
2. DETERMINE ALL UTILITY FIELD LOCATES AS NECESSARY.
3. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE AND CONCRETE WASH OUT. INSTALL ALL PERIMETER EROSION AND SEDIMENT CONTROL PER PLAN.
4. COMMENCE ALL CLEARING AND GRUBBING PER PLAN. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS.
5. STRIP TOPSOIL IN GRADING AREAS AND STOCKPILE IN AREAS AS SHOWN ON PLAN.
6. COMMENCE SITE GRADING. FILL ACTIVITIES SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.
7. CONSTRUCT RETAINING WALL AND FENCE.
8. INSTALL STORM SEWERS PER PLAN. INSTALL INLET PROTECTION IMMEDIATELY UPON COMPLETION OF EACH STORM STRUCTURE.
9. UTILIZE ONSITE FILL MATERIALS FOR OVER EXCAVATED AREAS. FOLLOW GEOTECHNICAL REPORT REQUIREMENTS FOR FILL MATERIAL.
10. INSTALL SITE UTILITIES AS GRADING ALLOWS.
11. FINALIZE BUILDING SUBGRADE PREPARATION IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
12. BEGIN BUILDING CONSTRUCTION.
13. FINALIZE PAVEMENT SUBGRADE PREPARATION. INSTALL BASE MATERIAL AS REQUIRED FOR PAVED AREAS. REMOVE INLET PROTECTION AROUND INLETS NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.
14. COMMENCE PAVEMENT AND SIDEWALK CONSTRUCTION. REMOVE TEMPORARY CONSTRUCTION ENTRANCE ONLY PRIOR TO PAVEMENT CONSTRUCTION IN THAT AREA (PAVE THIS AREA LAST).
15. COMPLETE FINISH GRADING, TOPSOIL, PLACEMENT, SEED/SOD, AND MULCH ALL DISTURBED AREAS. EXCESS TOPSOIL SHALL BE MOVED TO NEIGHBORING SITE.
16. INSTALL LANDSCAPING.
17. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL WHEN ALL DISTURBED AREAS ARE STABILIZED.

CONSTRUCTION NOTES

1. 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.
2. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL IDENTIFIED PROPERTY CORNERS, LAND SURVEY CORNERS, AND ACCESSORIES. THE CONTRACTOR SHALL CAUSE THE CORNERS AND ACCESSORIES TO BE REFERENCED BY A LICENSED LAND SURVEYOR, AND ANY SUCH CORNER OR ACCESSORIES DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE RESET BY THE SURVEYOR AT THE ORIGINAL LOCATION, AND FILE THE RESTORATIONS AND MONUMENT DOCUMENTS AS THE LAW REQUIRES.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEERING SURVEYS AND SERVICES FOR REVIEW AND APPROVAL FOR ALL MATERIALS BEFORE ORDERING.
5. ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF SIDEWALK, OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
6. CONCRETE DRIVEWAY APRONS SHALL BE CONSTRUCTED AS PER CITY OF LEE'S SUMMIT SPECIFICATIONS. CONTRACTOR SHALL OBTAIN PERMIT FROM CITY TO WORK WITHIN STREET RIGHT–OF–WAY.
7. ALL STRIPING SHALL BE 4" WIDE WHITE LINES, ACCESSIBLE SPACES SHALL BE 4" WIDE BLUE LINES AND ALL STRIPING SHALL BE A MINIMUM OF 2 COATS.
8. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
9. ALL TRAFFIC CONTROL SHALL BE PER CURRENT MUTCD REQUIREMENTS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A TRAFFIC CONTROL PLAN WILL BE REQUIRED FOR ANY WORK WITHIN THE RIGHT–OF–WAY.
10. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNERS IN WRITING 30 DAYS PRIOR TO CONSTRUCTION.
11. IF A CONFLICT EXISTS BETWEEN THE CIVIL PLANS AND CIVIL SPECIFICATIONS, THE CIVIL PLANS SHALL GOVERN.
12. ALL INCIDENTAL ITEMS INCLUDING BUT NOT LIMITED TO SIGNS, PAVEMENT MARKING, PAVEMENT, CURBS, TRUNCATED DOMES, FENCING, LANDSCAPING, IRRIGATION, ETC. EITHER DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITIONS BY THE CONTRACTOR.

HAZARDOUS SUBSTANCE NOTE

1. SUBSTANCES REGULATED BY FEDERAL LAW UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) OR THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) WHICH ARE TRANSPORTED, STORED OR USED FOR MAINTENANCE, CLEANING OR REPAIRS SHALL BE MANAGED ACCORDING TO THE PROVISIONS OF RCRA AND CERCLA.
2. ALL PAINTS, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS (EXCEPT FUELS) AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS OR CARTONS) SHALL BE STORED SUCH THAT THESE MATERIALS ARE NOT EXPOSED TO STORM WATER. SUFFICIENT PRACTICES OF SPILL PREVENTION, CONTROL AND/OR MANAGEMENT SHALL BE PROVIDED TO PREVENT ANY SPILLS OF THESE POLLUTANTS FROM ENTERING A WATER OF THE STATE. ANY CONTAINMENT SYSTEM USED TO IMPLEMENT THIS REQUIREMENT SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE SUBSTANCES CONTAINED AND SHALL ALSO PREVENT THE CONTAMINATION OF GROUNDWATER.
3. THE APPLICANT SHALL NOTIFY BY TELEPHONE AND IN WRITING THE DEPARTMENT OF NATURAL RESOURCES, WATER POLLUTION CONTROL PROGRAM, POST OFFICE BOX 176, JEFFERSON CITY, MO 65102, 1–800–361–4827, OF ANY OIL SPILLS OR IF HAZARDOUS SUBSTANCES ARE FOUND DURING THE PROSECUTION OF WORK UNDER THIS PERMIT.

ELECTRIC NOTES

SITE CONTRACTOR SHALL CONTACT EVERGY TO COORDINATE INSTALLATION OF ELECTRIC SERVICES. RESPONSIBILITY OF INSTALLATION SHALL BE AS FOLLOWS.

	SUPPLIED BY:	INSTALLED BY:
SECONDARY		
CONDUIT	CONTRACTOR	CONTRACTOR
CONDUCTOR	EVERGY	EVERGY
METER	EVERGY	EVERGY
CONNECTIONS	---	EVERGY
TRANSFORMER	EVERGY	EVERGY
TRANSFORMER PAD	EVERGY	CONTRACTOR
PRIMARY		
CONDUIT, CONNECTORS, ETC.	CONTRACTOR	CONTRACTOR
CONDUCTOR	EVERGY	EVERGY
CONNECTIONS	---	EVERGY

GRADING AND STORM SEWER CONSTRUCTION NOTES

1. ALL STORM SEWER PIPES AND INLETS SHALL MEET HEAVY DUTY TRAFFIC (HS20) LOADING AND BE INSTALLED ACCORDINGLY.
2. CONCRETE STORM SEWER INLETS & JUNCTION BOXES SHALL BE INSTALLED PER THE CITY OF LEE'S SUMMIT SPECIFICATIONS AND AS DETAILED IN THESE PLANS.
3. REINFORCED CONCRETE PIPE (RCP) SHALL BE INSTALLED PER THE "EMBEDMENT OF RCP STORM SEWER PIPE" DETAIL. PIPE CLASS SHALL BE APPROPRIATE TO DEPTH AND BEDDING MATERIAL AS SHOWN IN SCHEDULE.
4. ALL RCP PIPE JOINTS SHALL BE SOIL TIGHT PER CURRENT MODOT SPECIFICATIONS SECTION 726.3.1.
5. ALL HDPE PIPE SHALL BE ADS N–12 ST SOIL TIGHT, SMOOTH INTERIOR PIPE OR APPROVED EQUAL. INSTALLATION SHALL FOLLOW THE "EMBEDMENT OF PLASTIC STORM SEWER PIPE" DETAIL.
6. PVC PIPE MAY BE USED IN LIEU OF HDPE FOR DIAMETERS LESS THAN 15". PVC PIPE SHALL BE SDR 35 OR GREATER, AS REQUIRED BY DEPTH OR AS NOTED IN THESE PLANS.
7. INLINE DRAIN AND DRAIN BASINS SHALL BE NYLOPLAST, HARCO, OR APPROVED EQUAL AND SHALL BE PVC CONFORMING TO ASTM D1784 CELL CLASS 12454. JOINTS SHALL BE WATER TIGHT FLEXIBLE ELASTOMERIC SEALS CONFORMING TO ASTM D3212. INLINE DRAIN AND DRAIN BASIN GRATES AND FRAMES SHALL BE DUCTILE IRON CONFORMING TO ASTM A536 GRADE 70–50–05, OR 80–55–06.
8. CONTRACTOR SHALL ADJUST ALL GRATES, MANHOLES, VALVE BOXES, ETC. TO MATCH FINISH GRADES, AS REQUIRED.
9. ALL STRUCTURE CONNECTIONS SHALL BE WATERTIGHT.
10. ALL CONCRETE STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED CONCRETE INVERT FROM INVERT IN TO INVERT OUT.
11. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE FLUSH WITH FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER". TOP OF BOXES SHALL BE SLOPED TO MATCH PAVEMENT GRADE.
12. PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE OR DOWNSTREAM END OF FLARED END SECTIONS.
13. ALL FLARED END SECTIONS FOR CONCRETE PIPE SHALL BE REINFORCED PRECAST CONCRETE. ALL FLARED END SECTIONS FOR PLASTIC PIPE SHALL BE GALVANIZED METAL UNLESS OTHERWISE NOTED.
14. ALL SITES USED FOR IMPORTING OR EXPORTING OF FILL MATERIAL SHALL HAVE AN ACTIVE MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND DISTURBANCE PERMIT, AS REQUIRED.
15. CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS, TREES AND BRUSH, AND OTHER MATERIAL CREATED AS A RESULT OF CONSTRUCTION. MATERIAL SHALL BE DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. BURNING ON SITE SHALL BE ALLOWED BY PERMIT ONLY.
16. CONTRACTOR SHALL REMOVE ALL STUMPS BY EXCAVATING TO INCLUDE REMOVAL OF ASSOCIATED ROOT SYSTEM.
17. CONTRACTOR SHALL NOT ADVANCE TRENCH EXCAVATION BEYOND AMOUNT THAT CAN ACCOMMODATE PIPE INSTALLATION AND BACKFILLING AT THE END OF EACH DAY.
18. ENGINEERED FILL SHOULD BE FREE OF FROZEN SOIL, ORGANICS, RUBBISH, LARGE ROCKS, WOOD, OR OTHER DELETERIOUS MATERIAL. COHESIVE FILLS SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95 PERCENT OF THE "STANDARD" MAXIMUM DRY DENSITY AND BE WITHIN –2 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT AS DESCRIBED BY ASTM D698. GRANULAR FILLS SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95 PERCENT OF THE "STANDARD" MAXIMUM DRY DENSITY. THE MOISTURE CONTENT SHOULD BE HIGH ENOUGH TO PROVIDE FOR PROPER COMPACTION BUT LOW ENOUGH TO PREVENT UNDUE PUMPING. PLACE FILL MATERIAL IN LOOSE LIFTS NOT TO EXCEED 8 INCHES IN THICKNESS.
19. ROCKS AND STONES THAT EXCEED THE THICKNESS OF THE LOOSE LIFT FILL LAYER SHOULD BE REMOVED AND DISPOSED OF OFF THE IMMEDIATE CONSTRUCTION AREA.
20. IMPORTED SOILS PROPOSED FOR USE AS FILL OR BACKFILL SHOULD BE REVIEWED AND ANALYZED BY THE GEOTECHNICAL ENGINEER PRIOR TO USE ON SITE. SOIL CLASSIFIED AS MH, OH, OL, OR PT (HIGH PLASTICITY SOILS AND ORGANIC SOILS) BY THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) SHOULD NOT BE IMPORTED FOR USE AS ENGINEERED FILL. SUITABLE IMPORTED MATERIALS FOR GENERAL SITE FILL ARE THOSE THAT CLASSIFY AS GW, GM, GC, SC, AND CL IN ACCORDANCE WITH ASTM D 2487. MATERIALS CLASSIFIED AS CH SHOULD BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO THEIR IMPORTATION AND ONLY USED OUTSIDE THE BUILDING PAD AT DEPTHS BELOW THE UPPER 2 FEET OF SUBGRADE. SUBJECT TO FINAL DESIGN REQUIREMENTS FOR WALL BACKFILL, SUITABLE IMPORTED MATERIALS FOR WALL AND TRENCH BACKFILL ARE THOSE THAT CLASSIFY AS GW, GP, GM, GC, SM, SW, SP, SC, AND CL IN ACCORDANCE WITH ASTM D2487.
21. FILLS PLACED IN AREAS WHERE THE NATURAL SLOPE IS GREATER THAN 5H:1V (HORIZONTAL TO VERTICAL) SHOULD BE BENCHED INTO THE EXISTING GRADE TO REDUCE THE POTENTIAL FOR SLIPPAGE BETWEEN EXISTING SLOPES AND ENGINEERED FILL. BENCHES SHOULD BE LEVEL AND WIDE ENOUGH TO ACCOMMODATE COMPACTION AND EARTH MOVING EQUIPMENT.
22. FILL AND SUBGRADE CONSTRUCTION SHOULD NOT BE STARTED ON FOUNDATION SOIL, PARTIALLY COMPLETED FILL, OR SUBGRADES THAT CONTAIN FROST OR ICE. FILL SHOULD NOT BE CONSTRUCTED USING FROZEN SOIL. FROZEN SOIL SHOULD BE REMOVED PRIOR TO PLACING FILL MATERIAL.
23. AFTER STRIPPING AND GRUBBING OPERATIONS ARE COMPLETED AND PRIOR TO FILL PLACEMENT, AREAS TO BE FILLED SHALL BE PROOF ROLLED USING A LOADED TANDEM AXLE DUMP TRUCK TO IDENTIFY SOFT AND UNSUITABLE AREAS. SOFT MATERIAL MAY BE MOISTURE CONDITIONED AND REUSED AS ENGINEERED FILL, UNSUITABLE AND DELETERIOUS MATERIAL SHALL BE REMOVED FROM SITE.
24. ALL NEW UTILITY TRENCHES SHOULD BE BACKFILLED IN ACCORDANCE WITH APPROPRIATE CONTROLLED ENGINEERED FILL SPECIFICATIONS.
25. FIELD DENSITY TESTS SHOULD BE CONDUCTED IN ACCORDANCE WITH ASTM D6938 (NUCLEAR METHODS) OR ASTM D 1556 (SAND CONE METHOD). FIELD DENSITY TESTS SHOULD BE PERFORMED AT THE RATE OF ONE TEST PER 2,500 SQUARE FEET PER LIFT WITHIN THE BUILDING AND 10,000 SQUARE FEET PER LIFT BENEATH PAVEMENTS, SIDEWALKS, AND OTHER POTENTIAL STRUCTURAL AREAS WITH A MINIMUM OF 3 TESTS PER LIFT AND ONE TEST PER 150 LINEAL FEET PER LIFT FOR FOUNDATION, TRENCH AND WALL BACKFILL.
26. BUILDING PAD AND PARKING AREAS SHALL BE PROOF–ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK TO IDENTIFY ANY SOFT OR UNSUITABLE AREAS, PRIOR TO BASE ROCK PLACEMENT. THE PROOF–ROLL SHALL BE OBSERVED BY THE PROJECT GEOTECHNICAL ENGINEER. AREAS IDENTIFIED AS UNSUITABLE SHALL BE OVER EXCAVATED AND RECONSTRUCTED WITH ENGINEERED FILL.
27. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS FOR ALL LANDSCAPED AND PAVED AREAS.
28. CONTRACTOR SHALL PLACE STOCKPILED TOPSOIL FROM SITE IN ALL LANDSCAPE AREAS TO A MINIMUM DEPTH OF OF 6", UNLESS NOTED OTHERWISE IN PROJECT SPECIFICATIONS. ANY EXCESS TOPSOIL SHALL BE DISPOSED OF ONSITE PER OWNER.

PLAN REFERENCE NOTES (1)

1. THESE PLANS ARE PART OF A LARGE PLAN FOR THE DEVELOPMENT OF WILSHIRE HILLS. THE FULL SET OF PLANS INCLUDES THE FOLLOWING LIST, PREPARED BY AND DATED SPECIFICALLY FEBRUARY 16, 2024.
   a. ROAD & STORM SEWER PLAN
   b. UTILITY EXTENSION PLAN
   c. SANITARY SEWER EXTENSION PLAN
   d. MASS GRADING & EROSION CONTROL PLAN
2. IMPROVEMENTS FROM THE PUBLIC IMPRVOMENT PLAN (PDP) ARE SHOWN AS GREY SCALED ON THIS PLAN AND ARE ASSUMED TO BE THE EXISTING CONDITION FOR THESE PLANS.

SUBSTITUTION AND ALTERNATIVE MATERIALS NOTE

1. THE FOLLOWING MATERIALS WILL BE CONSIDERED ACCEPTABLE AS ALTERNATIVE/SUBSTITUTE MATERIAL.
   a. WATER MAIN, SERVICE FITTINGS, AND PIPES MAY BE SUBSTITUTED WITH EQUIVALENT ALTERNATIVE MATERIAL. ACCEPTABLE MATERIALS, SELECTED AS APPROPRIATE FOR PIPE SIZE, INCLUDE:
      i 280 PSI PRESSURE RATED, GASKETED BELL AND JOINT PVC
      ii DUCTILE IRON (BAGGED)
      iii SMALL DIAMETER TUBING: PEX–A, PEX–B, SDR9 PVC
   b. STORM: HDPE CAN BE SUBSTITUTED WITH RCP AND CMP (ALUMINIZED/SMOOTH WALL). CMP MUST BE INSTALLED UNDER MANUFACTURERS OBSERVATION. RCP MAY NOT BE SUBSTITUTED.

ALL SUBSTITUTIONS MUST BE NOTED IN THE BID PROVIDING A DEDUCTED ALTERNATIVE VALUE VERSUS THE AS DESIGNATED MATERIALS. ALL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER AND OWNER PRIOR TO USE.

WATER NOTES

1. ALL WATER LINE CONSTRUCTION SHALL BE PER CURRENT CITY OF LEE'S SUMMIT WATER UTILITY STANDARDS AND SPECIFICATIONS UNLESS NOTED OTHERWISE.
2. SITE CONTRACTOR SHALL FURNISH AND INSTALL:
   a. ALL WATER MAINS AND FIRE HYDRANTS
   b. DOMESTIC LINES TO WITHIN 5' OF BUILDING
   c. METERS
   d. BACKFLOW PREVENTERS
   e. ALL VALVES
   f. FIRE RISER
3. BUILDING CONTRACTOR SHALL CONNECT TO DOMESTIC WITHIN 5' OF BUILDING.
4. SITE CONTRACTOR SHALL INSTALL FIRE RISERS IN BUILDINGS TURN AND CAP 18 INCHES ABOVE FINISH FLOOR (SEE MEP PLANS FOR EXACT LOCATION).
5. ALL VALVES, TEES, CROSSES, BENDS AND REDUCERS SHALL BE RESTRAINED.
6. WATER METER BOXES SHALL BE PLACED INTERNAL TO BUILDING.
7. ACTUAL DEPTH OF THE 30–INCH WATER MAIN ON THE WEST EDGE OF THE PROPERTY WILL BE FIELD VERIFIED BEFORE ANY GRADING WORK BEGINS.
8. ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651 LATEST EDITION.

FIRE NOTES (1)

1. ALL ISSUES PERTAINING TO LIFE SAFETY AND PROPERTY PROTECTION FROM THE HAZARDS OF FIRE, EXPLOSION OR DANGEROUS CONDITIONS IN NEW AND EXISTING BUILDINGS, STRUCTURES AND PREMISES, AND TO THE SAFETY TO FIRE FIGHTERS AND EMERGENCY RESPONDERS DURING EMERGENCY OPERATIONS, SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL FIRE CODE.
2. AN APPROVED WATER SUPPLY CAPABLE OF SUPPLYING THE REQUIRED FIRE FLOW FOR FIRE PROTECTION SHALL BE PROVIDED TO PREMISES UPON WHICH FACILITIES, BUILDINGS OR PORTIONS OF BUILDINGS ARE HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION.
3. PRIOR TO ANY COMBUSTIBLE CONSTRUCTION, WILSHIRE DRIVE SHALL BE COMPLETED THROUGH STROTHER ROAD, ALL PUBLIC AND PRIVATE HYDRANTS SHALL BE IN PLACE AND OPERABLE, AND THE APARTMENT PARKING LOT'S ASPHALT BASE SHALL BE IN PLACE.
4. THE LOCATION OF FIRE DEPARTMENT CONNECTIONS SHALL BE APPROVED BY THE FIRE CODE OFFICIAL. CONNECTIONS SHALL BE A 4–INCH STORZ TYPE FITTING AND LOCATED WITHIN 100 FEET OF A FIRE HYDRANT, OR AS APPROVED BY THE CODE OFFICIAL.

GENERAL CONSTRUCTION NOTES

1. PARKING SUMMARY
   a. REQUIRED PARKING
   b. PROVIDED PARKING
      i. 48 STANDARD SPACES
      ii. 11 ACCESSIBLE SPACES
      iii. 59 TOTAL SPACES
2. SITE PAVEMENT SHALL BE PLACE AS FOLLOWS:
   a. CONCRETE PAVING
      i. STANDARD DUTY SHALL BE A MINIMUM OF 6–INCHES THICK REINFORCED CONCRETE WITH A MINIMUM 4" OF CRUSHED STONE BASE (SEE DETAIL SHEET C10.01).
      ii. HEAVY DUTY SHALL BE A MINIMUM 8–INCHES THICK REINFORCED CONCRETE WITH A MINIMUM 6–INCHES OF CRUSHED STONE BASE (SEE DETAIL SHEET C10.01).
   b. CONCRETE CURB (SEE DETAIL ON SHEET C10.01)
      i. ALL CURB SHALL BE 24–INCHES WIDE FROM BACK OF CURB TO EDGE OF GUTTER PAN.
      ii. CURB SHALL HAVE A MINIMUM 4–INCH OF CRUSHED STONE BASE.
      iii. ALL ACCESSIBLE CONCRETE PAVING SHALL BE DOWELED TO CURB.
   c. SIDEWALKS (SEE DETAIL ON SHEET C10.01–C10.03)
      i. TO BE FOUR INCH (4") THICK CONCRETE.
      ii. ALL SIDEWALK AT BACK OF CURB SHALL BE DOWELED TO CURB (SEE DETAIL ON SHEET C10.01).
      iii. SIDEWALKS SHALL NOT BE POURED UNTIL BUILDING EXTERIOR FINISHES ARE SUBSTANTIALLY COMPLETE. ANY PLACEMENT OF SIDEWALK PRIOR, WITHOUT OWNER'S APPROVAL, SHALL BE AT THE PAVING CONTRACTOR'S SOLE RISK.
   d. CONCRETE JOINTS
      i. CONCRETE PARKING LOT PAVING AND SIDEWALK SHALL BE PROVIDED JOINTS FOR PER THE JOINT PLAN AND PER DETAIL ON SHEET C10.01.
      ii. EXPANSION JOINTS SHOULD BE PLACED EVERY 100 LINEAL FEET FOR PARKING LOT PAVEMENT AND EVERY 50 LINEAL FEET FOR SIDEWALK, MINIMUM
      iii. PAVING JOINTS SHALL BE CONTINUOUS THRU CURB AND GUTTER.
      iv. PAVING JOINTS FOR SIDEWALK AT BACK OF CURB SHALL ALIGN WITH CURB AND GUTTER JOINTS.
   e. STANDARD DUTY CONCRETE PAVEMENT SHALL BE USED BELOW THE PORTE COCHERE.
   f. ALL DUMPSTER PADS AND APPROACHES SHALL BE HEAVY DUTY CONCRETE PAVEMENT.
3. SITE ACCESSIBILITY
   a. ALL ACCESSIBLE PARKING STALLS, CROSSWALKS, AND OTHER ACCESSIBLE ROUTES WITHIN THE PARKING AREA SHALL BE STANDARD DUTY CONCRETE, UNLESS NOTED OTHERWISE
   b. ACCESSIBLE CONCRETE PARKING SHALL HAVE A MAXIMUM SLOPE OF 1.7% IN ALL DIRECTIONS.
   c. ALL SIDEWALKS SHALL BE CONSTRUCTED AS FOLLOWS:
      i. 1.7% MAXIMUM CROSS SLOPE.
      ii. 4.7% MAXIMUM RUNNING SLOPE.
      iii. LANDINGS AT 1.7% MAX SLOPE IN ALL DIRECTIONS.
   d. RAMPS SHALL BE CONSTRUCTED AS FOLLOWS:
      i. 7.5% MAXIMUM RUNNING SLOPE
      ii. MAXIMUM RISE 6–INCHES
      iii. MAXIMUM CROSS SLOPE OF 1.7%
   e. LANDINGS SHALL BE PROVIDED AS THE INTERSECTION OF ALL SIDEWALKS AND AT THE TOP AND BOTTOM OF ALL RAMPS.
   f. ALL SIDEWALKS SHALL BE CONSIDERED ACCESSIBLE, UNLESS NOTED OTHERWISE.
   g. ALL SITE AMENITIES SHALL BE ACCESSIBLE.
   h. ALL DUMPSTERS SHALL BE ACCESSIBLE.
   i. NO ELEMENTS SHALL PROJECT MORE THAN 4" INTO AN ACCESSIBLE ROUTE.
4. FENCING
   a. ALL FENCING ABOVE RETAINING WALL SHALL BE 4' BLACK VINYL COATED CHAINLINK FENCE.
5. DUMPSTER ENCLOSURE
   a. ALL ENCLOSURES SHALL BE BLOCK WITH BRICK VENEER.
   b. ALL GATES SHALL BE STEEL FRAME AND VINYL SLATS.
   c. SEE ARCHITECTURAL PLANS FOR DETAILS.
6. MONUMENT SIGN
   a. SHALL BE BLOCK AND BRICK VENEER CONSTRUCTION.
   b. SIGN SHALL HAVE A 4' BY 8' SIGN FACE WITH 2' X 2' COLUMNS EACH END.
   c. ALL LIGHTING SHALL BE GROUND MOUNTED.
   d. A MINIMUM 2" PVC CONDUIT SHALL BE EXTENDED FROM THE HOUSE PANEL TO THE MONUMENT SIGN FOR POWER.
7. MAINTENANCE BUILDING
   a. PROVIDE A MINIMUM 2" PVC CONDUIT FROM THE HOUSE PANEL FOR ELECTRICAL SERVICE.
   b. MAINTENANCE BUILDING SHALL BE BRICK WAINSCOT AND SIDING.
   c. SEE ARCHITECTURAL PLANS.
8. FLAG POLE
   a. SEE ARCHITECTURAL PLANS FOR LOCATION AND DETAIL OF FLAG POLE
   b. FLAG POLE SHALL BE PROVIDED WITH AN ACCESSIBLE PATH.
   c. ALL LIGHTING SHALL BE GROUND MOUNTED, SEE MEP PLANS FOR LIGHTING DESIGN.
   d. A MINIMUM 2" PVC CONDUIT SHALL BE EXTENDED FROM THE HOUSE PANEL TO THE FLAG POLE FOR POWER.
9. SANITARY SEWER SERVICES SHALL BE TIED NEAR THE MIDDLE OF SLAB TO REDUCE DEPTH BELOW SLAB WHEN BUILDING IS OVER 150FT LONG. SEWER INVERT TO BE MINIMUM 5' BELOW FFE IN ORDER TO COME OUT BELOW THE FOOTING.
10. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR
    a. COORDINATION OF THE INSTALLATION OF THE WATER METER WITH THE UTILITY.
    b. COORDINATION OF WITH UTILITY PROVIDER FOR THE WATER MAIN TAP
    c. THE STANDARD SERVICE CONNECTION OR NEW MANHOLE LOCATION
    d. INSTALLATION OF THE FIRE RISER FOR WATER SERVICE INTO THE BUILDING, STUBBED 18" ABOVE FINISH FLOOR.
11. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR
    a. INSTALLATION THE CONNECTION OF THE SITE SEWER SERVICE TO THE MAIN INCLUDING ALL MATERIALS AND LABOR. THE CONTRACTOR SHALL PROVIDE TWENTY–FOUR (24) HOURS' NOTICE TO THE DEPARTMENT FOR CONNECTION. NONE OF THE BUILDING SEWER OR PLUMBING OR SANITARY DRAINAGE SYSTEM SHALL BE COVERED OR ENCLOSED UNTIL INSPECTED, HYDRAULICALLY TESTED, AND APPROVED BY THE DEPARTMENT
12. THE SITE CONTACTOR SHALL PERFORM A SITE SURVEY AFTER CLEARING & GRUBBING IN ORDER TO CONFIRM TOPO ON PLANS IS ACCURATE PRIOR TO MASS GRADING.
13. ALL 3–STORY OR TALLER BUILDINGS SHALL HAVE A LIGHTNING ROD (SEE ARCHITECTURAL).
14. LANDSCAPING
    a. PLANTS SHALL BE PROPERLY SELECTED TO FOR SITE CONDITION CONDITIONS SUCH AS:
       i. SHADE, PARTIAL SHADE, FULL SUN
       ii. WELL DRAINED OR POORLY DRAINED SOILS.
       iii. SUITABLE FOR USDA PLANT HARDINESS ZONE.
    b. SHADE TREES SHALL BE MINIMUM 2" CALIPER, UNLESS NOTED OTHERWISE.
    c. EVERGREEN TREES SHALL BE AT LEAST 6–FOOT TALL.
    d. SHRUBS SHALL BE 3–5 GALLON.
    e. SOD SHALL BE PLACE ON ALL DISTURBED AREAS AND AT A MINIMUM:
       i. BETWEEN THE BUILDING/PARKING LOT AND DISTURBED SITE FRONTAGE.
       ii. BETWEEN THE PARKING LOT AND BUILDING(S).
       iii. BETWEEN PARKING LOT AND SIDEWALKS.
       iv. A MINIMUM 15–FEET BEYOND EDGE OF SIDEWALK, PARKING LOT, AND SITE AMENITIES.
    f. ALL AREAS NOT SODDED SHALL BE HYDROSEEDED.
    g. TURF REINFORCEMENT MATS AND EROSION CONTROL BLANKETS SHALL BE PLACED AS NOTED ON PLAN.
15. IRRIGATION SYSTEM NOTES
    a. ALL SODDED AREA SHALL BE IRRIGATED.
    b. ALL HYDROSEEDED LAWN AREAS SHALL BE IRRIGATED.
    c. IRRIGATION METER AND BACKFLOW PREVENT SHALL BE PLACED PER PLAN.
    d. IRRIGATION METER SHALL BE INSTALLED PER LOCAL JURISDICTION.
    e. IRRIGATION CONTROLLER SHALL BE PLACED PER PLAN.
    f. IRRIGATION BACKFLOW PREVENTOR SHALL BE PLACED ABOVE GROUND WITHIN A LOCKABLE HOUSING CONSTRUCTED OR POWDER COATED STEEL FRAME AND MESH. BACKFLOW PREVENTOR SHALL BE PROPERLY PROTECTED FROM FROST.
    g. IRRIGATION SHALL BE ZONED. ALL PLANTING BEDS AND TURF SHALL BE SEPARATELY ZONED.
    h. CONSTRUCTOR SHALL SUBMIT IRRIGATION PLANS TO THE OWNER A MINIMUM OF 30 DAYS PRIOR TO PROPOSED INSTALLATION FOR APPROVAL. SHOW NOTE THAT IRRIGATION DESIGN DRAWINGS ARE TO BE SUBMITTED FOR APPROVAL.
16. THE MISSOURI DEPARTMENT OF NATURAL RESOURCES DATABASE OF WELLS (WISDIM) DOES NOT PROVIDE EVIDENCE FOR ANY ACTIVE, INACTIVE, OR ABANDONED OAL AND/OR GAS WELLS ON THE PROPERTY.

STORM WATER POLLUTION PREVENTION PLAN NOTES

1. CONTRACTOR SHALL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES. A COPY OF THIS PLAN, SWPPP, AND ALL PERMITS SHALL REMAIN ON SITE THROUGHOUT CONSTRUCTION.
2. CONTRACTORS ARE REQUIRED TO SUBMIT TO CITY INSPECTION STAFF COPIES OF THEIR INSPECTION REPORTS REQUIRED BY THE SWPPP ON A MONTHLY BASIS.
3. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVAL HAS BEEN RECEIVED FROM ALL GOVERNING AUTHORITIES.
4. IMMEDIATELY UPON COMPLETION OF FINISH GRADING IN EACH AREA, ALL LANDSCAPING AREAS SHALL BE STABILIZED PER PLANS AND/OR SPECIFICATIONS.
5. SHOULD CONSTRUCTION STOP FOR LONGER THAN 14 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED IN THE SWPPP.
6. SITE INSPECTION SHOULD OCCUR ON A REGULAR SCHEDULE AND WITHIN 24 HOURS OF A STORM EVENT OF 0.25 INCHES OR GREATER. REGULARLY SCHEDULED INSPECTION SHALL BE A MINIMUM OF ONCE EVERY 7 CALENDAR DAYS. ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE REPORT.
7. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
8. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
9. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
10. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
11. ALL SLOPES GREATER THAN 3:1 SHALL BE REINFORCED BY NORTH AMERICAN GREEN P300 PERMANENT TURF REINFORCEMENT MAT OR APPROVED EQUAL.
12. ALL ROLLED EROSION CONTROL MATS, BIONETS, BLANKETS, ETC. SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. INSTALLATION SHALL RESULT IN A PRODUCT THAT IS TIGHTLY SECURED TO THE GROUND THAT FORCES RUNOFF TO DRAIN OVER, NOT UNDER, THE PRODUCT. GRASS SHALL BE PLANTED PRIOR TO PRODUCT PLACEMENT SO IT WILL GROW THRU THE BLANKET. ALL ASPECTS OF THE PRODUCT SHALL BE FIRMLY SECURED TO THE GROUND SO IT CAN BE MOWED OVER WITHOUT GETTING TANGLED IN THE MOWER.
13. CONTRACTOR SHALL REMOVE ALL TRASH, DEBRIS, TREES & BRUSH AND OTHER MATERIAL CREATED AS A RESULT OF THE CONSTRUCTION WORK AND THE SITE SHALL BE RETURNED TO ITS ORIGINAL CONDITION.
14. ALL PERIMETER LANDSCAPED AREAS SHALL BE GRASS COVERED.
15. IN ORDER TO TERMINATE A MISSOURI DEPARTMENT OF NATURAL RESOURCES (MDNR) STATE OPERATING PERMIT, THE CONTRACTOR SHALL SUBMIT A REQUEST FOR TERMINATION OF OPERATING PERMIT FORM TO MDNR. A PERMIT IS ELIGIBLE FOR TERMINATION WHEN EITHER PERENNIAL VEGETATION, PAVEMENT, BUILDINGS, OR STRUCTURES USING PERMANENT MATERIALS COVER ALL AREAS THAT HAVE BEEN DISTURBED. VEGETATIVE COVER SHOULD BE AT LEAST 70% OF FULLY ESTABLISHED PLANT DENSITY OVER 100% OF THE DISTURBED AREA. A COPY OF THE REQUEST FOR TERMINATION OF OPERATING PERMIT FORM SHALL BE SUBMITTED TO THE CITY OF COLUMBIA AT WHICH TIME THE CITY WILL REMOVE THE PROJECT FROM ITS INSPECTION SCHEDULE.
16. THE SITE CONTRACTOR SHALL INCLUDE MAINTENANCE OF ALL BMP'S AS PART OF THEIR CONTRACT AND SHALL BE RESPONSIBLE FOR THE PROJECT UNTIL THE NPDES PERMIT IS TERMINATED.
17. SOIL STOCKPILES SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT.

UTILITY CONSTRUCTION NOTES

1. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY CONTRACTOR AND THE PROPER UTILITY COMPANY PROVIDING SERVICE PRIOR TO THE START OF CONSTRUCTION.
2. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
3. UTILITY TIE–INS ARE SHOWN IN APPROXIMATE LOCATIONS. REFER TO MEP PLANS FOR EXACT TIE–IN OF ALL UTILITIES.
4. SITE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF LEE'S SUMMIT WATER DEPARTMENT AND CITY OF LEE'S SUMMIT PUBLIC WORKS WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES, RESPECTIVELY.
5. OWNER OR OWNER'S AGENT WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED. SITE CONRACTOR IS RESPONSIBLE FOR COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
6. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END, VISIBLE ABOVE FINISHED GRADE.
7. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS, BACKFILL OF TRENCHES THROUGH ANY IMPROVED AREAS, SUCH AS STREET, DRIVES OR PARKING LOTS SHALL BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR DENSITY (ASTM D–698).
8. PROPOSED ELECTRIC, TELEPHONE, TELEVISION, AND GAS LINES ARE SHOWN FOR COORDINATION PURPOSES ONLY. SYSTEM DESIGN PREPARED BY EACH RESPECTIVE AGENCY. REFER TO MEP PLANS FOR CONDUIT REQUIREMENTS.
9. ALL UNDERGROUND UTILITY CONDUITS SHALL BE PLACED 48" BELOW FINISH GRADE UNLESS NOTED OTHERWISE.
10. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY, MEASURED EDGE TO EDGE, FROM ANY EXISTING OR PROPOSED SANITARY SEWER. WATER MAINS CROSSING SANITARY SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SANITARY SEWER. CENTER A FULL LENGTH OF WATER MAIN OVER OR UNDER THE SEWER SO BOTH WATER MAIN JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. AT SANITARY SEWER CROSSINGS, PLACE COMPACTED CLAY SOIL BACKFILL 18 INCHES ABOVE OR BELOW THE WATER MAIN FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE SANITARY SEWER. CONTRACTOR SHALL NOTIFY ENGINEER IF HORIZONTAL AND VERTICAL SEPARATION CANNOT BE PROVIDED.
11. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
12. TOPS OF EXISTING ELECTRIC, SANITARY, STORM, WATER, TELECOMMUNICATION, GAS, IRRIGATION, CHILLED WATER, AND STEAM STRUCTURES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED FINISHED ELEVATIONS.
13. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
14. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODE AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
15. REFER TO ARCHITECTURAL <MEP> PLANS FOR SITE LIGHTING PLAN.
16. PVC CONDUIT SHALL BE SCHEDULE 40 PVC WITH LONG SWEEPS ONLY (36" MINIMUM RADIUS) AND CONTAIN PULLTAPE, UNLESS OTHERWISE NOTED.
17. SITE CONTRACTOR SHALL PROVIDE AND INSTALL THE CONCRETE PAD FOR THE TRANSFORMER PER THE ELECTRIC COMPANY SPECIFICATIONS.
18. SITE CONTRACTOR SHALL CONTACT EVERGY TO COORDINATE INSTALLATION OF NEW TRANSFORMERS.
19. A MINIMUM 18" OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF THE ELECTRIC CONDUIT AND THE OUTSIDE OF THE WATER, STORM SEWER, SANITARY SEWER, OR GAS PIPE AT ALL CROSSINGS.
20. STUBS FOR FUTURE UTILITIES SHOULD BE CLEARLY MARKED AND ES&S CONTACTED FOR DATA COLLECTION.

CONSTRUCTION DOCUMENTS

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www.ess-inc.com
MO Engineering Corp. # 2004005018

WILSHIRE HILLS PHASE III
3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

2/22/2024
STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date
JUNE 30, 2023

Revised
(1) FEBRUARY 22, 2024

Design: ST Drawn: MJS

GENERAL NOTES

Sheet
C0.02

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E–JES–WILSHIRE–HILLS–3–ENG\CAD\15925 COVER & DETAILS.DWG 2/23/2024

NE MEADOWVIEW DRIVE
(48' CONCRETE W/ CURB & GUTTER – 60' R/W)

PROPOSED WILSHIRE DRIVE
(60' R/W)

3-STORY
50 UNITS
FF=937.00

DETENTION BASIN

OWNER: RTC REAL ESTATE LLC & EXCEL HOLDINGS LLC

NOTE:
1. SEE PAGE C0.02 FOR REFERENCE TO WILSHIRE HILLS PUBLIC IMPROVEMENT PLAN AND LIMITS OF WORK

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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MO Engineering Corp. # 2004005018

N

0 1"
SCALE: 1" = 30'

4/17/2024
STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
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Revised
1 FEBRUARY 22, 2024
2 APRIL 17, 2024

Design: ST Drawn: MJS

OVERALL PLAN

Sheet
C1.01

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E - JES - WILSHIRE HILLS - 3-ENG\CAD\15925 SITE PLAN.DWG 4/19/2024

OWNER: WILSHIRE PROPERTIES LLC

LOT 4A WILSHIRE HILLS – 3RD PLAT RECORDED IN DOC. NO. 2016E022915 IN BOOK 161 PAGE 43–46

OWNER: RTC REAL ESTATE LLC & EXCEL HOLDINGS LLC

5

110,478 SQ. FT.
OR 2.54 ACRES

3200 WILSHIRE DRIVE

2.50 ACRES

3-STORY
50 UNITS
FF=937.00

PATIO

MAINT. SHED
FF=935.50

DUMPSTER ENCLOSURE

FLAG POLE 5'R 10'R

PORTICO

MONUMENT SIGN

1 STORY BRICK

TULIP CLUSTER

SIGN

CONCRETE W/ CURB & GUTTER

CONCRETE SIDEWALK

GRAVEL

BOLLARD

CONCRETE BLOCK RETAINING WALL

4" DECORATIVE METAL FENCE

4" WOVEN WIRE FENCE

SEGMENTAL BLOCK RETAINING WALL W/ 4' BLACK VINYL COATED CHAIN LINK FENCE

UTILITY EASEMENT (DTP)

PROPOSED 15' UTILITY EASEMENT

EXISTING 5' CONCRETE SIDEWALK

STANDARD DUTY CONCRETE

HEAVY DUTY CONCRETE

CCAG

CURB TAPER

ACCESSIBLE PARKING SIGN (TYP)

ACCESSIBLE VAN PARKING SIGN

1ST, 2ND, 3RD

1ST, 2ND

VAN

CP12995

CP10741

CP16191

CP19971

B1 B2 B3 B4 B5 B6 B8 B9 B11 B12 B13 B14 B15 B20

S 87°54'40"E 332.03'

N 0°46'40"W 40.65'

S 87°54'40"E 60.00'

N 87°54'40"W 335.00'

N 2°05'20"E 330.00'

N 87°54'50"W 30.07'

S 88°21'30"E 322.38'

S 1°38'30"W 15.00'

15' UTILITY EASEMEN

N 46°51'50"E 35.22'

N 2°05'10"E 146.62'

S 5°00'20"W 41.75'

S 45°23'20"W 70.75'

S 5°00'20"W 95.75'

N 84°59'40"W 15.00'

S 0°46'40"E 61.79'

S 2°06'50"W 268.29'

S 2°06'49"W 487.02'

S 2°06'50"W 228.97'

S 2°06'50"W 162.44'

(SEE WILSHIRE HILL III PUBLIC IMPROVEMENT PLAN)
PROPOSED WILSHIRE DRIVE
(60' R/W)

WILSHIRE DRIVE (R/W VARIES)

7.5' UTILITY EASEMENT PER PLAT RECORDED IN BOOK____ PAGE____

10' BUILDING LINE (DTP)

10' BUILDING LINE PER PLAT RECORDED IN BOOK____ PAGE____

20' WATERLINE EASEMENT IN DOCUMENT NO. 1981I0450725 RECORDED IN BOOK I 1066 PAGE 1736

10' UTILITY EASEMENT PER PLAT RECORDED IN BOOK____ PAGE____

1/4 1/4 SECTION LINE

20' BUILDING LINE PER PLAT RECORDED IN BOOK____ PAGE____

20' BUILDING LINE (DTP)

15' UTILITY EASEMENT PER PLAT RECORDED IN BOOK____ PAGE____

NOTE:
1. SEE PAGE C0.02 FOR REFERENCE TO WILSHIRE HILLS PUBLIC IMPROVEMENT PLAN AND LIMITS OF WORK

P:\GENERAL PROJECTS\15925E—ES-WILSHIRE-HILLS-3-ENG\CAD\15925 SITE PLAN.DWG 2/26/2024

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N

0 1"
SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

2/22/2024

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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1 FEBRUARY 22, 2024

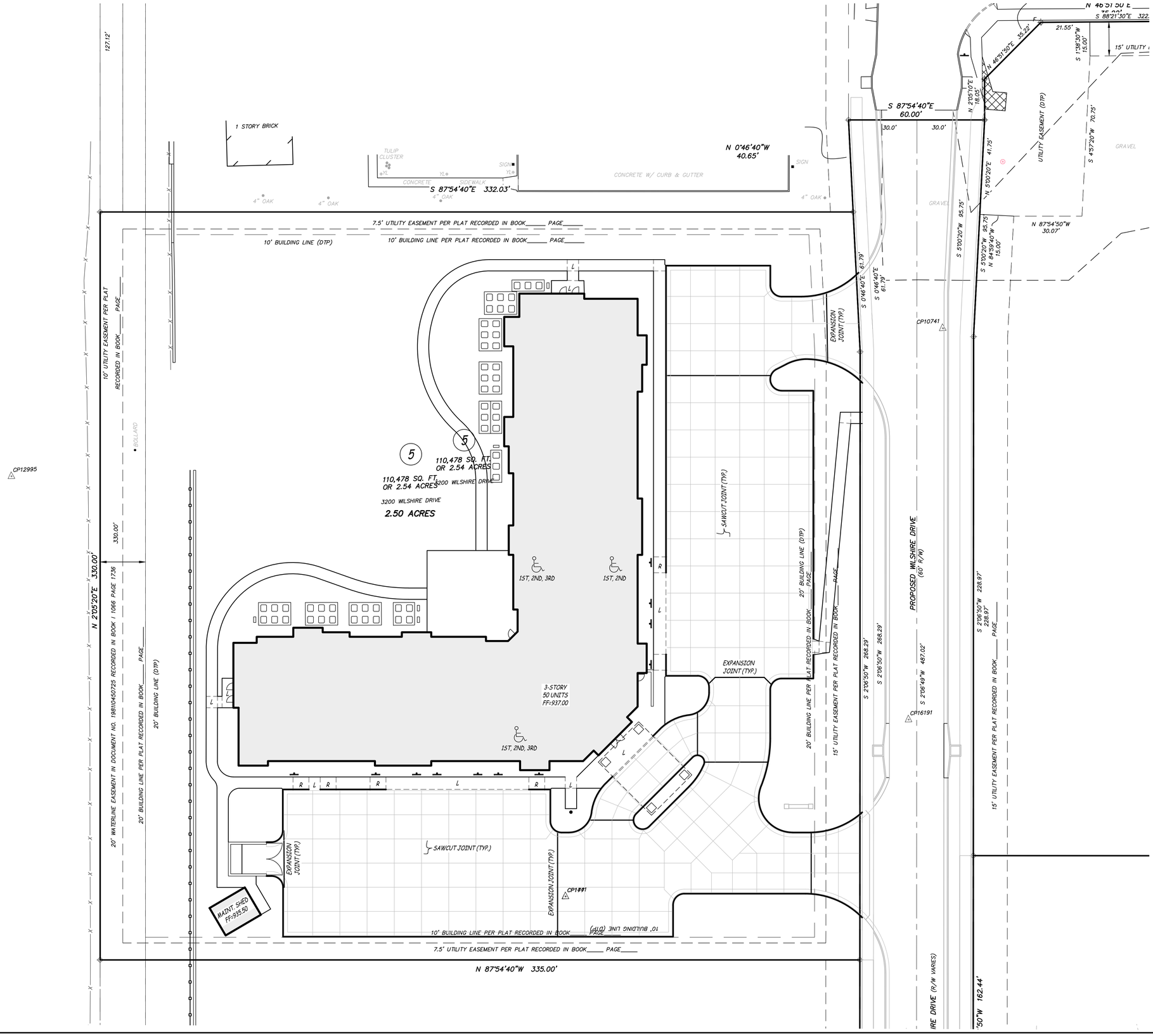
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SITE PLAN

Sheet
C2.01

CONSTRUCTION DOCUMENTS

ES&S PROJECT NO. 15925



1 NOTE:
1. SEE PAGE C0.02 FOR REFERENCE TO WILSHIRE HILLS PUBLIC IMPROVEMENT PLAN AND LIMITS OF WORK

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

2/22/2024

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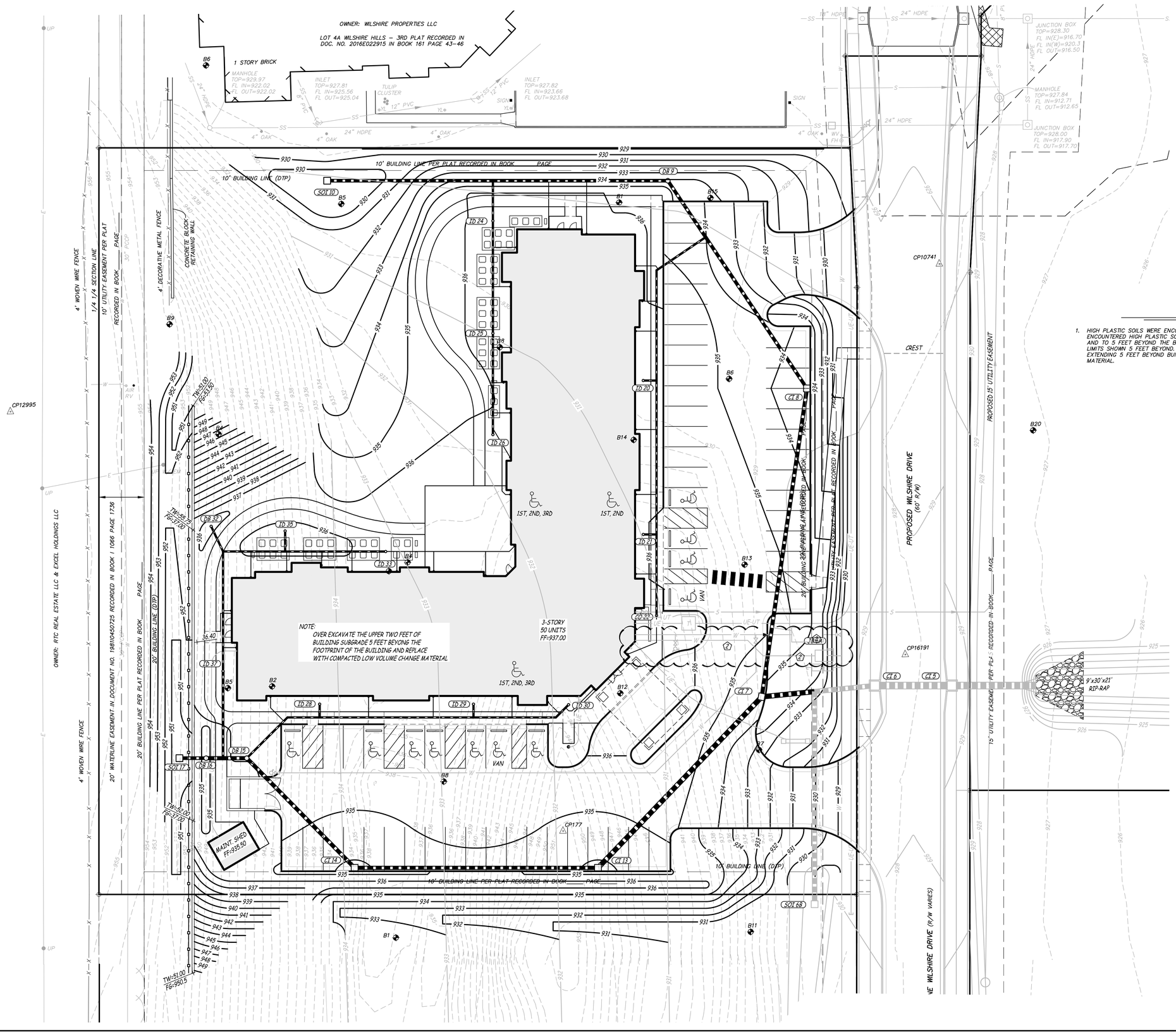
CONSTRUCTION DOCUMENTS

JOINT PLAN

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C3.01

ES&S PROJECT NO. 15925

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EARTHWORK NOTES

1. HIGH PLASTIC SOILS WERE ENCOUNTERED IN THE AREA. CONTRACTOR SHALL OVER-EXCAVATE ENCOUNTERED HIGH PLASTIC SOILS WITHIN THE 2 FOOT OF FINISHED SUBGRADE BUILDING PAD AND TO 5 FEET BEYOND THE BUILDING, AND AT LEAST 1 FOOT BELOW PAVEMENT SUBGRADE LIMITS SHOWN 5 FEET BEYOND. ANY FILL PLACED WITHIN THE UPPER 2 FEET OF SUBGRADE EXTENDING 5 FEET BEYOND BUILDING FOOTPRINT SHOULD CONSIST OF LOW VOLUME CHANGE MATERIAL.

(1) NOTE:
1. SEE PAGE C0.02 FOR REFERENCE TO WILSHIRE HILLS PUBLIC IMPROVEMENT PLAN AND LIMITS OF WORK

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N

0 1"
SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

4/17/2024

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
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1	FEBRUARY 22, 2024
2	APRIL 17, 2024

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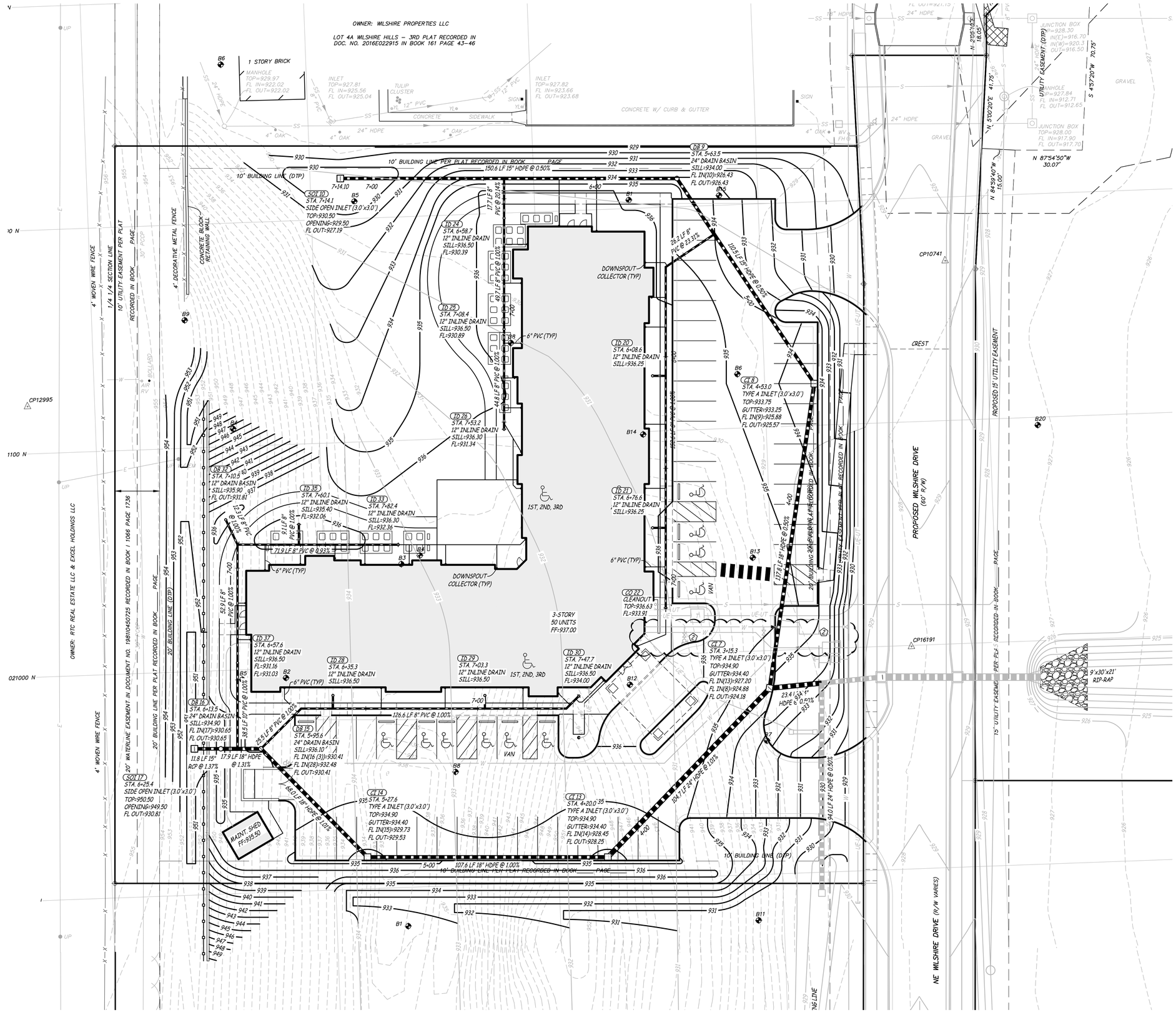
GRADING & DRAINAGE PLAN

Sheet
C4.01

CONSTRUCTION DOCUMENTS

ES&S PROJECT NO. 15925

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N

0 1"
SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

4/17/2024

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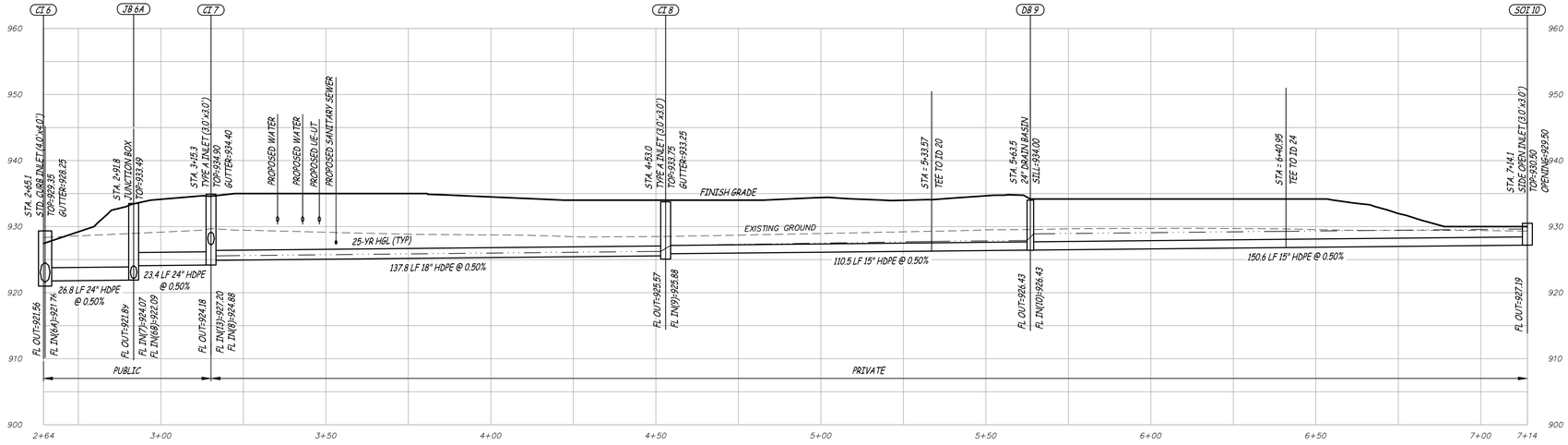
CONSTRUCTION DOCUMENTS

STORM SEWER PLAN

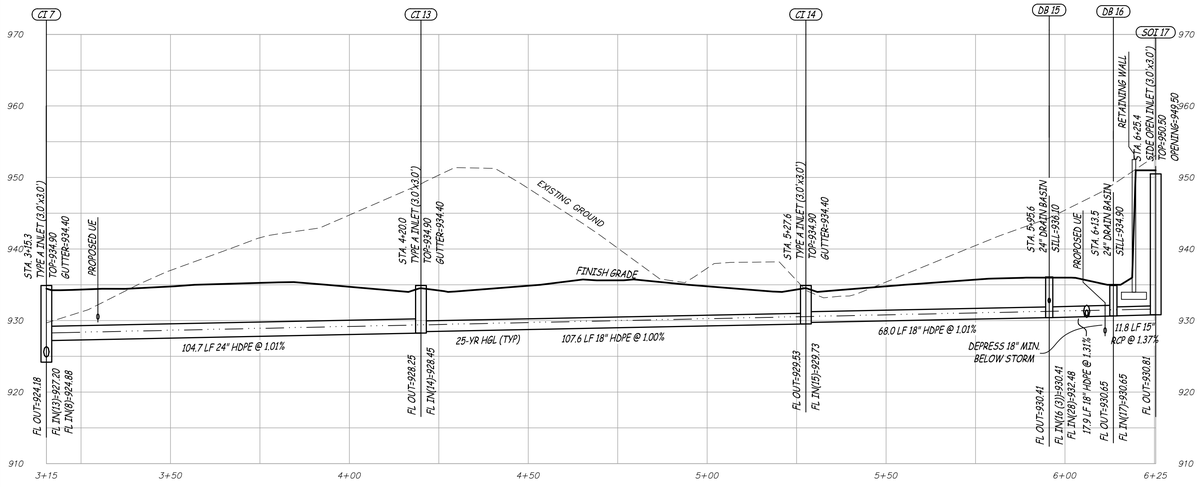
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C5.01

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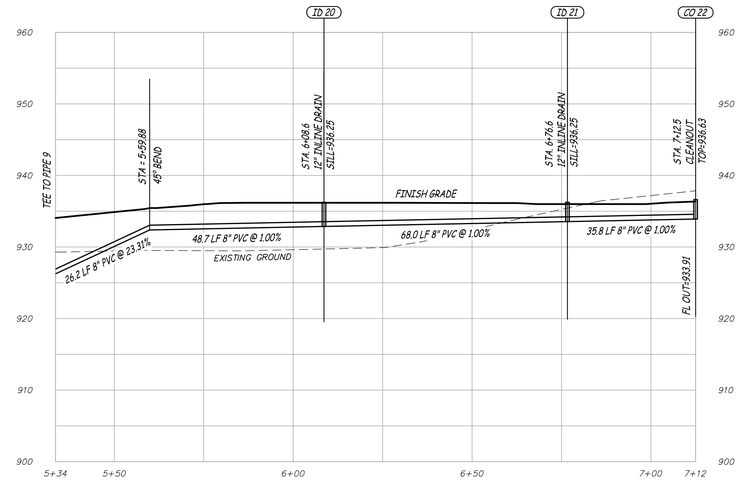
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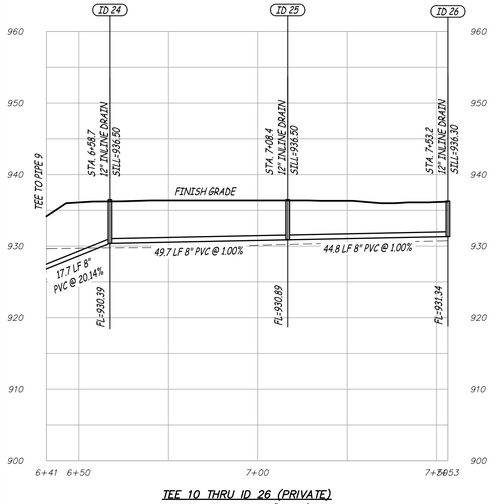
TMI 6 THRU SOI 10
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'



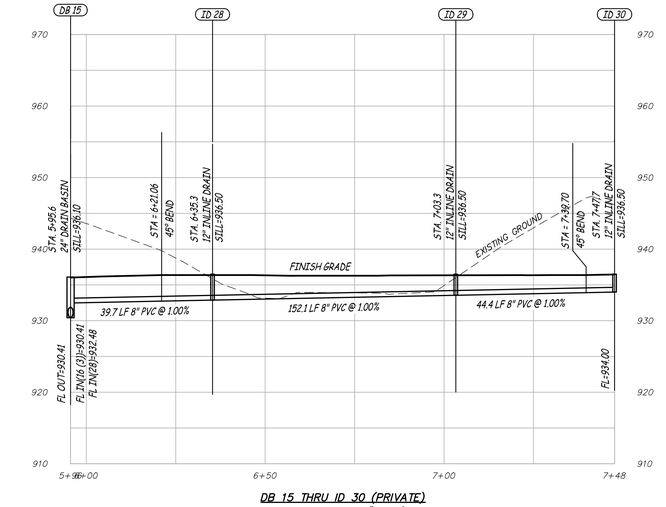
CI 7 THRU SOI 17 (PRIVATE)
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'



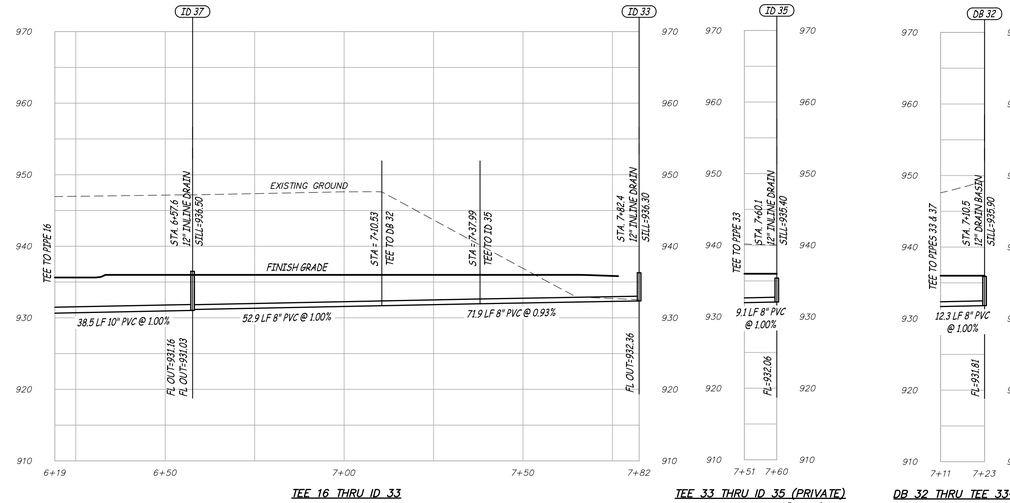
TEE 9 THRU CO 22 (PRIVATE)
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'



TEE 10 THRU ID 26 (PRIVATE)
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'



DB 15 THRU ID 30 (PRIVATE)
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'



TEE 16 THRU ID 33
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'

TEE 33 THRU ID 35 (PRIVATE)
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'

DB 32 THRU TEE 33–37
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'

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MO Engineering Corp. # 2004005018

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

CONSTRUCTION DOCUMENTS

2/22/2024

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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STORM SEWER PROFILES

Sheet
C6.01

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E—ES-WILSHIRE—HILLS-3—ENG\CAD\15925 SITE PLAN.DWG 2/23/2024

OWNER: WILSHIRE PROPERTIES LLC

LOT 4A WILSHIRE HILLS – 3RD PLAT RECORDED IN DOC. NO. 2016E022915 IN BOOK 161 PAGE 43-46

OWNER: RTC REAL ESTATE LLC & EXCEL HOLDINGS LLC

10' BUILDING LINE PER PLAT RECORDED IN BOOK_____ PAGE_____

20' WATERLINE EASEMENT IN DOCUMENT NO. 1981004507250 RECORDED IN BOOK I 1066 PAGE 1736

20' BUILDING LINE PER PLAT RECORDED IN BOOK_____ PAGE_____

10' UTILITY EASEMENT PER PLAT RECORDED IN BOOK_____ PAGE_____

1/4 1/4 SECTION LINE

4' WOVEN WIRE FENCE

4' DECORATIVE METAL FENCE

CONCRETE BLOCK RETAINING WALL

1 STORY BRICK

MANHOLE
TOP=929.97
FL IN=922.02
FL OUT=922.02

INLET
TOP=927.81
FL IN=925.56
FL OUT=925.04

INLET
TOP=927.82
FL IN=923.66
FL OUT=923.68

TULIP CLUSTER

CONCRETE

SIDEWALK

CONCRETE W/ CURB & GUTTER

GRAVEL

SIGN

WV & FH

CURB INLET
TOP=928.23
GUTTER=927.35
FL IN=922.53
FL OUT=922.18

CURB INLET
TOP=928.15
GUTTER=921.29
FL IN=921.50
FL OUT=921.15

JUNCTION BOX
TOP=928.30
IN(E)=916.70
IN(W)=920.30
OUT=916.50

MANHOLE
TOP=927.84
FL IN=912.71
FL OUT=912.65

JUNCTION BOX
TOP=928.00
FL IN=917.90
FL OUT=917.70

UTILITY EASEMENT (OTP)

18" HDPE

24" HDPE

12" PVC

8" PVC

4" OAK

BOLLARD

AIR RV

UP W/ EM

POP

5

110,478 SQ. FT.
OR 2.54 ACRES

3200 NE WILSHIRE DRIVE

2.50 ACRES

1ST, 2ND, 3RD

1ST, 2ND

1ST, 2ND, 3RD

3-STORY
50 UNITS
FF=937.00

DOMESTIC BACK FLOW PREVENTER LOCATED WITHIN BUILDING

CO F
TWO-WAY CLEANOUT
TOP=936.00
FL=927.94

2 FIRE DOMESTIC FDC

1-4" PVC UE
1-4" PVC AT&T
1-4" PVC UT COMCAST
1-4" PVC UT EMPTY

86.0 LF 6" SDR35 PVC W/ TRACER WIRE @ 1.00%

CO C
3+00

T
6" C-900 PVC W/ TRACER WIRE

UE-UT

3" SDR21 PVC W/ TRACER WIRE

2

FIRE HYDRANT ASSEMBLY

45° BEND

SEE DETAIL

2" PVC

FIRE HYDRANT ASSEMBLY

B8 W 6" C-900 PVC W/ TRACER WIRE

45° BEND

MAINT. SHED
FF=935.50

CP177

CP10741

CP16191

PROPOSED WILSHIRE DRIVE (60' R/W)

PROPOSED 15' UTILITY EASEMENT I-00

20' BUILDING LINE PER PLAT RECORDED IN BOOK_____ PAGE_____

15' UTILITY EASEMENT PER PLAT RECORDED IN BOOK_____ PAGE_____

WILSHIRE DRIVE (R/W VARIES)

N 46°51'50"E 35.22'

S 1°38'30"W 15.00'

N 2°55'10"E 18.24'

N 5°20'20"E 41.75'

N 84°39'40"W 15.00'

S 4°57'20"W 70.75'

F 21.55'

S 86

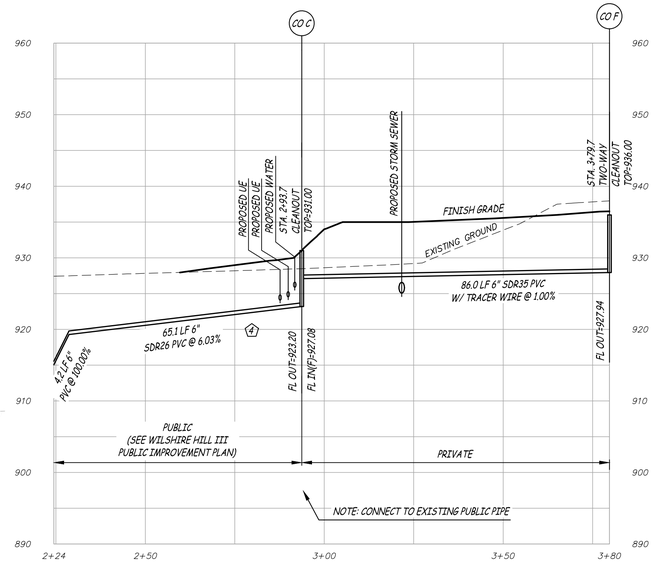
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B1 B2 B3 B4 B5 B6 B8 B9 B11 B12 B13 B14 B15 B20 B27

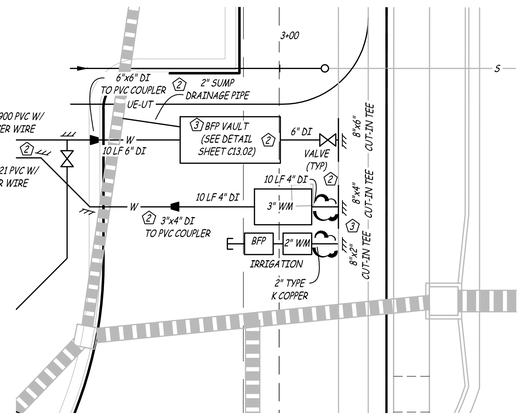
UTILITY NOTES

1. ALL ISSUES PERTAINING TO LIFE SAFETY AND PROPERTY PROTECTION FROM THE HAZARDS OF FIRE, EXPLOSION OR DANGEROUS CONDITIONS IN NEW AND EXISTING BUILDINGS, STRUCTURES AND PREMISES, AND TO THE SAFETY TO FIRE FIGHTERS AND EMERGENCY RESPONDERS DURING EMERGENCY OPERATIONS, SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL FIRE CODE.

2. PRIOR TO ANY COMBUSTIBLE CONSTRUCTION, WILSHIRE DRIVE SHALL BE COMPLETED THROUGH TO STROTHER ROAD, ALL PUBLIC AND PRIVATE HYDRANTS SHALL BE IN PLACE AND OPERABLE, AND THE APARTMENT PARKING LOT'S ASPHALT BASE SHALL BE IN PLACE.



SERVICE CONNECTION THRU CO F (PRIVATE)
SCALE – HORIZ. 1" = 20'
VERT. 1" = 10'



DETAIL
SCALE: 1" = 10'

1 NOTE:
1. SEE PAGE C0.02 FOR REFERENCE TO WILSHIRE HILLS PUBLIC IMPROVEMENT PLAN AND LIMITS OF WORK.

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MO Engineering Corp. # 2004005018

N

0 1"
SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

4/17/24

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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Date
JUNE 30, 2023

Revised	
1	FEBRUARY 6, 2024
2	MARCH 27, 2024
3	APRIL 17, 2024

Design: ST Drawn: MJS

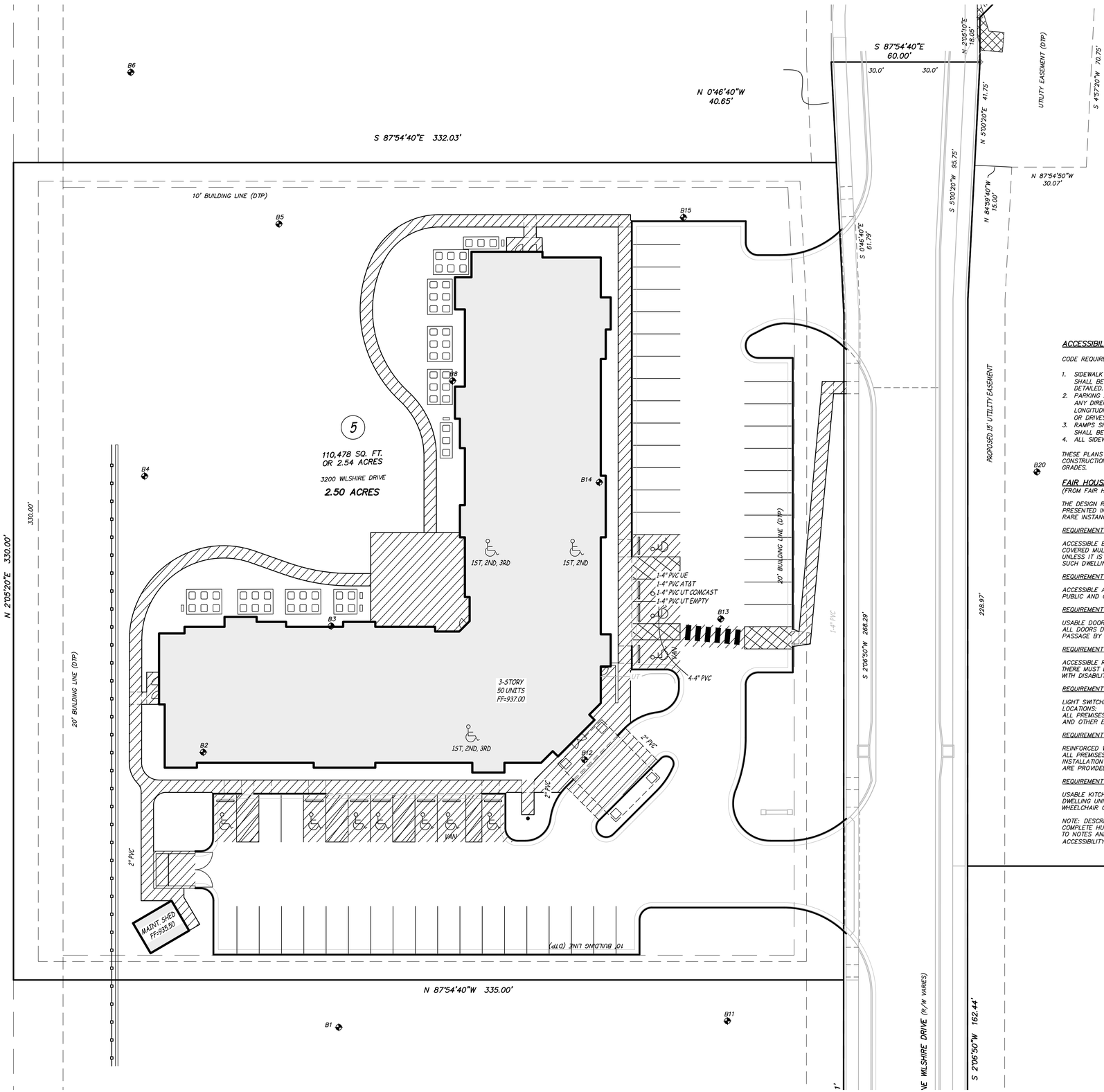
UTILITY PLAN & PROFILE

Sheet
C7.01

ES&S PROJECT NO. 15925

CONSTRUCTION DOCUMENTS

\\192.168.0.99\PROJECTS\GENERAL PROJECTS\15925E-JES-WILSHIRE-HILLS-3-ENG\CAD\15925 SITE PLAN.DWG 4/17/2024



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N

0 1"

SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

ACCESSIBILITY NOTES

CODE REQUIRES THE FOLLOWING:

1. SIDEWALK SHALL NOT EXCEED 5% (1'–0" IN 20'–0") SLOPE WITH A 2% (1'–0" IN 50'–0") CROSS–SLOPE AND SHALL BE 5' WIDE EXCEPT AS NOTED ON SITE PLAN. PROVIDE STAIRS, RAMPS, CURBS, ETC., AS NOTED AND DETAILED.
2. PARKING AREAS FOR ACCESSIBLE SPACES AND ACCESS AISLE SHALL NOT EXCEED A 2% (1'–0" IN 50'–0") IN ANY DIRECTION. OTHER PORTIONS OF THE ACCESSIBLE ROUTE SHALL NOT EXCEED A 5% (1'–0" IN 20'–0") LONGITUDINAL SLOPE NOR A 2% (1'–0" IN 50'–0") CROSS–SLOPE. OTHER PARKING AREAS AND CROSS–SLOPE OR DRIVES SHALL NOT EXCEED A 5% (1'–0" IN 20'–0") SLOPE.
3. RAMPS SHALL NOT EXCEED 8.33% (1'–0" IN 12'–0") SLOPE WITH A 2% (1'–0" IN 50'–0") CROSS–SLOPE AND SHALL BE 5' WIDE EXCEPT AS NOTED ON SITE LAYOUT PLAN. RISE OF RAMP SHALL NOT EXCEED 6".
4. ALL SIDEWALK INTERSECTIONS SHALL HAVE A 5' x 5' LANDING AT 1/4" PER 1' MAX SLOPE IN ALL DIRECTIONS.

THESE PLANS AND SPECIFICATIONS HAVE BEEN DESIGNED WITH TOLERANCE BELOW THE CODE TO IMPROVE POST CONSTRUCTION COMPLIANCE. REFERENCE THE PLAN SHEETS AND DETAILS FOR SPECIFIED GRADES AND MAXIMUM GRADES.

FAIR HOUSING ACCESSIBILITY GUIDELINES

(FROM FAIR HOUSING ACT DESIGN MANUAL, REVISED APRIL 1998)

THE DESIGN REQUIREMENTS OF THE GUIDELINES TO WHICH NEW BUILDINGS AND DWELLING UNITS MUST COMPLY ARE PRESENTED IN ABRIDGED FORM BELOW. DWELLING UNITS ARE NOT SUBJECT TO THESE REQUIREMENTS ONLY IN THE RARE INSTANCE WHERE THERE ARE EXTREMES OF TERRAIN OR UNUSUAL CHARACTERISTICS OF THE SITE.

REQUIREMENT 1

ACCESSIBLE BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE:
COVERED MULTIFAMILY DWELLINGS MUST HAVE AT LEAST ONE BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE, UNLESS IT IS IMPRACTICAL TO DO SO BECAUSE OF TERRAIN OR UNUSUAL CHARACTERISTICS OF THE SITE. FOR ALL SUCH DWELLINGS WITH A BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE THE FOLLOWING SIX REQUIREMENTS APPLY.

REQUIREMENT 2

ACCESSIBLE AND USABLE PUBLIC AND COMMON USE AREAS:
PUBLIC AND COMMON USE AREAS MUST BE READILY ACCESSIBLE TO AND USABLE BY PEOPLE WITH DISABILITIES.

REQUIREMENT 3

USABLE DOORS:
ALL DOORS DESIGNED TO ALLOW PASSAGE INTO AND WITHIN ALL PREMISES MUST BE SUFFICIENTLY WIDE TO ALLOW PASSAGE BY PERSONS IN WHEELCHAIRS. SEE ARCH PLANS.

REQUIREMENT 4

ACCESSIBLE ROUTE INTO AND THROUGH THE COVERED DWELLING UNIT:
THERE MUST BE AN ACCESSIBLE ROUTE INTO AND THROUGH THE DWELLING UNITS, PROVIDING ACCESS FOR PEOPLE WITH DISABILITIES THROUGHOUT THE UNIT. SEE ARCH PLANS

REQUIREMENT 5

LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS AND OTHER ENVIRONMENTAL CONTROLS IN ACCESSIBLE LOCATIONS:
ALL PREMISES WITHIN THE DWELLING UNITS MUST CONTAIN LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS AND OTHER ENVIRONMENTAL CONTROLS IN ACCESSIBLE LOCATIONS. SEE ARCH PLANS

REQUIREMENT 6

REINFORCED WALLS FOR GRAB BARS:
ALL PREMISES WITHIN DWELLING UNITS MUST CONTAIN REINFORCEMENTS IN BATHROOM WALLS TO ALLOW LATER INSTALLATION OF GRAB BARS AROUND TOILET, TUB, SHOWER STALL AND SHOWER SEAT, WHERE SUCH FACILITIES ARE PROVIDED. SEE ARCH PLANS.

REQUIREMENT 7

USABLE KITCHENS AND BATHROOMS:
DWELLING UNITS MUST CONTAIN USABLE KITCHENS AND BATHROOMS SUCH THAT AN INDIVIDUAL WHO USES A WHEELCHAIR CAN MANEUVER ABOUT THE SPACE. SEE ARCH PLANS.

NOTE: DESCRIPTIONS OF THE SEVEN REQUIREMENTS ABOVE ARE OF AN ABBREVIATED NATURE. REFER TO THE COMPLETE HUD FAIR HOUSING ACCESSIBILITY GUIDELINES FOR DETAILED DESCRIPTION OF EACH REQUIREMENT. REFER TO NOTES AND DETAILS ON VARIOUS PLAN SHEETS FOR CERTAIN SPECIFIC REQUIREMENTS OF THE FAIR HOUSING ACCESSIBILITY GUIDELINES (FHA) AND THE UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS).

2/22/2024

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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Date

JUNE 30, 2023

Revised

1 FEBRUARY 22, 2024

Design: ST Drawn: MJS

ACCESSIBILITY PLAN

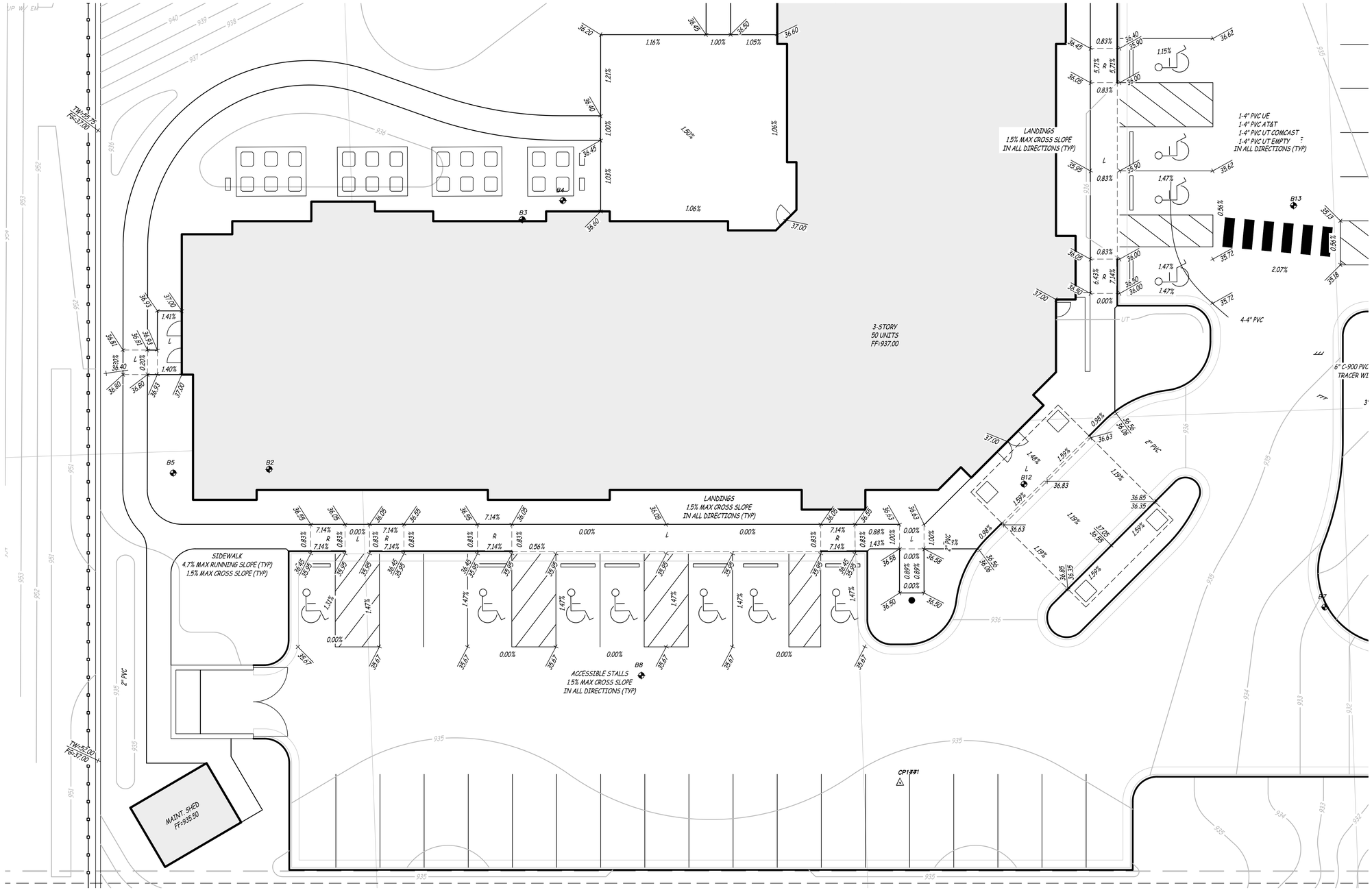
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C8.01

CONSTRUCTION DOCUMENTS

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E–JES–WILSHIRE–HILLS–3–ENG\CAD\15925 SITE PLAN.DWG 2/26/2024



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N

0 1"
SCALE: 1" = 10'

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

2/22/2024

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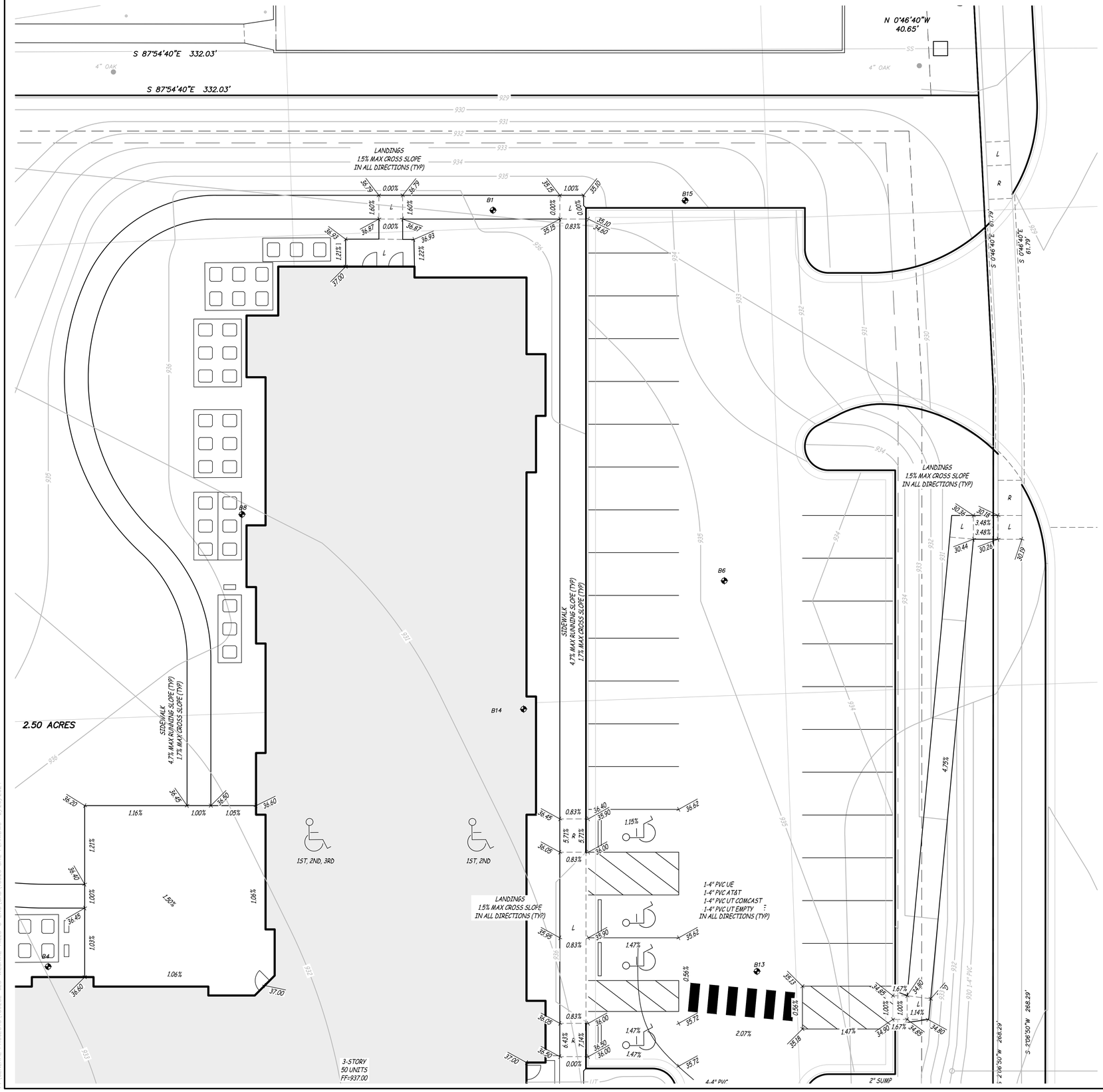
CONSTRUCTION DOCUMENTS

ACCESSIBILITY PLAN

Sheet
C8.02

ES&S PROJECT NO. 15925

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1. NOTE:
   1. REFERENCE TO PUBLIC IMPROVEMENT PLAN

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N

0 1"
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WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

2/22/2024

STATE OF MISSOURI
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CONSTRUCTION DOCUMENTS

ACCESSIBILITY PLAN

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C8.03

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E--JES--WILSHIRE-HILLS-3-ENG\CAD\15925 SITE PLAN.DWG 2/26/2024

OWNER: WILSHIRE PROPERTIES LLC

LOT 4A WILSHIRE HILLS – 3RD PLAT RECORDED IN DOC. NO. 2016E022915 IN BOOK 161 PAGE 43–46

1 STORY BRICK

MANHOLE TOP=929.97 FL IN=922.02 FL OUT=922.02

INLET TOP=927.81 FL IN=925.56 FL OUT=925.04

TULIP CLUSTER

INLET TOP=927.82 FL IN=923.66 FL OUT=923.68

N 0°46'40"W 40.65'

S 87°54'40"E 332.03'

CLEARING & GRADING LIMITS

SILT FENCE

10' BUILDING LINE PER PLAT RECORDED IN BOOK____ PAGE____

SOI 10

INLET PROTECTION (TYP)

DI 9

TEMPORARY DIVERSION DIKE

CONCRETE WASHOUT

20'x50' TEMPORARY CONSTRUCTION ENTRANCE

CONSTRUCTION TRAILER

PORTABLE TOILET

CI 8

CI 7

5 TOPSOIL STOCKPILE

110,478 SQ. FT. OR 2.54 ACRES

3200 NE WILSHIRE DRIVE

S 87°54'40"E 60.00'

30.0'

30.0'

N 2°05'20"E 18.05'

S 0°46'40"E 61.79'

S 5°00'20"W 95.75'

JUNCTION BOX TOP=928.30 FL IN(E)=916.70 FL IN(W)=920.3 FL OUT=916.50

MANHOLE TOP=923.83 FL IN=912.71 FL OUT=912.65

JUNCTION BOX TOP=928.00 FL IN=917.90 FL OUT=917.70

PROPOSED 15' UTILITY EASEMENT

PROPOSED WILSHIRE DRIVE (60' R/W)

S 2°06'50"W 228.97'

S 2°06'50"W 268.29'

S 2°06'50"W 162.44'

20' BUILDING LINE PER PLAT RECORDED IN BOOK____ PAGE____

15' UTILITY EASEMENT PER PLAT RECORDED IN BOOK____ PAGE____

9'x30'x21' RIP-RAP

N 87°54'40"W 335.00'

N 87°54'40"W 330.00'

N 2°05'20"E 330.00'

OWNER: RTC REAL ESTATE LLC & EXCEL HOLDINGS LLC

BOOK I 1066 PAGE 1736

20' WATERLINE EASEMENT IN DOCUMENT NO. 1981I0450725 RECORDED IN BOOK I 1066 PAGE 1736

CLEARING & GRADING LIMITS

20' BUILDING LINE PER PLAT RECORDED IN BOOK____ PAGE____

10' UTILITY EASEMENT PER PLAT RECORDED IN BOOK____ PAGE____

1/4 1/4 SECTION LINE

4' WOVEN WIRE FENCE

4' DECORATIVE METAL FENCE

CONCRETE BLOCK RETAINING WALL

1 STORY BRICK

CONCRETE W/ CURB & GUTTER

SIDEWALK

GRAVEL

4" OAK

24" HDPE

18" HDPE

12" PVC

6" PVC

SIGN

BOLLARD

UP

UP W/ EM

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ESS
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N

0 1"

SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

STREET ADDRESS

LEE'S SUMMIT JACKSON COUNTY, MISSOURI

1/23/2024

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
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1 JANUARY 23, 2024

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CONSTRUCTION DOCUMENTS

INITIAL EROSION CONTROL PLAN

Sheet

C9.01

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E-JES-WILSHIRE-HILLS-3-ENG\CAD\15925 EROSION.DWG 4/19/2024

OWNER: WILSHIRE PROPERTIES LLC

LOT 4A WILSHIRE HILLS – 3RD PLAT RECORDED IN DOC. NO. 2016E022915 IN BOOK 161 PAGE 43–46

OWNER: RTC REAL ESTATE LLC & EXCEL HOLDINGS LLC

110,478 SQ. FT. OR 2.54 ACRES

3200 NE WILSHIRE DRIVE

3-STORY 50 UNITS FF=937.00

MAINT. SHED FF=935.50

1 STORY BRICK

CLEARING & GRADING LIMITS

10' BUILDING LINE PER PLAT RECORDED IN BOOK ____ PAGE ____

20' BUILDING LINE PER PLAT RECORDED IN BOOK ____ PAGE ____

20' WATERLINE EASEMENT IN DOCUMENT NO. 1981004507 25 RECORDED IN BOOK I 1066 PAGE 1736

10' UTILITY EASEMENT PER PLAT RECORDED IN BOOK ____ PAGE ____

15' UTILITY EASEMENT PER PLAT RECORDED IN BOOK ____ PAGE ____

PROPOSED 15' UTILITY EASEMENT

PROPOSED WILSHIRE DRIVE (60' R/W)

4' WOVEN WIRE FENCE

4' DECORATIVE METAL FENCE

CONCRETE BLOCK RETAINING WALL

CONCRETE W/ CURB & GUTTER

CONCRETE SIDEWALK

SILT FENCE

INLET PROTECTION (TYP)

1ST, 2ND, 3RD

1ST, 2ND

GRAVEL

CREST

9'x30'x21' RIP-RAP

S 87°54'40"E 332.03'

N 0°46'40"W 40.65'

S 87°54'40"E 60.00'

S 0°46'40"E 61.79'

S 5°00'20"W 95.75'

S 2°06'50"W 228.97'

S 2°06'50"W 268.29'

S 2°06'50"W 162.44'

N 87°54'40"W 335.00'

N 2°05'20"E 330.00'

N 2°05'20"E 18.05'

JUNCTION BOX TOP=928.30 FL IN(E)=916.70 FL IN(W)=920.3 FL OUT=916.50

MANHOLE TOP=923.83 FL IN=912.77 FL IN=912.77 FL OUT=912.65

JUNCTION BOX TOP=928.00 FL IN=917.90 FL OUT=917.70

INLET TOP=927.81 FL IN=925.56 FL OUT=925.04

INLET TOP=927.82 FL IN=923.66 FL OUT=923.68

TULIP CLUSTER

SIGN

4" OAK

24" HDPE

18" HDPE

12" PVC

6" PVC

B1 B2 B4 B5 B6 B11 B12 B13 B14 B15 B16 B20

DB 9 DB 15 DB 16 DB 17 DB 18 DB 19 DB 20

SOI 10 SOI 17 SOI 68

ID 24 ID 25 ID 26 ID 27 ID 28 ID 29 ID 30 ID 33 ID 34 ID 35 ID 37

GO 22

CT 5 CT 6 CT 7 CT 8 CT 13 CT 14

JB 64

CP12995 CP10741 CP16191 CP1???

1100 N 021000 N

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N

0 1"

SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

STREET ADDRESS

LEE'S SUMMIT JACKSON COUNTY, MISSOURI

4/17/2024

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2 APRIL 17, 2024

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FINAL EROSION CONTROL PLAN

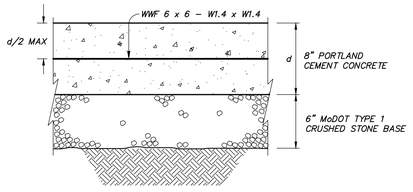
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C9.02

ES&S PROJECT NO. 15925

CONSTRUCTION DOCUMENTS

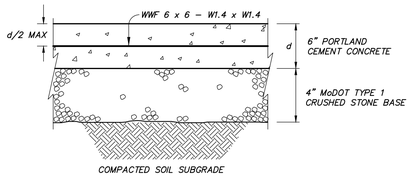
P:\GENERAL PROJECTS\15925—JES—WILSHIRE—HILLS—3—ENG\CAD\15925 EROSION.DWG 4/19/2024



NOTE: TOP OF REINFORCEMENT SHALL BE A MINIMUM OF 2" BELOW THE TOP OF PAVEMENT.

HEAVY DUTY CONCRETE PAVEMENT

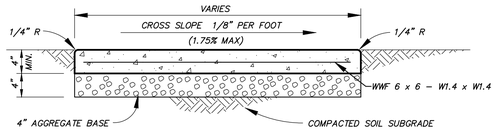
NOT TO SCALE



NOTE: TOP OF REINFORCEMENT SHALL BE A MINIMUM OF 2" BELOW THE TOP OF PAVEMENT.

STANDARD DUTY CONCRETE PAVEMENT

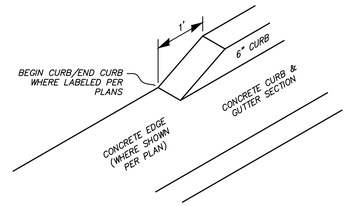
NOT TO SCALE



NOTES:
1. SIDEWALK SHALL BE 5–8% AIR–ENTRAINED, 6 BAG MIX, 4,000 PSI PORTLAND CEMENT CONCRETE.
2. INSTALL TRANSVERSE EXPANSION JOINTS TO MATCH STREET OR CURB AND GUTTER EXPANSION JOINTS AND AT ALL DRIVEWAY APPROACHES, FIXED STRUCTURES, BUILDINGS, AND SIDEWALK RAMPS. SPACING SHALL NOT EXCEED 50'.
3. FOR SIDEWALKS UP TO 6 FT. WIDE, INSTALL TRANSVERSE SAW–CUT JOINTS AT SPACING EQUAL TO SIDEWALK WIDTH.
4. FOR SIDEWALKS WIDER THAN 6 FT., INSTALL LONGITUDINAL SAW JOINT AT CENTERLINE OR AT A SPACING NOT TO EXCEED 5 FT. TRANSVERSE SAW–CUT JOINT SPACING EQUAL TO HALF SIDEWALK WIDTH.
5. IF SIDEWALK IS REINFORCED, NO STEEL SHALL BE PLACED THROUGH AN EXPANSION JOINT.
6. SEE SEPARATE DETAIL FOR ADDITIONAL CONCRETE JOINT REQUIREMENTS.

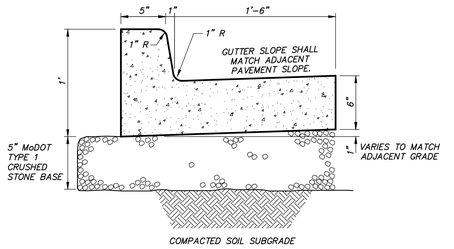
CONCRETE SIDEWALK

NOT TO SCALE



BEGIN CURB / END CURB DETAIL

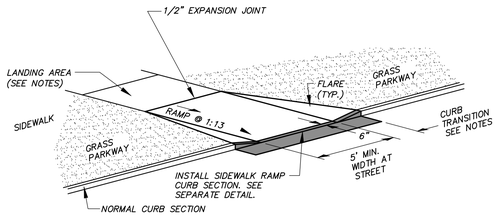
NOT TO SCALE



NOTES:
1. CURB AND GUTTER MAY BE INTEGRAL IF CONCRETE PAVEMENT IS USED.
2. INSTALL TRANSVERSE EXPANSION JOINTS TO MATCH ADJACENT PAVEMENT,OR AT EVERY 150' MAX.
3. INSTALL SAW–CUT JOINTS TO MATCH ADJACENT PAVEMENT OR EVERY 10' MAX.
4. SAW–CUT JOINTS SHALL EXTEND THROUGH THE ENTIRE CURB SECTION FROM THE TOP OF CURB TO A DEPTH OF 2" BELOW THE GUTTER SURFACE.

6" CONCRETE CURB & GUTTER SECTION

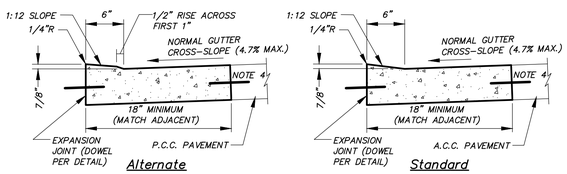
NOT TO SCALE



NOTES:
1. RAMP SHALL BE 4" THICK P.C.C.
2. EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
3. ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
4. REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION – SEE SEPARATE DETAIL.
5. RAMP LENGTH IS DEPENDENT ON 1:13 MAX SLOPE. USE FLATTER WHEN POSSIBLE.
6. LANDING AREA SHALL BE 4'–0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 1.7%
7. FLARES ARE REQUIRED AT RAMPS TO KEEP GRASS PARKWAY SLOPES IN CONFORMANCE WITH THE TYPICAL CROSS SECTION.
8. CURB TRANSITION LENGTH IS DEPENDENT ON FLARE SLOPE.
9. MAXIMUM RAMP CROSS SLOPE IS 1.7% IN ALL DIRECTIONS.

PERPENDICULAR CURB RAMP

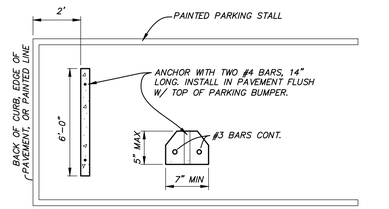
NOT TO SCALE



NOTES:
1. CONCRETE THICKNESS AND BASE SHALL MATCH ADJACENT CONCRETE PAVEMENT OR ADJACENT CURB AND GUTTER.
2. EXPANSION JOINTS AND CONTRACTION JOINTS SHALL BE PLACED AT LOCATIONS SIMILAR TO THE ADJACENT PAVEMENT AND CURB & GUTTER.
3. CURB EDGE SHALL BE TOOLED WITH 1/4" RADIUS.
4. WHERE PAVEMENT IS P.C.C. DOWEL USING 12" LONG #4 BARS AT 24" CTRS.

SIDEWALK RAMP CURB

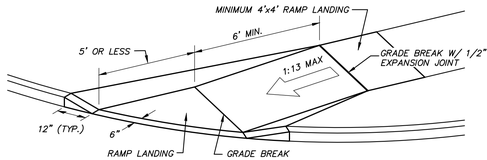
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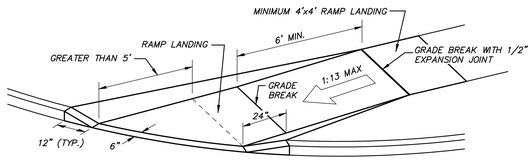
NOTES:
1. CONCRETE SHALL BE A MINIMUM 5,000 PSI AND AIR–ENTRAINED.
2. PROVIDE A MINIMUM 2 SLOTS ON THE BOTTOM OF THE BUMPER FOR DRAINAGE.

CONCRETE PARKING BUMPER

NOT TO SCALE



CONDITION 1

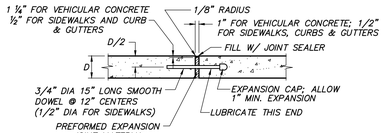


CONDITION 2

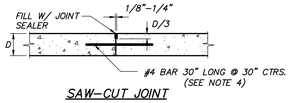
NOTES:
1. RAMP SHALL BE 4" THICK PORTLAND CEMENT CONCRETE – SEE SPECS.
2. EXPANSION JOINTS SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
3. MAXIMUM RAMP CROSS SLOPE IS 1.7%
4. MAXIMUM RAMP LONGITUDINAL SLOPE IS 1:13. USE A FLATTER RAMP SLOPE WHEN POSSIBLE.
5. RAMP LANDING SLOPE SHALL NOT EXCEED 1.7% IN ALL DIRECTIONS.

SKEW / RADIAL CURB RAMPS

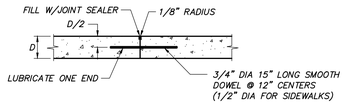
NOT TO SCALE



EXPANSION JOINT



SAW–CUT JOINT

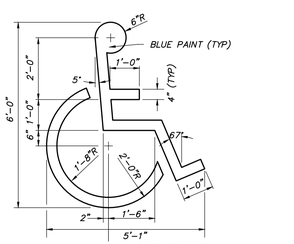


CONSTRUCTION JOINT

NOTES:
1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT A PAVEMENT JOINT PLAN OF ALL CONCRETE PAVEMENT FOR APPROVAL.
2. CONCRETE PAVEMENT SHALL HAVE SAW–CUT OR CONSTRUCTION JOINTS EVERY 10 FEET FOR 4 INCH THICK PAVEMENT, 12 FEET FOR 5 INCH THICK PAVEMENT, AND 15 FEET FOR 6 INCH THICK PAVEMENT OR GREATER. PANELS SHALL BE CUT SUCH THAT PANELS ARE NEARLY SQUARE AND DO NOT EXCEED 100 SQUARE FEET IN AREA OR 1.4 LENGTH TO WIDTH RATIO. EXPANSION JOINTS SHALL BE PROVIDED AT ALL FIXED STRUCTURES, SUCH AS; LIGHT STANDARD FOUNDATIONS, SEWER STRUCTURES, BUILDINGS, WALLS, BOTTOM OF STAIRS, ROOF DRAINS, ETC., AND EVERY 100 FEET MAXIMUM. DOWEL BARS SHALL BE PROVIDED AT TRANSVERSE JOINTS IN ALL HEAVY DUTY PAVEMENT DRIVE AISLES.
3. THIS DETAIL APPLIES TO ALL CONCRETE PAVEMENT FOR PARKING LOTS, DRIVE/ACCESS AISLES, CURBS & GUTTERS, AND SIDEWALKS.
4. INCLUDE BAR WITH TRANSVERSE SAW–CUT JOINTS FOR HEAVY DUTY PAVEMENT. OMIT BAR WITH SAW–CUT JOINTS FOR STANDARD DUTY PAVEMENT AND SIDEWALKS.
5. PROVIDE CONSTRUCTION JOINT AT END OF DAYS WORK OR IF CONCRETE PLACEMENT IS SUSPENDED FOR MORE THAN 30 MINUTES.
6. SAW–CUT JOINTS SHALL BE CUT WITHIN 12 HOURS OF INITIAL SET OF CONCRETE. RAVELED JOINTS WILL NOT BE ACCEPTED.
7. ELASTOMERIC POLYURETHANE OR SILICONE JOINT SEALANT IS REQUIRED FOR ALL JOINTS AND SHALL BE LIGHT GRAY IN COLOR.
8. OMIT DOWEL BARS FOR EXPANSION JOINTS AT BUILDINGS, LIGHT STANDARDS, AND ROOF DRAINS.

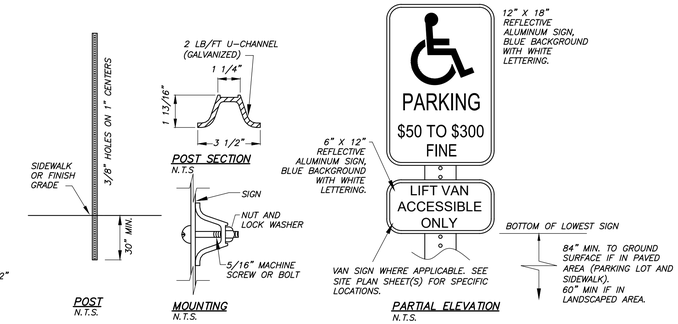
CONCRETE PAVEMENT JOINTS

NOT TO SCALE



ACCESSIBLE SYMBOL FOR PARKING SPACES

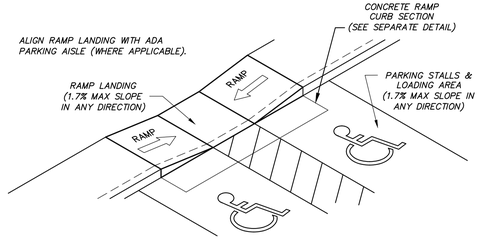
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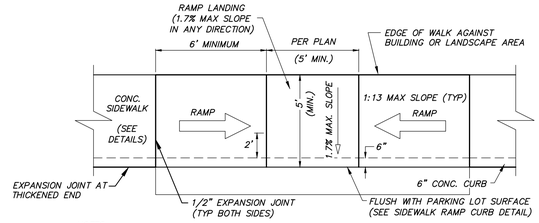
NOTES:
1. SEE SITE PLAN SHEET(S) FOR SIGN LOCATIONS.
2. ALL SIGNS SHALL BE 0.80 ENGINEER GRADE REFLECTIVE ALUMINUM.

ACCESSIBLE PARKING STALL SIGNAGE

NOT TO SCALE



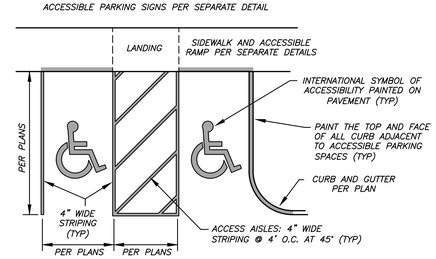
ISOMETRIC



NOTES:
1. RAMP SHALL BE 4" THICK PORTLAND CEMENT CONCRETE – SEE SPECS.
2. EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
3. MAXIMUM RAMP CROSS SLOPE IS 1.7%
4. MAXIMUM RAMP LONGITUDINAL SLOPE IS 1:13. USE A FLATTER RAMP SLOPE WHEN POSSIBLE.
5. RAMP LANDING SLOPE SHALL NOT EXCEED 1.7% IN ALL DIRECTIONS.

PARALLEL CURB RAMP

NOT TO SCALE



NOTES:
1. ALL ACCESSIBLE STRIPING SHALL BE BLUE RETROREFLECTIVE.
2. ALL PAVEMENT WITHIN ACCESSIBLE PARKING AREAS SHALL BE AT 1.7% OR LESS SLOPE IN ALL DIRECTIONS.

ACCESSIBLE PARKING STALL STRIPING (MISSOURI)

NOT TO SCALE

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MO Engineering Corp. # 2004005018

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

6/30/2023

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date
JUNE 30, 2023

Revised

Design: ST Drawn: MJS

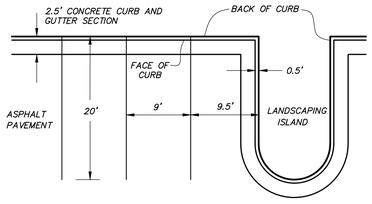
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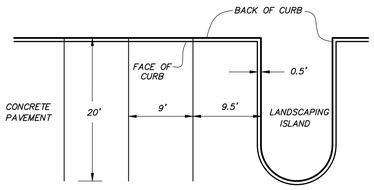
ES&S PROJECT NO. 15925

CONSTRUCTION DOCUMENTS

P:\GENERAL PROJECTS\15925E–JES–WILSHIRE–HILLS–3–ENG\CAD\15925 COVER & DETAILS.DWG 6/30/2023



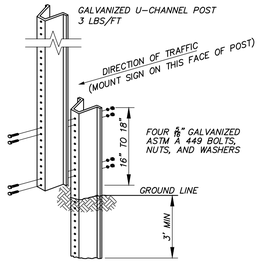
ASPHALT PAVEMENT



CONCRETE PAVEMENT

TYPICAL PARKING STALL DETAIL

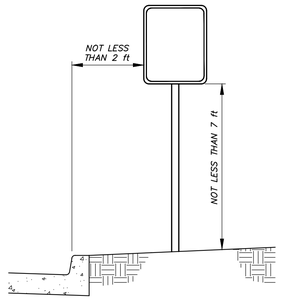
NOT TO SCALE



NOTES:
1. STUB HEIGHT AND SPLICE LAP SHALL BE 16" TO 18".
2. SPLICE SHALL NOT EXTEND BELOW THE GROUND.
3. ONLY ONE SPLICE WILL BE ALLOWED PER POST.
4. USE OF SPLICE IS OPTIONAL.
5. SIGNS SHALL BE 7' MIN. FROM FINISH GRADE TO BOTTOM OF LOWEST MOUNTED SIGN.

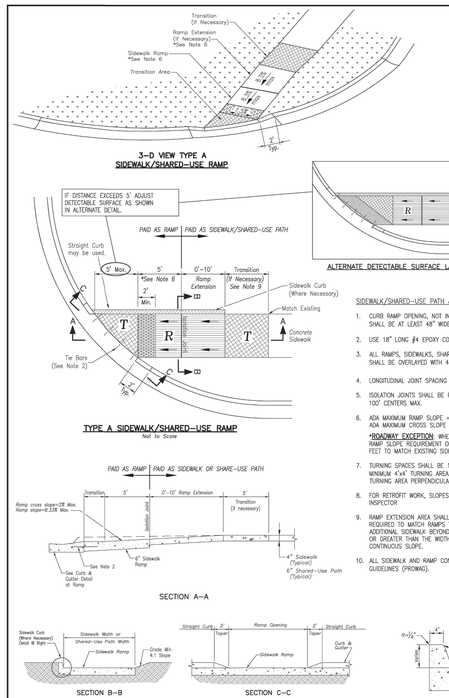
SIGN POST DETAIL

NOT TO SCALE

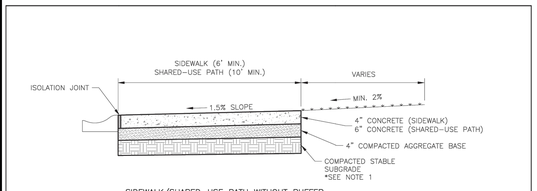


URBAN ROADSIDE SIGN LOCATION

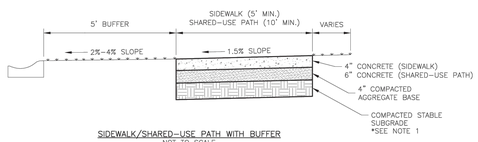
NOT TO SCALE



GEN-3A



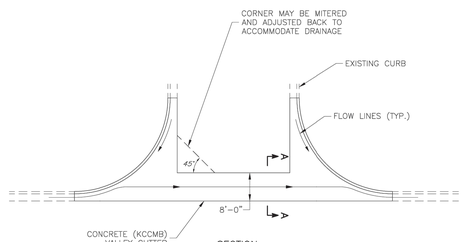
SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



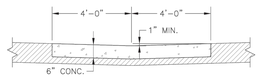
SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS.
4. ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 100 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
7. SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
8. SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
9. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
SIDEWALK/SHARED-USE PATH DETAIL
Date: 05/2021 | Drawn By: MJF | Checked By: DL
GEN-2



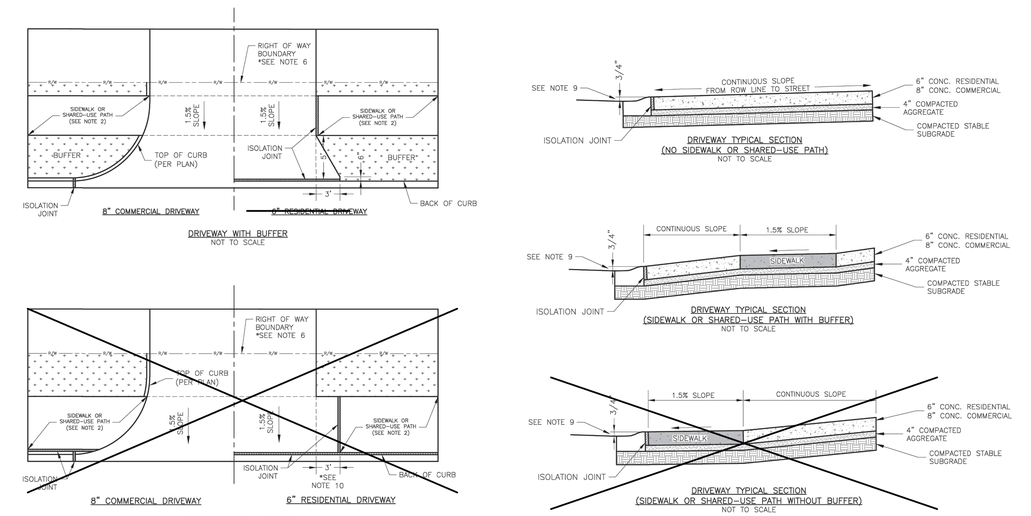
SECTION



SECTION
Scale: 1" = 1'-0"

VALLEY GUTTER DETAIL
Intersection of Two Public Streets

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
VALLEY GUTTER DETAIL
Date: 05/2021 | Drawn By: MJF | Checked By: DL
GEN-7



GENERAL NOTES
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Project:
Sheet Name: DRIVEWAY DETAIL
Drawn By: MJF | Checked By: DL | Date: 05/2021 | Proj. #:
GEN-1

CONSTRUCTION DOCUMENTS

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WILSHIRE HILLS PHASE III

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

6/30/2023
STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
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PE-2007002811

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Date
JUNE 30, 2023

Revised

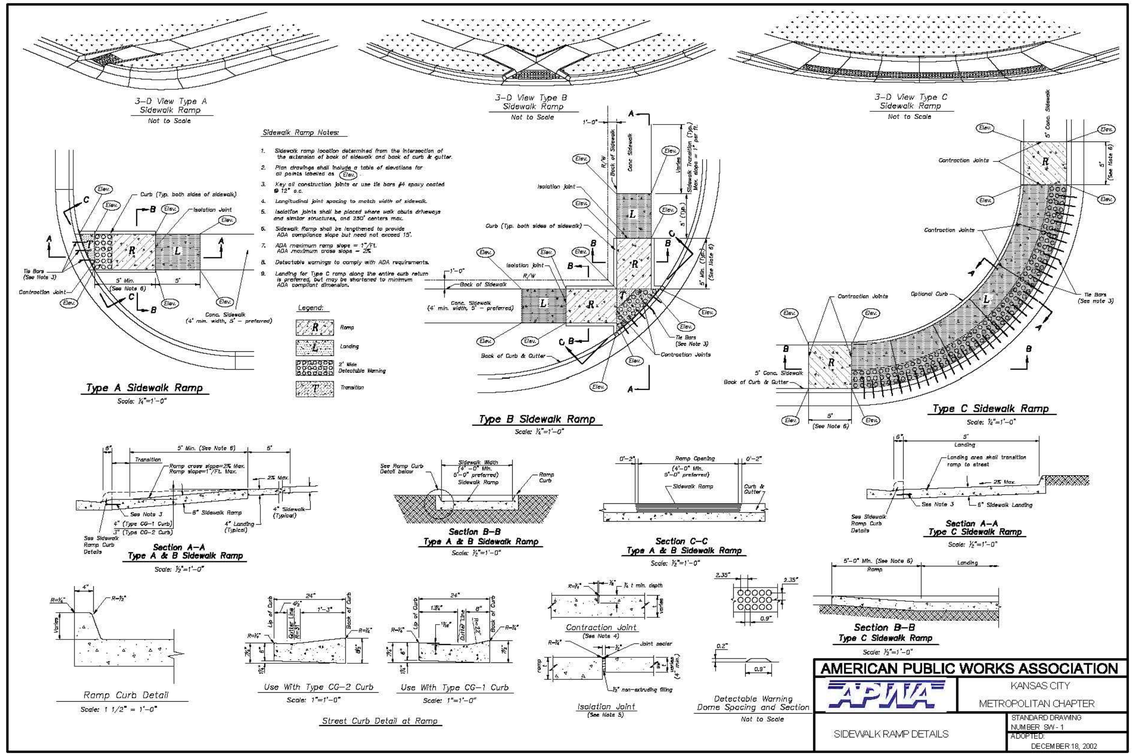
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SITE DETAILS

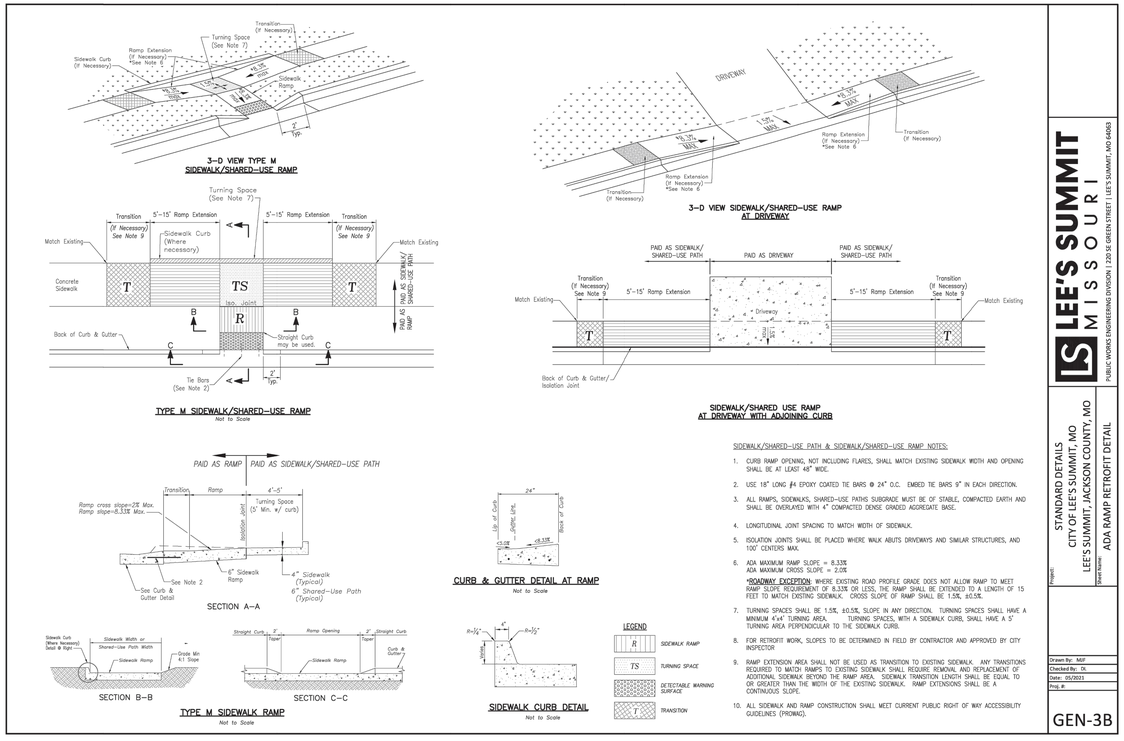
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ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E-JES-WILSHIRE-HILLS-3-ENG\CAD\15925 COVER & DETAILS.DWG 6/30/2023



AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METROPOLITAN CHAPTER
SIDEWALK RAMP DETAILS
STANDARD DRAWING NUMBER SW-1
ADOPTED: DECEMBER 18, 2002



SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
ADA MAXIMUM CROSS SLOPE = 2.0%
*ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: AGF
Checked By: DL
Date: 05/2023
Proj. #:

GEN-3B

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6/30/2023

STATE OF MISSOURI
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Revised

Design: ST Drawn: MJS

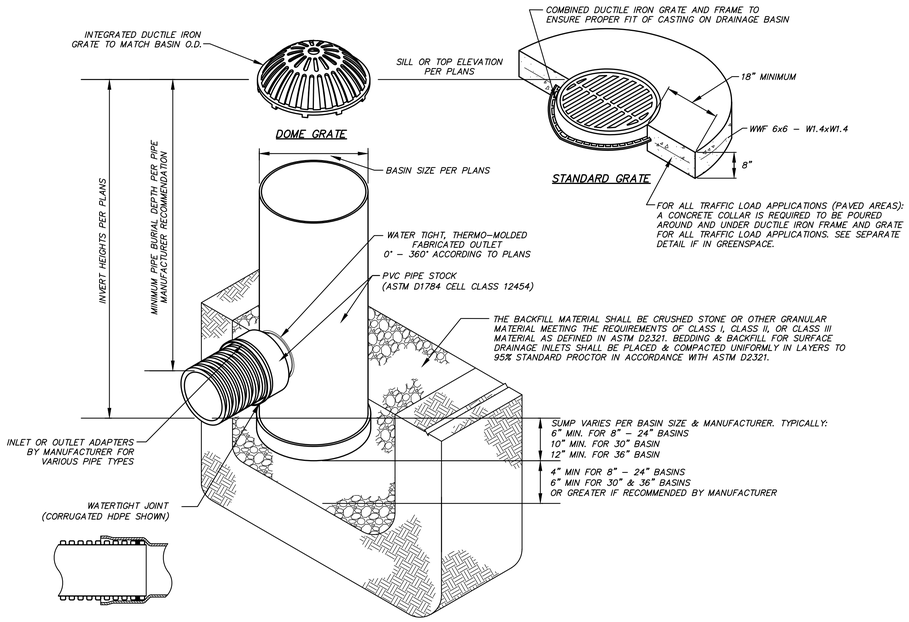
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ES&S PROJECT NO. 15925

CONSTRUCTION DOCUMENTS

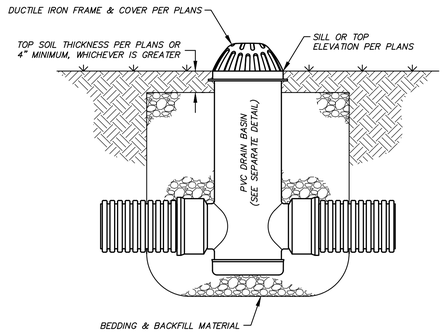
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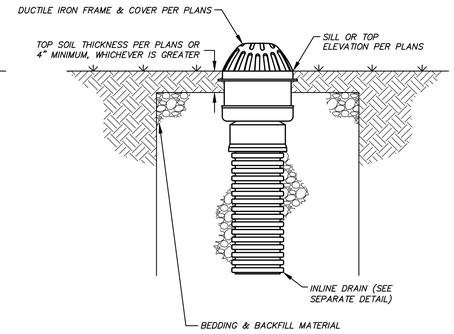


NOTES:
1. ALL CONNECTIONS SHALL BE WATERTIGHT.
2. SEE PLANS FOR GRATE TYPE FOR EACH BASIN.
3. ALL FRAMES & GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, OR 80-55-06.
4. ALL STANDARD OR SOLID GRATES SHALL BE MEET H-20 LOAD RATING. DOME GRATES HAVE NO LOAD RATING.
5. DRAIN BASINS SHALL BE CUSTOM MANUFACTURED AS A SINGLE UNIT ACCORDING TO PLAN DIMENSIONS. RISERS SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL BY ENGINEER.
6. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE & PVC PIPE.
7. STORM INLET TOP/GRATE SHALL BE LABELED TO DISCOURAGE DUMPING OF POLLUTANTS TO WATERWAY.

PVC DRAIN BASIN & GRATE

NOT TO SCALE

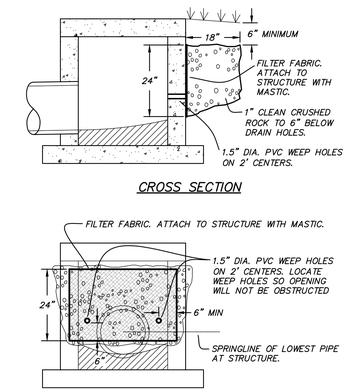




NOTES:
1. THE BEDDING & BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. ALL BEDDING & BACKFILL SHALL BE PLACED & COMPACTED UNIFORMLY IN LIFTS TO 95% STANDARD PROCTOR IN ACCORDANCE WITH ASTM D2321.
2. STORM INLET TOP/GRATE SHALL BE LABELED TO DISCOURAGE DUMPING OF POLLUTANTS TO WATERWAY.

PVC BASIN/DRAIN INSTALLATION FOR NON-TRAFFIC/GREENSPACE AREAS ONLY

NOT TO SCALE



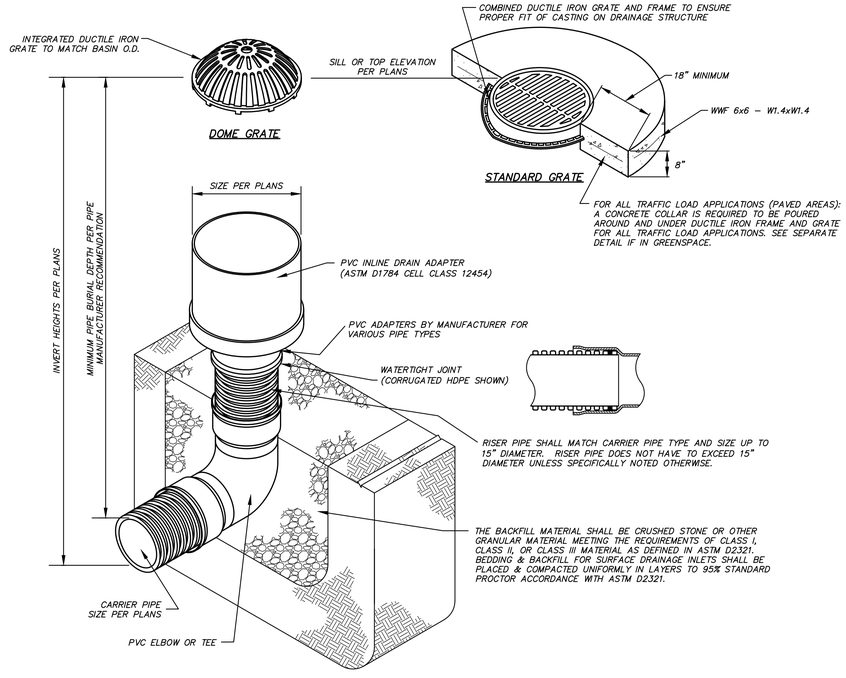
CROSS SECTION

ELEVATION

NOTES:
1. PLACE WEEP HOLES ON UPSTREAM FACE OF ALL STRUCTURES AND ALSO ON PAVEMENT FACE OF CURB INLET STRUCTURES.
2. WEEP HOLE FILTER FABRIC SHALL CONSIST OF A NON WOVEN, POLYPROPYLENE TYPE FABRIC SUCH AS: TENCATE MIRAFI 180N, GEOTEX 801, OR APPROVED EQUAL.

WEEP HOLES FOR CONCRETE STORM SEWER STRUCTURES

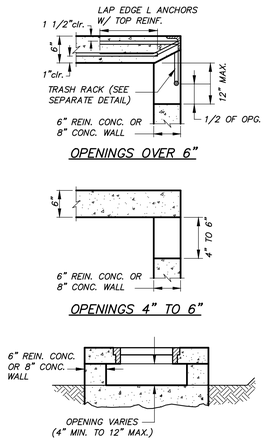
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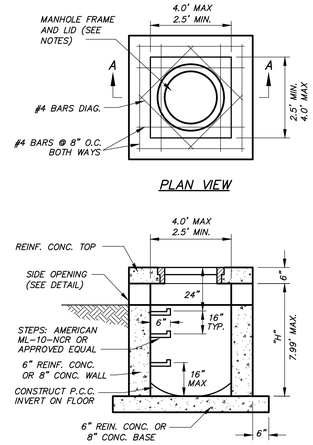


NOTES:
1. ALL CONNECTIONS SHALL BE WATERTIGHT.
2. SEE PLANS FOR GRATE TYPE FOR EACH DRAIN.
3. ALL FRAMES & GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, OR 80-55-06.
4. ALL STANDARD OR SOLID GRATES SHALL BE MEET H-20 LOAD RATING. DOME GRATES HAVE NO LOAD RATING.
5. DRAIN ADAPTER SHALL BE CUSTOM MANUFACTURED AS A SINGLE UNIT ACCORDING TO PLAN DIMENSIONS. RISERS SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL BY ENGINEER.
6. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE & PVC PIPE.
7. STORM INLET TOP/GRATE SHALL BE LABELED TO DISCOURAGE DUMPING OF POLLUTANTS TO WATERWAY.

PVC INLINE DRAIN & GRATE

NOT TO SCALE

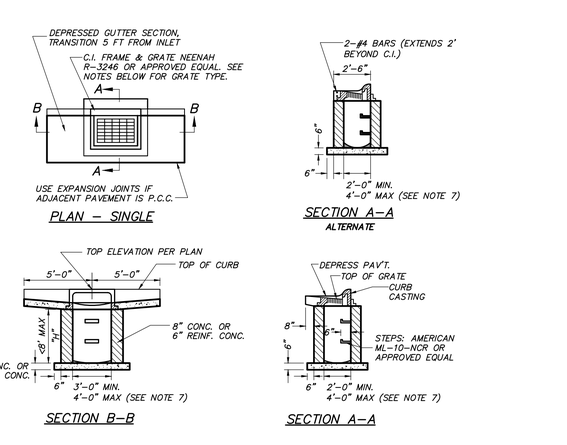




NOTES:
1. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS WITH 6% AIR.
2. REINFORCING STEEL SHALL BE GRADE 60.
3. INSTALL WEEP HOLES PER SEPARATE DETAIL.
4. REINFORCED CONCRETE SHALL BE #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS.
5. FRAME AND LID SHALL BE NEENAH R-1960-A (TYPE C LID), DEETER 1180, OR APPROVED EQUAL.
6. SIDE OPENINGS SHALL BE 6" HIGH ON ALL FOUR SIDES UNLESS NOTED OTHERWISE.
7. INSTALL TRASH RACK ON OPENINGS OVER 6", SEE SEPARATE DETAIL.
8. FORM ALL INVERTS FOR SMOOTH FLOW THRU STRUCTURE.
9. SEE SEPARATE DETAIL FOR CONCRETE BOX DESIGN FOR DIMENSIONS THAT EXCEED THE MAXIMUMS LISTED HERE.
10. STEPS NOT REQUIRED WHERE "H" IS LESS THAN 4'. PLACE STEPS ON VACANT WALL WHEN POSSIBLE. STAGGER STEPS 2" EACH WAY FROM CENTERLINE OF FRAME AND LID.
11. FRAME AND LID SHALL BE CENTERED ON CENTERLINE OF STEPS.
12. STORM INLET TOP/GRATE SHALL BE LABELED TO DISCOURAGE DUMPING OF POLLUTANTS TO WATERWAY.

SIDE OPENING INLET

NOT TO SCALE



NOTES:
1. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS WITH 6% AIR.
2. INSTALL WEEP HOLES PER SEPARATE DETAIL.
3. REINFORCED CONCRETE SHALL BE #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS FOR BOXES UP TO 4.0' WIDTH AND <8' HEIGHT. SEE SEPARATE DETAIL FOR CONCRETE BOX DESIGN FOR DIMENSIONS THAT EXCEED THESE MAXIMUMS.
4. FORM ALL INVERTS FOR SMOOTH FLOW THRU STRUCTURE WITH NON SHRINK GROUT.
5. STEPS NOT REQUIRED WHERE "H" IS LESS THAN 4' PLACE STEPS ON VACANT WALL WHEN POSSIBLE. STAGGER STEPS 2" FROM CENTERLINE OF FRAME AND GRATE. TOP STEP SHALL BE 24" BELOW GRATE. STEP SPACING SHALL BE 16" TO BOTTOM OF STRUCTURE.
6. GRATE SHALL BE NEENAH TYPE C IF AT LOW POINT (SUMP) OR TYPE L BICYCLE VANE GRATE WHEN INLET IS SET ON GRADE (NOT IN SUMP).
7. FOR STRUCTURES LARGER THAN 3'x2' FOR SINGLE INLETS, OR 6'-2"x2' FOR DOUBLE INLETS, INSTALL REINFORCED CONCRETE TOP WITH 3'x2' OR 6'-2"x2' OPENING.
8. FOR BOXES <4' WIDE AND <8' TALL TOP REINFORCEMENT SHALL BE #4 BARS @ 8" E.W. WITH #4 BARS DIAGONAL AT OPENING. BOXES >4' WIDE AND >8' TALL REINFORCEMENT SHALL BE PER SEPARATE DETAIL.
9. TOP ELEVATION SHOWN ON THE PLAN SHALL BE THE CENTER OF THE CURB RETURN OF THE CASTING.
10. SLOPE THE TOP TO MATCH ADJACENT GRADE IF NOT LOCATED AT LOW POINT. MAINTAIN WATERTIGHTNESS.
11. STORM INLET TOP/GRATE SHALL BE LABELED TO DISCOURAGE DUMPING OF POLLUTANTS TO WATERWAY.

TYPE "A" INLET (CURB INLET)

NOT TO SCALE

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WILSHIRE HILLS PHASE III

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

6/30/2023

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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Revised

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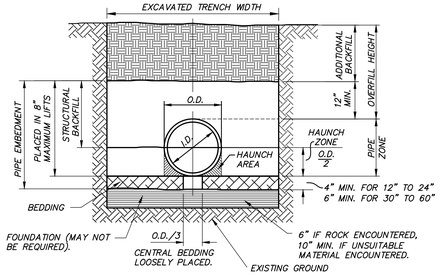
STORM SEWER DETAILS

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CONSTRUCTION DOCUMENTS

ES&S PROJECT NO. 15925

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TYPICAL TRENCH DETAIL

BACKFILL NOTES:

1. BEDDING, HAUNCH, AND STRUCTURAL BACKFILL SHALL BE IN CONFORMANCE WITH AASHTO M145 A1 OR A-3 COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D698.
2. ALL PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ASTM D2321 LATEST ADDITION.
3. HAUNCH, STRUCTURAL, AND ADDITIONAL BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D698.

TABLE I
CORRUGATED HDPE AND POLYVINYL CHLORIDE CIRCULAR PIPE

SPECIFIED DIA OF PIPE (IN.)	MIN OVERFILL HEIGHT (FT)	HDPE MAX OVERFILL HEIGHT* (FT)	POLYVINYL CHLORIDE MAX OVERFILL HEIGHT* (FT)		VIRGIN RESIN (AASHTO M294) OVERFILL HEIGHT* (FT)			ENGINEERED COMPOUND (RECYCLED, ASTM F2648) OVERFILL HEIGHT* (FT)			TRENCH WIDTH (IN.)
			SDR 35#	SDR 26#	CLASS 1**	CLASS 2**	CLASS 3**	CLASS 1**	CLASS 2**	CLASS 3**	
12	2	26	15	30	43	29	21	27	19	12	34
15	2	28	15	30	45	30	22	27	20	13	39
18	2	24	15	30	40	27	19	25	18	11	44
24	2	20	15	30	36	25	17	22	16	12	55
30	2.5	17	N/A	N/A	29	21	15	16	12	6	67
36	2.5	19	N/A	N/A	34	23	16	21	15	10	76
42	2.5	19	N/A	N/A	31	23	16	17	13	7	84
48	2.5	17	N/A	N/A	30	20	14	18	13	10	95
54	2.5	9	N/A	N/A	33	22	15	N/A	N/A	N/A	104
60	2.5	9	N/A	N/A	33	22	15	20	15	10	113

TABLE ASSUMES STANDARD PROCTOR DENSITY OF 95%
* MAXIMUM OVERFILL MEASURED FROM THE TOP OF PIPE TO SURFACE
** CLASS 1 – CRUSHED ROCK, ANGULAR; AASHTO M43 – 5, 6, 56, 57, 67
** CLASS 2 – CLEAN, COURSE GRAINED SOILS TO BORDERLINE CLEAN FINES; AASHTO M43 – 5, 6, 56, 57, 67; AASHTO M145 – A1, A3
** CLASS 3 – COURSE GRAINED SOILS WITH FINES AND INORGANIC FINE-GRAINED SOILS; AASHTO M43 – GRAVEL AND SAND WITH <10% FINES; AASHTO M145 – A-2-4, A-2-5, A-2-6, A-4, OR A-6 WITH >30% RETAINED ON #200 SIEVE
** REFER TO CURRENT ADS INC. DRAINAGE HANDBOOK FOR A COMPLETE LISTING OF SUITABLE MATERIALS
PER ASTM D-3034 FOR PIPE UP TO 15" AND ASTM F679 OVER 15"

EMBEDMENT OF PLASTIC STORM SEWER PIPE
NOT TO SCALE

TABLE II
MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIA. (IN.)	MINIMUM COVER (FT) FOR INDICATED AXLE LOADS (THOUSANDS OF POUNDS)			
	18–50	50–75	75–110	110–150
12–36	2.0	2.5	3.0	3.0
42–48	3.0	3.0	3.5	4.0

THE CONTRACTOR SHALL PROVIDE MINIMUM COVER PLUS ANY ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. IN UNPAVED SITUATIONS, THE SURFACE MUST BE MAINTAINED TO A LEVEL AND NON-RUTTED CONDITION.

LEGEND

I.D. = NORMAL INSIDE DIAMETER OF PIPE.
O.D. = OUTSIDE DIAMETER OF PIPE.
H = FILL COVER HEIGHT OVER PIPE (FEET).
MIN. = MINIMUM
MAX = MAXIMUM
= UNDISTURBED SOIL

CONSTRUCTION SEQUENCE:

1. PLACE BEDDING MATERIAL TO GRADE.
2. COMPACT BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
3. INSTALL PIPE TO GRADE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE SPRINGLINE.
5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.

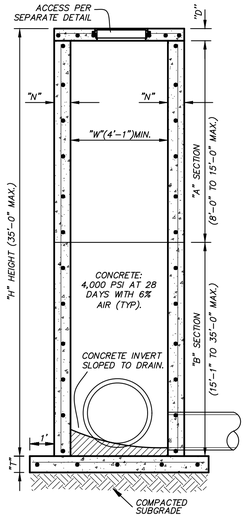


TABLE OF "T" & "N" DIMENSIONS				
SECTION	WIDTH ("W")	"T"	"N"	"D"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
"B"	4'-1"	6" + PIPE THICKNESS	8"	8"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	10"	8"

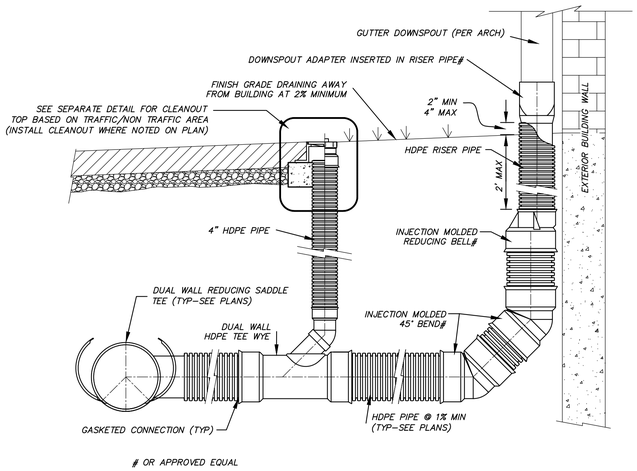
REINFORCEMENT SCHEDULE, TOP		
DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W1 = GREATER THAN 7'	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = GREATER THAN 7'	#4's @ 6" E.W.	DIAGONAL @ COVER
W1 = GREATER THAN 7'	#4's @ 6" E.W.	DIAGONAL @ COVER
W2 = GREATER THAN 7'	#4's @ 6" E.W.	DIAGONAL @ COVER

REINFORCEMENT SCHEDULE, WALLS			
SECTION	WIDTH ("W")	HOR.	VERT.
"A"	4'-1"	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'-1"	#4's @ 6"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

REINFORCEMENT SCHEDULE, BASE	
SECTION	
"A" ONLY	#4's @ 6" E.W.
"A" & "B"	#6's @ 6" E.W.

NOTES:
1. SEE PLANS FOR CURB INLET, JUNCTION BOX, CATCH BASIN, ETC. DESIGNATION. SEE CORRESPONDING DETAILS FOR ACCESS FRAME AND GRATE/LID REQUIREMENTS.
2. ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFERS.
3. ALL #4 & #5 REINFORCING BARS SHALL HAVE 1-1/2" MINIMUM COVER. LARGER BAR SIZES SHALL HAVE 2" MINIMUM COVER.
4. PIPES SHALL CONNECT TO THE FLAT FACES OF THE STRUCTURE. CONNECTIONS SHALL NOT BE MADE AT CORNERS OF STRUCTURE.
5. ALL REINFORCING BARS SHALL BE GRADE 60.
6. INSTALL WEEP HOLES AND STEPS PER SEPARATE DETAILS.

STORM SEWER LARGE CONCRETE BOX REINFORCEMENT
(WIDTH GREATER THAN 4'; HEIGHT 8' AND GREATER)
NOT TO SCALE



OR APPROVED EQUAL

NOTES:
1. SEE PLANS TO DETERMINE IF FITTINGS AND JOINTS ARE SOIL TIGHT (ST) OR WATER TIGHT (WT).
2. INSTALL ALL PIPING PER SEPARATE DETAIL OR MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. THIS DETAIL IS FOR GENERAL LAYOUT PURPOSES ONLY. ADDITIONAL COUPLERS, GASKETS, FITTINGS, ETC. MAY BE NECESSARY PER MANUFACTURER'S REQUIREMENTS.
4. IF GUTTER DOWNSPOUT SIZE EXCEEDS THE LARGEST AVAILABLE MANUFACTURER DOWNSPOUT ADAPTER, THE HDPE PIPE SIZE SHALL BE INCREASED TO ACCOMMODATE THE DOWNSPOUT AND THE DOWNSPOUT ADAPTER SHALL BE REPLACED WITH AN HDPE END CAP PREFABRICATED OR CUT TO FIT THE DOWNSPOUT GUTTER AND UPSIZED HDPE PIPE. CAP/PIPE SHALL BE INSTALLED SO CAP IS 2" ABOVE FINISHED GRADE, MINIMUM.
5. SDR35 PVC PIPE MAY BE SUBSTITUTED FOR ANY HDPE PIPE AND/OR FITTING UP TO 15" IN DIAMETER.

GUTTER DOWNSPOUT CONNECTION
NOT TO SCALE

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6/30/2023
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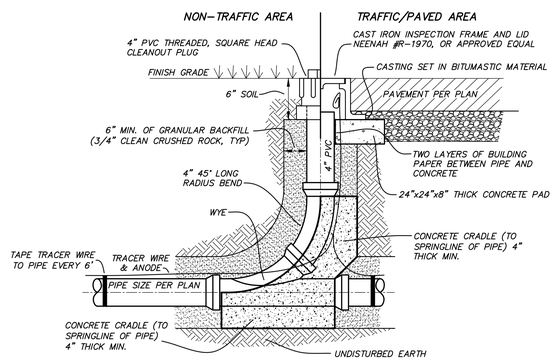
STORM SEWER DETAILS

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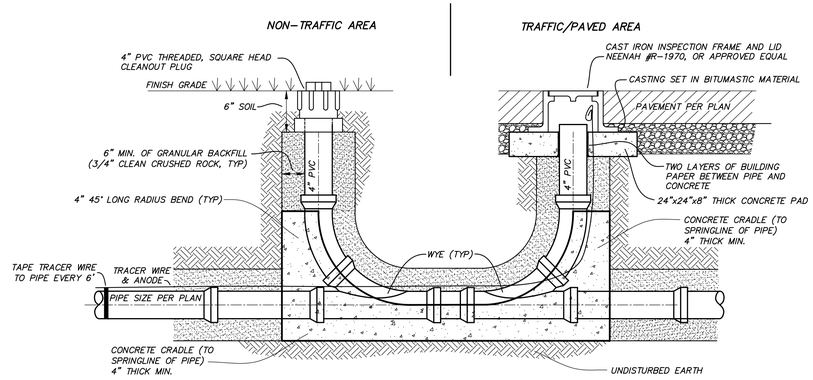
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NOTES:
1. ALL PIPE & FITTINGS SHALL BE WATER TIGHT, GASKETED, SDR35 PVC.
2. INSTALL ALL PIPING PER SEPARATE DETAIL OR MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. THIS DETAIL IS FOR GENERAL LAYOUT PURPOSES ONLY. ADDITIONAL COUPLERS, GASKETS, FITTINGS, ETC. MAY BE NECESSARY PER MANUFACTURER'S REQUIREMENTS
4. TOP SHALL BE SET FLUSH WITH FINISH GRADE.
5. INSTALL IN THE DIRECTION OF FLOW AS SHOWN UNLESS OTHERWISE INDICATED IN PLANS.

IN–LINE SANITARY SEWER CLEANOUT W/ TRACER WIRE

NOT TO SCALE

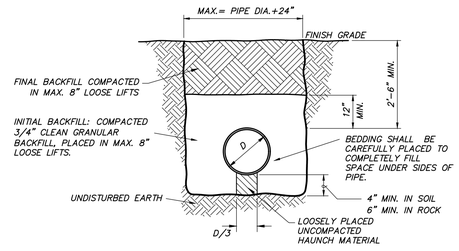


NOTES:
1. ALL PIPE & FITTINGS SHALL BE WATER TIGHT, GASKETED, SDR35 PVC.
2. INSTALL ALL PIPING PER SEPARATE DETAIL OR MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. THIS DETAIL IS FOR GENERAL LAYOUT PURPOSES ONLY. ADDITIONAL COUPLERS, GASKETS, FITTINGS, ETC. MAY BE NECESSARY PER MANUFACTURER'S REQUIREMENTS
4. TOP SHALL BE SET FLUSH WITH FINISH GRADE.
5. INSTALL IN THE DIRECTION OF FLOW AS SHOWN UNLESS OTHERWISE INDICATED IN PLANS.

TWO WAY SANITARY CLEANOUT W/ TRACER WIRE

NOT TO SCALE

PIPE DIA.	MIN. TRENCH WIDTH
≤ 6"	PIPE DIA. + 18"
8"–10"	PIPE DIA. + 10"
12"–36"	PIPE DIA. + 12"



EMBEDMENT OF PVC SANITARY SEWER PIPE

NOT TO SCALE

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SANITARY SEWER DETAILS

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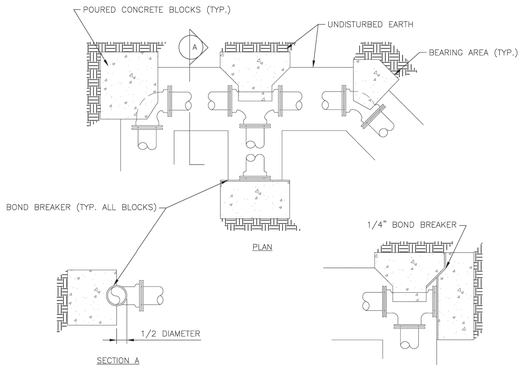
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CONSTRUCTION DOCUMENTS

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REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8



NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

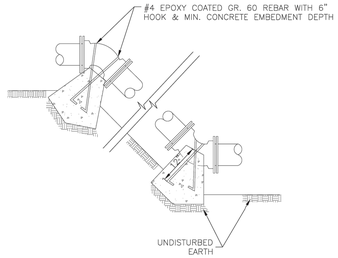
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HORIZONTAL THRUST BLOCK — WAT-1

Date: 01/2016 | Drawn By: JN | Checked By: DL

REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4

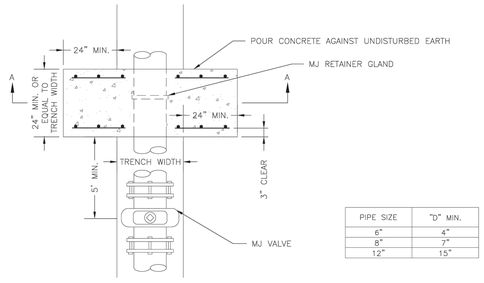


NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

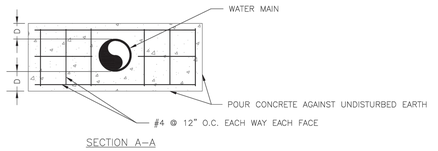
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VERTICAL THRUST BLOCK — WAT-2

Date: WAT-2 | Drawn By: JN | Checked By: DL



PIPE SIZE	"D" MIN.
6"	4"
8"	7"
12"	15"

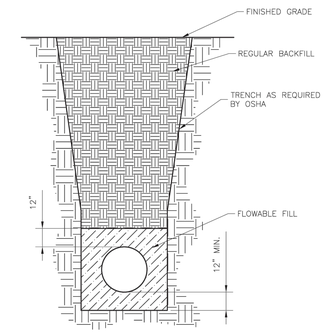


NOTE:
THIS DETAIL NOT TO BE USED FOR PIPE GREATER THAN 12"

LEE'S SUMMIT MISSOURI
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STRADDLE BLOCK — WAT-3

Date: 01/2016 | Drawn By: JN | Checked By: DL

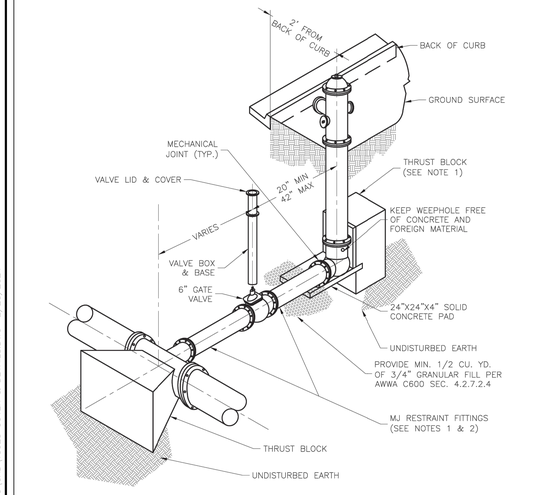


NOTES:
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12'.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

WATER TRENCH CHECK DETAIL — WAT-6

Date: 01/2016 | Drawn By: JN | Checked By: DL

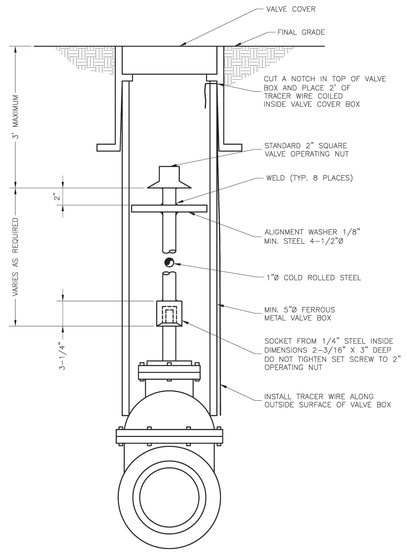


NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT MISSOURI
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HYDRANT - STRAIGHT SET — WAT-7

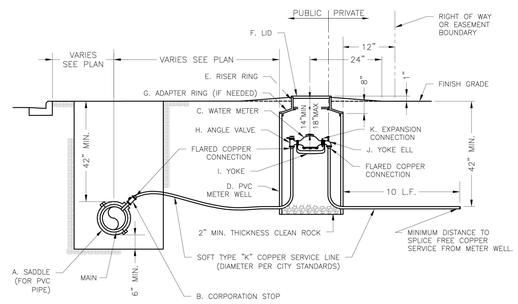
Date: 01/2016 | Drawn By: JN | Checked By: DL



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VALVE STEM EXTENSION AND VALVE BOX — WAT-9

Date: 01/2016 | Drawn By: JN | Checked By: DL

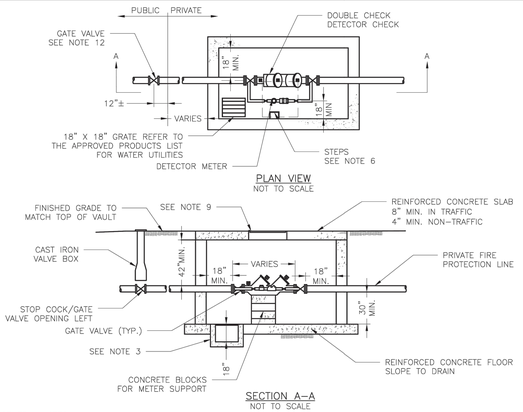


NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9 LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816–969–1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SERVICE CONNECTION WITH METER WELL 1 — WAT-11

Date: 08/2023 | Drawn By: MJF | Checked By: KLY



GENERAL NOTES:
1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE–GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816–969–1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON–TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VAULT FOR DOUBLE CHECK DETECTOR CHECK — WAT-12

Date: 02/2016 | Drawn By: JN | Checked By: DL

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www.ess-inc.com
MO Engineering Corp. # 2004005018

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

2/22/2024

STATE OF MISSOURI — MATTHEW AARON KRIETE — NUMBER PE-2007002811 — PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date
JUNE 30, 2023

Revised
1 FEBRUARY 22, 2024

Design: ST Drawn: MJS

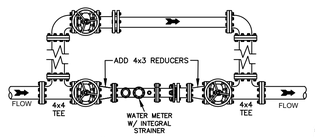
WATER DETAILS

Sheet
C13.01

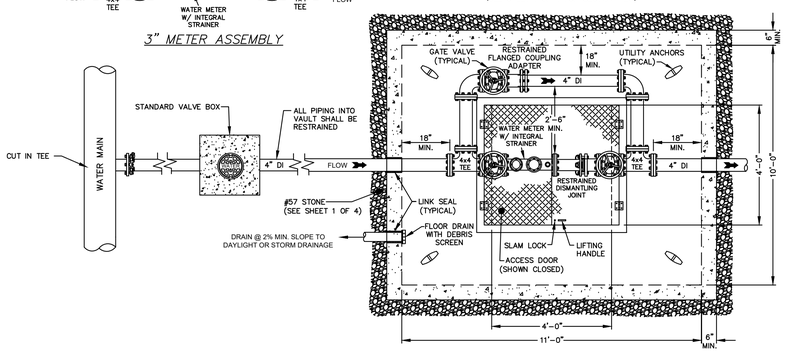
CONSTRUCTION DOCUMENTS

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E–JES–WILSHIRE–HILLS–3–ENG\CAD\15925 COVER & DETAILS.DWG 2/23/2024

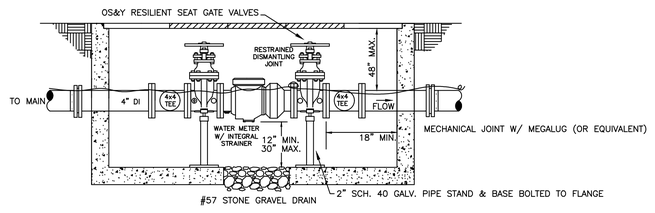


3" METER ASSEMBLY



PLAN VIEW
(SEE SHEET 1 OF 4 FOR SECTION VIEW)

PLAN VIEW



SECTION VIEW

GENERAL NOTES:

1. METER VAULT WILL BE POURED CONCRETE OR PRECAST REINFORCED CONCRETE. A CONCRETE FLOOR SHALL BE REQUIRED. THE FLOOR SHALL BE SLOPED TO A GRATE-COVERED DRAIN SUMP.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA AND WHERE SURFACE WATER WILL NOT DRAIN INTO IT.
4. STEPS SHALL BE IN ACCORDANCE WITH WATER UTILITIES LIST OF ACCEPTABLE MANUFACTURERS AND MODELS AND SHALL BE ON 16" CENTERS.
5. VALVES MUST HAVE FLANGED ENDS, BE IN ALIGNMENT, AND BE ADEQUATELY SECURED TO WITHSTAND THRUST WITH METER REMOVAL.
6. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE AND FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
7. IF HIGHER CONTINUOUS RATE OF FLOW IS REQUIRED, A LARGER BY-PASS MAY BE PERMITTED, BUT NOT LARGER THAN PRIMARY DOMESTIC SERVICE.
8. ALL VALVES SHALL BE RISING STEM VALVES.
9. PROVIDE THE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE.

WATER METER VAULT (2) (3)

NOT TO SCALE

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WILSHIRE HILLS PHASE III
3200 NE MANHATTAN DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

4/17/24
STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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Date
MARCH 27, 2024

Revised
(3) APRIL 17, 2024

Design: ST Drawn: MJS

WATER DETAILS

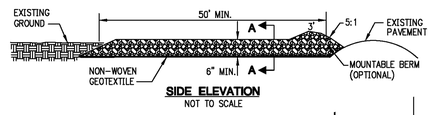
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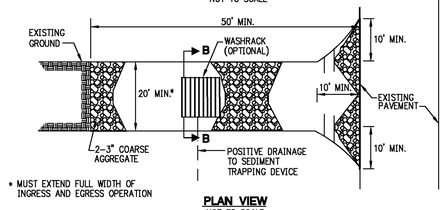
CONSTRUCTION DOCUMENTS

\\192.168.0.99\PROJECTS\GENERAL PROJECTS\15925E - JES - WILSHIRE-HILLS - 3-ENG\CAD\15925 COVER & DETAILS.DWG 4/17/2024

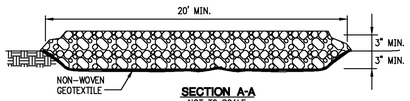
TEMPORARY CONSTRUCTION ENTRANCE



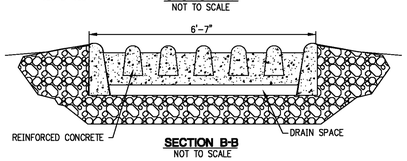
SIDE ELEVATION
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PLAN VIEW
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SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

SOURCE: MODIFIED FROM VA. DCR, 1992

TEMPORARY CONSTRCUTION ENTRANCE PAD NOTES:

A) INSTALLATION:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2% CONSTRUCT A 6-TO 8-INCH HIGH RIDGE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
5. PLACE STONE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

B) TROUBLESHOOTING:

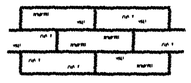
1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
   a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD – INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.
   b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL – INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.
   c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC – EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

C) INSPECTION AND MAINTENANCE:

1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2-AND 3-INCH STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
TEMPORARY CONSTRUCTION ENTRANCE	STANDARD DRAWING NUMBER ESC-01 ADOPTED:

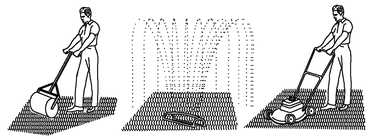
SODDING



LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.



BUTTING – ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.



ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

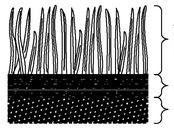
MOW WHEN THE SOD IS ESTABLISHED, TYPICALLY IN 2-3 WEEKS. SET THE MOWER AT 2 TO 3 INCHES HIGH.

SODDING NOTES:

A) SODDING:

1. THE SOD SHALL BE DENSELY ROOTED, NURSERY GROWN, AND A PERENNIAL GRASS. THE SOD SHALL CONTAIN A GROWTH OF NOT MORE THAN 10 PERCENT OF OTHER GRASSES, SHALL BE FREE FROM ALL PROHIBITED AND NOXIOUS WEEDS, AND SHALL BE CUT IN STRIPS OF UNIFORM THICKNESS. THE RANGE OF ACCEPTABLE THICKNESS SHALL BE 1/2 TO 1 1/2 INCH, WITH EACH STRIP CONTAINING AT LEAST ONE (1) SQUARE YARD. SOD SHALL BE CUT IN STRIPS NOT LESS THAN 12 INCHES WIDE.
2. FERTILIZER SHALL BE INORGANIC 12-12-12 OR 13-13-13 GRADE, UNIFORM IN COMPOSITION, FREE FLOWING, SUITABLE FOR APPLICATION WITH APPROVED EQUIPMENT, AND DELIVERED TO THE SITE IN CONVENIENT CONTAINERS, EACH FULLY LABELED. LABELS SHALL CONFORM TO APPLICABLE STATE FERTILIZER LAWS AND BEARING THE NAME, TRADE NAME OR TRADEMARK, AND WARRANTY OF THE PRODUCER.
3. BEFORE TILLING OPERATIONS, FERTILIZER SHALL BE SPREAD UNIFORMLY AT THE RATE OF 300 POUNDS PER ACRE. FERTILIZING RATE IS EQUIVALENT TO 3.5 POUND PER 500 SQUARE FEET.
4. THE SOD BED SHALL HAVE A UNIFORM SURFACE FREE FROM WASHES AND DEPRESSIONS. IT SHALL CONFORM TO THE FINISHED GRADE PROFILE AND CROSS SECTION SHOWN ON THE PLANS. THE SOIL, EXCEPT WHERE FRESH TOP SOIL HAS BEEN APPLIED AND COMPACTED, SHALL BE THOROUGHLY TILLED TO A DEPTH OF 2 INCHES.
5. FRESHLY GRADED AREAS WHICH HAVE SET LONG ENOUGH TO BECOME DRY AND CRUSTED OVER SHALL BE TILLED, AS SPECIFIED ABOVE, BEFORE PLACING THE SOD.
6. SOD SHALL NOT BE PLACED DURING A DROUGHT NOR ON FROZEN GROUND UNLESS AUTHORIZED BY THE ENGINEER.
7. SOD SHALL BE MOIST WHEN IT IS PLACED. SOD STRIPS SHALL BE LAID ALONG CONTOUR LINES, COMMENCING AT THE LOWEST POINT OF THE AREA AND WORKING UPWARD. THE TRANSVERSE JOINTS OF SOD STRIPS SHALL BE STAGGERED AND THE SOD CAREFULLY PLACED TO PRODUCE TIGHT JOINTS. THE SOD SHALL BE FIRMED AND WATERED IMMEDIATELY AFTER IT IS PLACED. THE FIRMING SHALL BE ACCOMPLISHED BY APPLICATION OF A ROLLER WEIGHING BETWEEN 60 AND 90 POUNDS PER LINEAL FOOT OF ROLLER.
8. ON 2H:1V SLOPES OR STEEPER THE SOD SHALL BE ANCHORED WITH 1/2-INCH SQUARE BY 8-INCH LONG WOODEN PEGS DRIVEN INTO THE GROUND, 3 PEGS TO THE SQUARE YARD OR OTHER APPROVED CONFIGURATION. PEGGING SHALL BE DONE IMMEDIATELY AFTER SOD IS FIRMED. THE AREA SHALL THEN BE CLEARED OF LOOSE SOD, EXCESS OR BROKEN ANCHORS, EXCESSIVE SOIL, AND OTHER FOREIGN MATERIALS.

APPEARANCE OF GOOD SOD



SHOOTS – GRASS BLADES SHOULD BE GREEN AND HEALTHY, MOWED AT A 2"-3" CUTTING HEIGHT.

THATCH – GRASS CLIPPINGS AND DEAD LEAVES, UP TO 1/2" THICK.

ROOT ZONE – SOIL AND ROOTS SHOULD BE 1/2"-3/4" THICK, WITH DENSE ROOT MAT FOR STRENGTH.

B) TROUBLESHOOTING:

1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
   a. VARIATION IN TOPOGRAPHY ON SITE INDICATE THE SODDING MATERIALS WILL NOT FUNCTION AS INTENDED; CHANGES IN PLAN MAY BE NEEDED.
   b. DESIGN SPECIFICATIONS FOR SOD VARIETY CANNOT BE MET OR IRRIGATION IS NOT POSSIBLE; SUBSTITUTION OR SEEDING MAY BE REQUIRED. UNAPPROVED SUBSTITUTIONS COULD RESULT IN EROSION OR SODDING FAILURE.
2. COMMON PROBLEMS:
   a. SOD LAID ON POORLY PREPARED SOIL OR UNSUITABLE SURFACE DIES BECAUSE IT IS UNABLE TO ROOT – REMOVE DEAD SOD, PREPARE SURFACE, AND RESOD.
   b. SOD NOT ADEQUATELY IRRIGATED AFTER INSTALLATION CAUSES ROOT DIEBACK, GRASS TO NOT ROOT RAPIDLY, AND DRYING OUT – IRRIGATE SOD AND UNDERLYING SOIL TO THE DEPTH OF 4 INCHES AND KEEP MOIST UNTIL ROOTS ARE ESTABLISHED.
   c. SOD NOT ANCHORED PROPERLY IS LOOSENED BY RUNOFF – REPLACE DAMAGED AREAS AND ANCHOR SOD.
   d. SLOW GROWTH DUE TO LACK OF NITROGEN CAUSES YELLOWING OF LEAF BLADES – REFERTILIZE SOD, BUT AVOID FERTILIZING COOL SEASON GRASSES FROM LATE MAY THROUGH JULY.

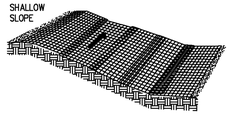
C) MAINTENANCE AND INSPECTION:

1. THE SODDED AREA SHALL BE THOROUGHLY WATERED DAILY FOR A PERIOD OF FIFTEEN DAYS AFTER PLACING EXCEPT WHEN THOROUGHLY WETTED BY RAIN. ANY PORTION OF THE SOD THAT IS NOT IN GOOD GROWING CONDITION FOLLOWING THE FIRST FULL GROWING SEASON (SPRING TO FALL), SHALL BE REPLACED WITH FRESH LIVE SOD.

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APWA	KANSAS CITY METROPOLITAN CHAPTER
SODDING	STANDARD DRAWING NUMBER ESC-02 ADOPTED:

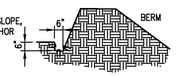
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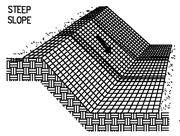
EROSION CONTROL BLANKET



NOTE:
ON SHALLOW SLOPES, PROTECTIVE EROSION CONTROL BLANKETS MAY BE APPLIED ACROSS THE SLOPE.

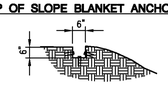
NOTE:
WHERE THERE IS A BERM AT THE TOP OF THE SLOPE, BRING THE MATERIAL OVER THE BERM AND ANCHOR IT BEHIND THE BERM.



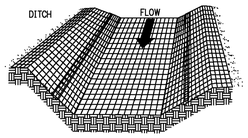


NOTE:
ON STEEP SLOPES, APPLY PROTECTIVE BLANKET PERPENDICULAR TO THE DIRECTION OF FLOW AND ANCHOR SECURELY.

TOP OF SLOPE BLANKET ANCHOR SLOT



NOTE:
BRING MATERIAL DOWN TO A LEVEL AREA BEFORE TERMINATING THE INSTALLATION.



NOTE:
IN DITCHES, APPLY PROTECTIVE COVERING PARALLEL TO THE DIRECTION OF FLOW. USE CHECK SLOTS AS REQUIRED. AVOID JOINING MATERIAL IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE. FOLLOW BLANKET MANUFACTURER'S RECOMMENDATIONS FOR ALLOWABLE VELOCITY AND SHEAR STRESS.

EROSION CONTROL BLANKET NOTES (1 OF 2):

A) SITE PREPARATION:
AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN 1 1/2 INCHES IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT UNIFORM CONTACT OF THE PROTECTIVE COVERING WITH THE SOIL SURFACE.

B) PLANTING:
LIME, FERTILIZE, AND SEED IN ACCORDANCE WITH SEEDING OR PLANTING PLAN. WHEN USING JUTE MESH ON A SEEDED AREA, APPLY APPROXIMATELY ONE HALF THE SEED AFTER LAYING THE MAT. THE PROTECTIVE COVERING CAN BE LAID OVER SPRIGGED AREAS WHERE SMALL GRASS PLANTS HAVE BEEN INSERTED INTO THE SOIL. WHERE GROUND COVERS ARE TO BE PLANTED, LAY THE PROTECTIVE COVERING FIRST AND THEN PLANT THROUGH THE MATERIAL AS PER PLANTING PLAN.

C) LAYING AND STAPLING:
IF INSTRUCTIONS HAVE BEEN FOLLOWED, ALL NEEDED CHECK SLOTS WILL HAVE BEEN INSTALLED, AND THE PROTECTIVE COVERING WILL BE LAID ON A FRIABLE SEEDBED FREE FROM CLODS, ROCKS, ROOTS, ETC. THAT MIGHT IMPEDE GOOD CONTACT.

1. START LAYING THE PROTECTIVE COVERING FROM THE TOP OF THE CHANNEL OR SLOPE AND UNROLL DOWN-GRADE. ALLOW TO LAY LOOSELY ON SOIL; DO NOT STRETCH.
2. UPSLOPE ENDS OF THE BLANKET SHOULD BE BURIED IN AN ANCHOR SLOT NO LESS THAN 6-INCHES DEEP. TAMP EARTH
3. FIRMLY OVER THE MATERIAL. WHEN TOP IS RELATIVELY FLAT, EXTEND BLANKET ABOUT 40 INCHES AWAY FROM SLOPE. STAPLE THE MATERIAL AT A MINIMUM OF EVERY 12 INCHES ACROSS THE TOP END.
4. EDGES OF THE MATERIAL SHALL BE STAPLED EVERY 3 FEET. WHERE MULTIPLE WIDTHS ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND STAPLED TOGETHER.
5. STAPLES SHALL BE PLACED DOWN THE CENTER, STAGGERED WITH THE EDGES AT 3-FOOT INTERVALS.

D) TROUBLESHOOTING:
CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL, IF ANY OF THE FOLLOWING OCCUR:

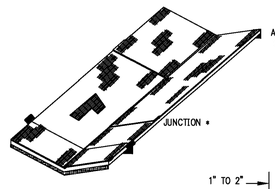
1. MOVEMENT OF THE BLANKET OR EROSION UNDER THE BLANKET IS OBSERVED.
2. VARIATIONS IN TOPOGRAPHY ON SITE INDICATE EROSION CONTROL MAT WILL NOT FUNCTION AS INTENDED; CHANGES IN PLAN MAY BE NEEDED, OR A BLANKET WITH A SHORTER OR LONGER LIFE MAY BE NEEDED.
3. DESIGN SPECIFICATIONS FOR SEED VARIETY, SEEDING DATES, OR EROSION CONTROL MATERIALS CANNOT BE MET; SUBSTITUTION MAY BE REQUIRED. UNAPPROVED SUBSTITUTIONS COULD RESULT IN FAILURE TO ESTABLISH VEGETATION.

E) MAINTENANCE & INSPECTION
INSPECT CONTROLS AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER, AND EVERY 7 DAYS UNTIL VEGETATION IS ESTABLISHED, FOR EROSION OR UNDERMINING BENEATH THE NETTING, BLANKETS, OR MATS. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE MATERIAL, ADD SOIL, TAMP DOWN, AND RESEED; RESECURE THE MATERIAL IN PLACE. IF NETTING, BLANKETS OR MATS BECOME DISLOCATED OR DAMAGED, REPAIR OR REPLACE AND RESECURE IMMEDIATELY.

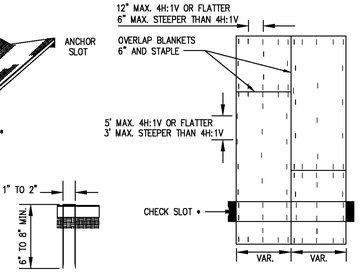
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET SHEET 1 OF 2	STANDARD DRAWING NUMBER ESC-04 ADOPTED:

SOURCE: MODIFIED FROM VA. DCR, 1992

EROSION CONTROL BLANKET INSTALLATION FOR CHANNELS



NOTE:
* JUNCTION: OVERLAP TOP BLANKET 6 INCHES MINIMUM AND STAPLE EVERY 6 INCHES ACROSS.



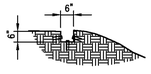
PLAN VIEW
STAPLING DIAGRAM
NOT TO SCALE

NOTE:
* CHECK SLOTS AT MIN. 50' INTERVALS; NOT REQUIRED WITH ALL COMBINATION BLANKETS

NOT TO SCALE

NOTE:
STAPLE FORMED FROM NO.11 STEEL WIRE.
MIN. 8" STAPLE LENGTH FOR SANDY SOIL.
MIN. 6" STAPLE LENGTH FOR OTHER SOIL.

NOTE:
APPROXIMATELY 200 STAPLES ARE REQUIRED PER 100 SQ. YDS. OF MATERIAL ROLL. ANCHOR SLOTS, JUNCTION SLOTS, AND CHECK SLOTS TO BE BURIED 6" TO 12" DEEP.



ANCHOR SLOT

EROSION CONTROL BLANKET NOTES (2 OF 2):

F) STAPLES:
STAPLES FOR ANCHORING BLANKET SHALL BE NO. 11-GAUGE WIRE OR HEAVIER. THEIR LENGTH SHALL BE A MINIMUM OF 6 INCHES. A LARGER STAPLE WITH A LENGTH OF UP TO 12 INCHES SHALL BE USED ON LOOSE, SANDY, OR UNSTABLE SOILS.

G) JOINING PREOTECTIVE COVERINGS:
OVERLAP THE END OF THE PREVIOUS ROLL A MINIMUM OF 6 INCHES AND STAPLE. STAPLE ACROSS THE END OF THE ROLL JUST BELOW THE ANCHOR SLOT AND ACROSS THE MATERIAL EVERY 6 INCHES.

H) TERMINAL END:
AT THE POINT AT WHICH THE MATERIAL IS DISCONTINUED, OR WHERE THE PROTECTIVE COVERING MEETS A STRUCTURE OF SOME TYPE, STAPLE A MINIMUM OF EVERY 12 INCHES.

I) FINAL CHECK:
THESE INSTALLATION CRITERIA MUST BE ADHERED TO:
1. ALL DISTURBED AREAS ARE SEEDED.
2. PROTECTIVE BLANKET IS IN UNIFORM CONTACT WITH THE SOIL.
3. ALL LAP JOINTS ARE SECURE.
4. ALL STAPLES ARE DRIVEN FLUSH WITH THE GROUND.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET SHEET 2 OF 2	STANDARD DRAWING NUMBER ESC-05 ADOPTED:

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660-826-6618
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WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

6/30/2023
STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date
JUNE 30, 2023

Revised

Design: ST Drawn: MJS

EROSION CONTROL DETAILS

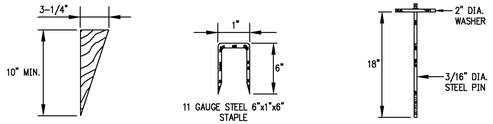
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ES&S PROJECT NO. 15925

CONSTRUCTION DOCUMENTS

P:\GENERAL PROJECTS\15925E-JES-WILSHIRE-HILLS-3-ENG\CAD\15925 COVER & DETAILS.DWG 6/30/2023

STAKES, STAPLES, AND PINS



1. STAKE SEE NOTE 1

2. STAPLE SEE NOTE 2

3. PIN SEE NOTE 3

STAKES, STAPLES, AND PINS FOR INSTALLATION OF ROLLED EROSION CONTROL PRODUCTS
NOT TO SCALE

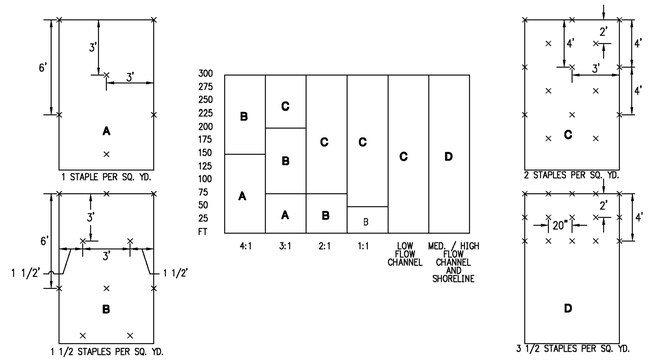
STAKES, STAPLES, AND PINS NOTES; GENERAL NOTES:

1. STAKES SHALL BE 1x4 TRIANGULAR SURVEY STAKES A MINIMUM OF 10" IN LONG.
2. STAPLES SHALL BE 11 GAUGE STEEL A MINIMUM OF 1" WIDE BY 6" IN LONG. A 2"x8" STAPLE MAY BE REQUIRED IN CERTAIN SOIL CONDITIONS.
3. STEEL PINS SHALL BE 3/16 DIAMETER BY 18" IN LONG WITH A 2" DIAMETER WASHER ON TOP. (SEE ILLUSTRATION.)
4. ANCHORING METHODS AND RECOMMENDATIONS VARY BY MANUFACTURERS. THE EXPECTATION OF HIGH VELOCITIES SHOULD DICTATE THE USE OF MORE SUBTANTIAL ANCHORING.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
STAKES, STAPLES, AND PINS	STANDARD DRAWING NUMBER: ESC-08	ADOPTED:

STAPLE PATTERNS FOR ROLLED EROSION CONTROL PRODUCTS



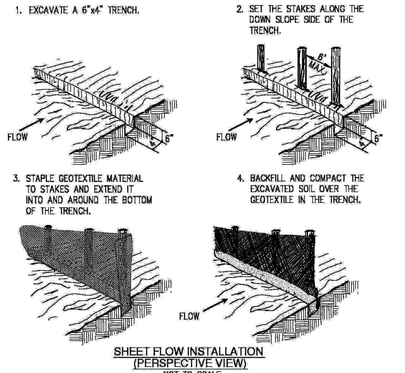
GENERAL STAPLE PATTERN GUIDE AND RECOMMENDATIONS FOR ROLLED EROSION CONTROL PRODUCTS
NOT TO SCALE

NOTE:
FOR OPTIMUM RESULTS, THESE RECOMMENDED STAPLE PATTERN GUIDES MUST BE FOLLOWED UNLESS OTHERWISE DICTATED BY THE MANUFACTURER. SUGGESTED ANCHORING METHODS VARY BY MANUFACTURER. THIS CHART SHOWS HOW SLOPE LENGTHS AND GRADIENTS AFFECT STAPLING PATTERNS.

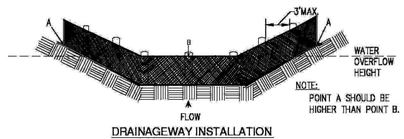
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APWA	KANSAS CITY METROPOLITAN CHAPTER	
STAPLE PATTERNS FOR ROLLED EROSION CONTROL PRODUCTS	STANDARD DRAWING NUMBER: ESC-09	ADOPTED:

SEDIMENT FENCE



SHEET FLOW INSTALLATION (PERSPECTIVE VIEW)
NOT TO SCALE



DRAINAGEWAY INSTALLATION (FRONT ELEVATION)
NOT TO SCALE

SEDIMENT FENCE NOTES:

A) INSTALLATION:

1. THE HEIGHT OF SEDIMENT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34 INCHES ABOVE THE GROUND SURFACE.
2. THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SECURELY SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MAX 6-INCH OVERLAP.
3. DIG A TRENCH AT LEAST 6 INCHES DEEP AND 4 INCHES WIDE ALONG THE FENCE ALIGNMENT.
4. DRIVE POSTS AT LEAST 24 INCHES INTO THE GROUND ON THE DOWNSLOPE SIDE OF THE TRENCH. SPACE POSTS A MAXIMUM OF 6 FEET APART.
5. EXTRA-STRENGTH SEDIMENT FENCE FABRIC SHALL BE USED. POSTS FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE SEDIMENT FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING A MINIMUM OF ONE INCH LONG, HEAVY-DUTY WIRE STAPLES OR TIE-WIRES, AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. PLACE THE BOTTOM 1 FOOT OF FABRIC IN THE MINIMUM-OF-6-INCH DEEP TRENCH, LAPPING TOWARD THE UPSLOPE SIDE. BACKFILL WITH COMPACTED EARTH OR GRAVEL.
7. IF A SEDIMENT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, IT MUST BE OF SUFFICIENT LENGTH TO ELIMINATE ENDFLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE, PLACED ON A CONTOUR, WITH THE ENDS ORIENTED UPSLOPE. EXTRA-STRENGTH SEDIMENT FABRIC SHALL BE USED WITH A MAXIMUM 3-FOOT SPACING OF POSTS.
8. TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SEDIMENT STORAGE AREA IN THE UPSLOPE SIDE OF THE FENCE. PROVIDE GOOD ACCESS IN AREAS OF HEAVY SEDIMENTATION FOR CLEAN OUT AND MAINTENANCE.
9. SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

B) TROUBLESHOOTING:

1. DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES, BEFORE FENCE INSTALLATION SO UTILITIES ARE NOT DISTURBED.
2. GRADE ALIGNMENT OF FENCE AS NEEDED TO PROVIDE A BROAD, NEARLY LEVEL AREA UPSTREAM OF FENCE TO ALLOW SEDIMENT COLLECTION AREA.

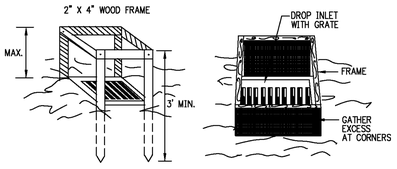
C) INSPECTION MAINTENANCE:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID DAMAGING OR UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT ACCUMULATION SHOULD NOT EXCEED 1/2 THE HEIGHT OF THE FENCE.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY AND COMPLETELY STABILIZED.

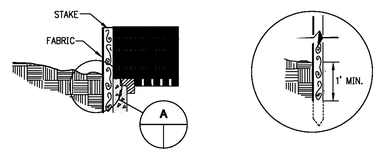
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APWA	KANSAS CITY METROPOLITAN CHAPTER	
SEDIMENT FENCE	STANDARD DRAWING NUMBER: ESC-10	ADOPTED:

SEDIMENT FENCE DROP INLET PROTECTION



PERSPECTIVE VIEWS
NOT TO SCALE



ELEVATION OF STAKE AND FABRIC ORIENTATION

DETAIL A
NOT TO SCALE

SEDIMENT FENCE DROP INLET PROTECTION NOTES:

A) CONSTRUCTION SPECIFICATIONS:

1. SEDIMENT FENCE SHALL CONFORM TO THE CONSTRUCTION SPECIFICATIONS FOR EXTRA STRENGTH FOUND IN THE TABLE BELOW AND SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID JOINTS.

PHYSICAL PROPERTIES OF FABRIC IN SEDIMENT FENCE:

PHYSICAL PROPERTY	TEST	REQUIREMENTS
FILTERING EFFICIENCY	ASTM 5141	75%
TENSILE STRENGTH AT 20% (MAX.) ELONGATION*	ASTM 4632 AASHTO M288-96	EXTRA STRENGTH – 50 LBS./LINEAR INCH
FLOW RATE	ASTM 5141	0.2 GAL./SQ.FT/ MINUTE**
ULTRAVIOLET RADIATION STABILITY %	ASTM D 4355	90%

* REQUIREMENTS REDUCED BY 50% AFTER SIX MONTHS OF INSTALLATION.
** HIGH POROSITY FABRIC MADE BY BETTER SUITED FOR THIS DEVICE.

2. FOR STAKES, USE 2X4 WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
3. SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND SECURELY DRIVE THEM INTO THE GROUND, APPROXIMATELY 18 INCHES DEEP.
4. TO PROVIDE NEEDED STABILITY TO THE INSTALLATION, FRAME WITH 2X4 WOOD STRIPS AROUND THE CREST OF THE OVERFLOW AREA AT A MAXIMUM OF 1.5 FEET ABOVE THE DROP INLET CREST.
5. PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN A TRENCH AND BACKFILL THE TRENCH WITH 12-INCHES OF COMPACTED SOIL.
6. FASTEN FABRIC SECURELY BY STAPLES, OR WIRE IT TO THE STAKES AND FRAME. JOINTS MUST BE OVERLAPPED TO THE NEXT STAKE.
7. IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON THE DOWNSLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW.

B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
SEDIMENT FENCE DROP INLET PROTECTION	STANDARD DRAWING NUMBER: ESC-19	ADOPTED:

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WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

CONSTRUCTION DOCUMENTS

6/30/2023

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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Date
JUNE 30, 2023

Revised

Design: ST Drawn: MJS

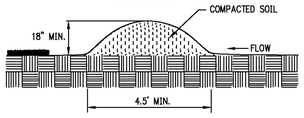
EROSION CONTROL DETAILS

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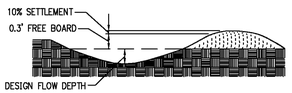
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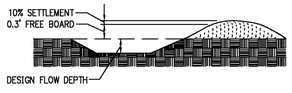
DIVERSIONS



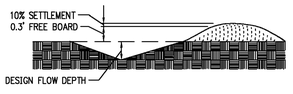
TEMPORARY DIVERSION DIKE
NOT TO SCALE



TYPICAL PARABOLIC DIVERSION

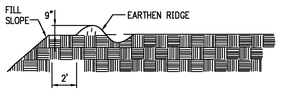


TYPICAL TRAPEZOIDAL DIVERSION

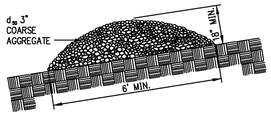


TYPICAL VEE-SHAPED DIVERSION

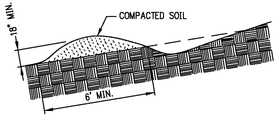
TEMPORARY RIGHT-OF-WAY DIVERSIONS



TEMPORARY FILL DIVERSION
NOT TO SCALE



TYPICAL GRAVEL STRUCTURE



TYPICAL EARTHEN STRUCTURE

TEMPORARY DIVERSION DIKE NOTES:
1. TEMPORARY DIVERSION DIKES MUST BE INSTALLED AS A FIRST STEP IN THE LAND-DISTURBING ACTIVITY AND MUST BE FUNCTIONAL PRIOR TO UPSLOPE LAND DISTURBANCE.
2. THE DIKE SHOULD BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
3. TEMPORARY OR PERMANENT SEEDING AND MULCH SHALL BE APPLIED TO THE DIKE IMMEDIATELY FOLLOWING ITS CONSTRUCTION.
4. THE DIKE SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS AND TRAFFIC.

TEMPORARY FILL DIVERSION NOTES:
1. THE DIVERSION SHALL BE CONSTRUCTED AT THE TOP OF THE FILL AT THE END OF EACH WORK DAY AS NEEDED.
2. THE DIVERSION SHALL BE LOCATED AT LEAST 2 FEET INSIDE THE TOP EDGE OF THE FILL.
3. THE SUPPORTING RIDGE SHALL BE CONSTRUCTED WITH A UNIFORM HEIGHT ALONG ITS ENTIRE LENGTH. WITHOUT UNIFORM HEIGHT, THE FILL DIVERSION MAY BE SUSCEPTIBLE TO BREACHING.

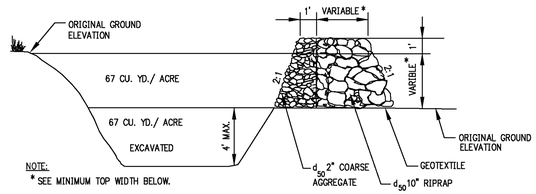
RIGHT-OF-WAY DIVERSION DETAIL NOTES:
1. THE DIVERSION SHALL BE INSTALLED AS SOON AS THE RIGHT-OF-WAY HAS BEEN CLEARED AND/OR GRADED.
2. ALL EARTHEN DIVERSIONS SHALL BE MACHINE- OR HAND-COMPACTED IN 8-INCH LIFTS.
3. THE OUTLET OF THE DIVERSION SHALL BE LOCATED IN AN UNDISTURBED AND STABILIZED AREA WHEN AT ALL POSSIBLE. THE FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED OUTLET.
4. EARTHENED DIVERSIONS WHICH WILL NOT BE SUBJECT TO CONSTRUCTION TRAFFIC SHOULD BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING.

DIVERSION DETAIL NOTES:
1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS-SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, FREE OF IRREGULARITIES WHICH WILL IMPEDE FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETED DIVERSION. FILL SHALL BE COMPOSED OF SOIL WHICH IS FREE FROM EXCESSIVE ORGANIC DEBRIS, ROCKS, OR OTHER OBJECTIONABLE MATERIALS.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
5. PERMANENT STABILIZATION OF DISTURBED AREAS SHALL BE DONE IN ACCORDANCE WITH SECTION 2151.

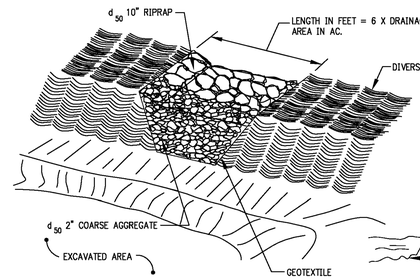
SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
DIVERSIONS	STANDARD DRAWING NUMBER ESC-29 ADOPTED:

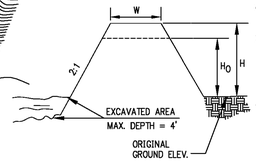
TEMPORARY SEDIMENT TRAP



CROSS SECTION OF OUTLET
NOT TO SCALE



OUTLET (PERSPECTIVE VIEW)



H	H_O	W
1.5	0.5	2.0
2.0	1.0	2.0
2.5	1.5	2.5
3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

MINIMUM TOP WIDTH
NOT TO SCALE

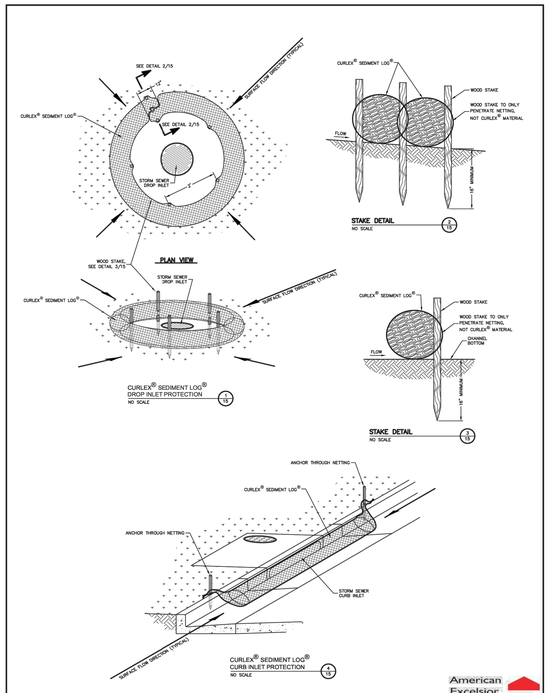
TEMPORARY SEDIMENT TRAP NOTES:

A) CONSTRUCTION SPECIFICATIONS:
1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT.
2. FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHOULD BE COMPACTED IN 6-INCH LAYERS BY TRAVERSING WITH CONSTRUCTION EQUIPMENT.
3. THE EARTHEN EMBANKMENT SHALL BE SEEDED WITH TEMPORARY OR PERMANENT VEGETATION IMMEDIATELY AFTER INSTALLATION.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT TO MINIMIZE EROSION AND WATER POLLUTION.
5. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE UPSLOPE DRAINAGE AREA HAS BEEN STABILIZED.
6. ALL CUT AND FILL SLOPES SHALL BE 2H:1V OR FLATTER EXCEPT FOR EXCAVATED, WET STORAGE AREAS WHICH MAY BE AT A MAXIMUM 1H:1V GRADE.

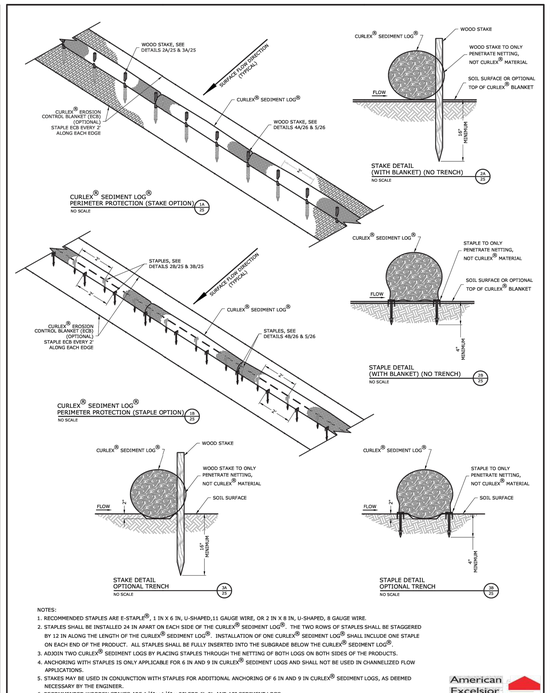
B) INSPECTION AND MAINTENANCE:
1. INSPECT THE TEMPORARY SEDIMENT TRAP AFTER EACH STORM EVENT OF 1/2-INCH OR GREATER.
2. REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT ACCUMULATES TO ONE-HALF THE DESIN VOLUME AS INDICATED BY THE CLEAN-OUT STAKE.
3. PERIODICALLY CHECK THE EMBANKMENT, SPILLWAY, AND OUTLET APRON FOR EROSION DAMAGE, SETTLING SEEPAGE, OR SLUMPING ALONG THE TOE AND REPAIR IMMEDIATELY.
4. REPLACE THE SPILLWAY GRAVEL FACING IF IT BECOMES CLOGGED.
5. INSPECT VEGETATION AND RESEED IF NECESSARY.
6. REPLACE ANY DISPLACED RIPRAP SO THAT NO REPLACEMENT ROCK IS ABOVE THE DESIGN GRADE.
7. REMOVE THE TEMPORARY SEDIMENT TRAP AFTER THE DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, INSPECTED, AND APPROVED. DO SO BY DRAINING ANY WATER, REMOVING THE SEDIMENT TO A DESIGNATED DISPOSAL AREA, AND GRADING THE SITE TO BLEND WITH THE SURROUNDING AREA; THEN STABILIZE.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
TEMPORARY SEDIMENT TRAP	STANDARD DRAWING NUMBER ESC-33 ADOPTED:

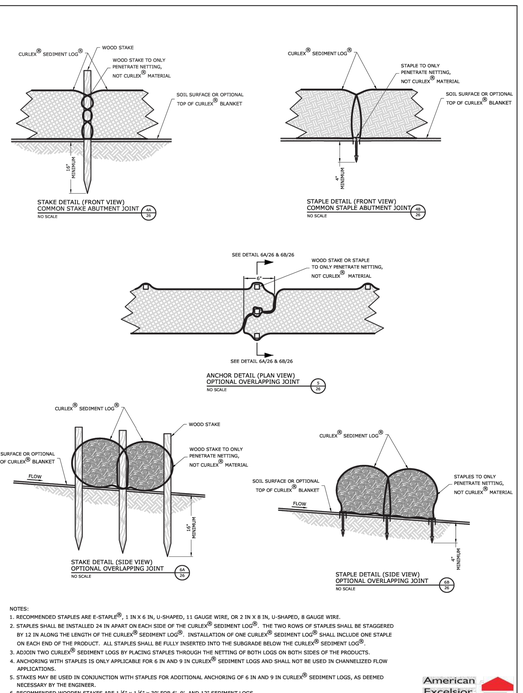


AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS	SHEET DESCRIPTION: CURLEX® SEDIMENT LOG® INLET PROTECTION DETAILS	DATE 3/27/17	DRAWN BY
		SCALE: NONE	PROJECT NO.
American Excelsior Company® Earth Science Division			SHEET NO. 15



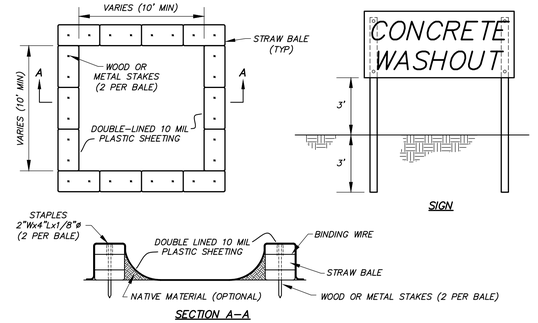
NOTES:
1. RECOMMENDED STAPLES ARE E-STAPLE®, 1 IN X 6 IN, U-SHAPED,11 GAUGE WIRE, OR 2 IN X 8 IN, U-SHAPED, 8 GAUGE WIRE.
2. STAPLES SHALL BE INSTALLED 24 IN APART ON EACH SIDE OF THE CURLEX® SEDIMENT LOG®. THE TWO ROWS OF STAPLES SHALL BE STAGGERED BY 12 IN ALONG THE LENGTH OF THE CURLEX® SEDIMENT LOG®. INSTALLATION OF ONE CURLEX® SEDIMENT LOG® SHALL INCLUDE ONE STAPLE ON EACH END OF THE PRODUCT. ALL STAPLES SHALL BE FULLY INSERTED INTO THE SUBGRADE BELOW THE CURLEX® SEDIMENT LOG®.
3. ADJOIN TWO CURLEX® SEDIMENT LOGS BY PLACING STAPLES THROUGH THE NETTING OF BOTH LOGS ON BOTH SIDES OF THE PRODUCTS.
4. ANCHORING WITH STAPLES IS ONLY APPLICABLE FOR 6 IN AND 9 IN CURLEX® SEDIMENT LOGS AND SHALL NOT BE USED IN CHANNELIZED FLOW APPLICATIONS.
5. STAKES MAY BE USED IN CONJUNCTION WITH STAPLES FOR ADDITIONAL ANCHORING OF 6 IN AND 9 IN CURLEX® SEDIMENT LOGS, AS DEEMED NECESSARY BY THE ENGINEER.
6. RECOMMENDED WOODEN STAKES ARE 1 ½" x 1 ½" x 30" FOR 6", 9", AND 12" SEDIMENT LOGS.
7. RECOMMENDED WOODEN STAKES ARE 1 ½" x 1 ½" x 48" FOR 20" SEDIMENT LOGS.
8. CURLEX® SEDIMENT LOG® PERIMETER CONTROL DETAILS CONTINUE ON SHEET 26.

AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS	SHEET DESCRIPTION: CURLEX® SEDIMENT LOG® PERIMETER CONTROL DETAILS	DATE 5/15/17	DRAWN BY
		SCALE: NONE	PROJECT NO.
American Excelsior Company® Earth Science Division			SHEET NO. 25



NOTES:
1. RECOMMENDED STAPLES ARE E-STAPLE®, 1 IN X 6 IN, U-SHAPED, 11 GAUGE WIRE, OR 2 IN X 8 IN, U-SHAPED, 8 GAUGE WIRE.
2. STAPLES SHALL BE INSTALLED 24 IN APART ON EACH SIDE OF THE CURLEX® SEDIMENT LOG®. THE TWO ROWS OF STAPLES SHALL BE STAGGERED BY 12 IN ALONG THE LENGTH OF THE CURLEX® SEDIMENT LOG®. INSTALLATION OF ONE CURLEX® SEDIMENT LOG® SHALL INCLUDE ONE STAPLE ON EACH END OF THE PRODUCT. ALL STAPLES SHALL BE FULLY INSERTED INTO THE SUBGRADE BELOW THE CURLEX® SEDIMENT LOG®.
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AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS	SHEET DESCRIPTION: CURLEX® SEDIMENT LOG® PERIMETER CONTROL DETAILS	DATE 5/8/17	DRAWN BY
		SCALE: NONE	PROJECT NO.
American Excelsior Company® Earth Science Division			SHEET NO. 26



SECTION A-A

NOTES:
1. ALL CONCRETE WASTE MATERIAL, INCLUDING WASHOUT WATER, SHALL BE TOTALLY CONTAINED.
2. SEE SWPPP FOR MORE DETAILS.
3. UPON PROJECT COMPLETION CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CONCRETE WASTE FROM THE OWNER'S PROPERTY PER ALL APPLICABLE SOLID WASTE REGULATIONS.
4. CONSTRUCT SIGN OF WEATHER PROOF MATERIALS OF A SIZE EASILY READABLE BY CONCRETE TRUCK DRIVERS. PLACE SIGN WITHIN 10' OF WASHOUT.
5. CONTRACTOR SHALL CONTAIN WASHOUT WATERS AT ALL TIMES.

CONCRETE WASHOUT AREA
NOT TO SCALE

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WILSHIRE HILLS PHASE III
3200 NE WILSHIRE DR
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

6/30/2023
STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date
JUNE 30, 2023

Revised

Design: ST Drawn: MJS

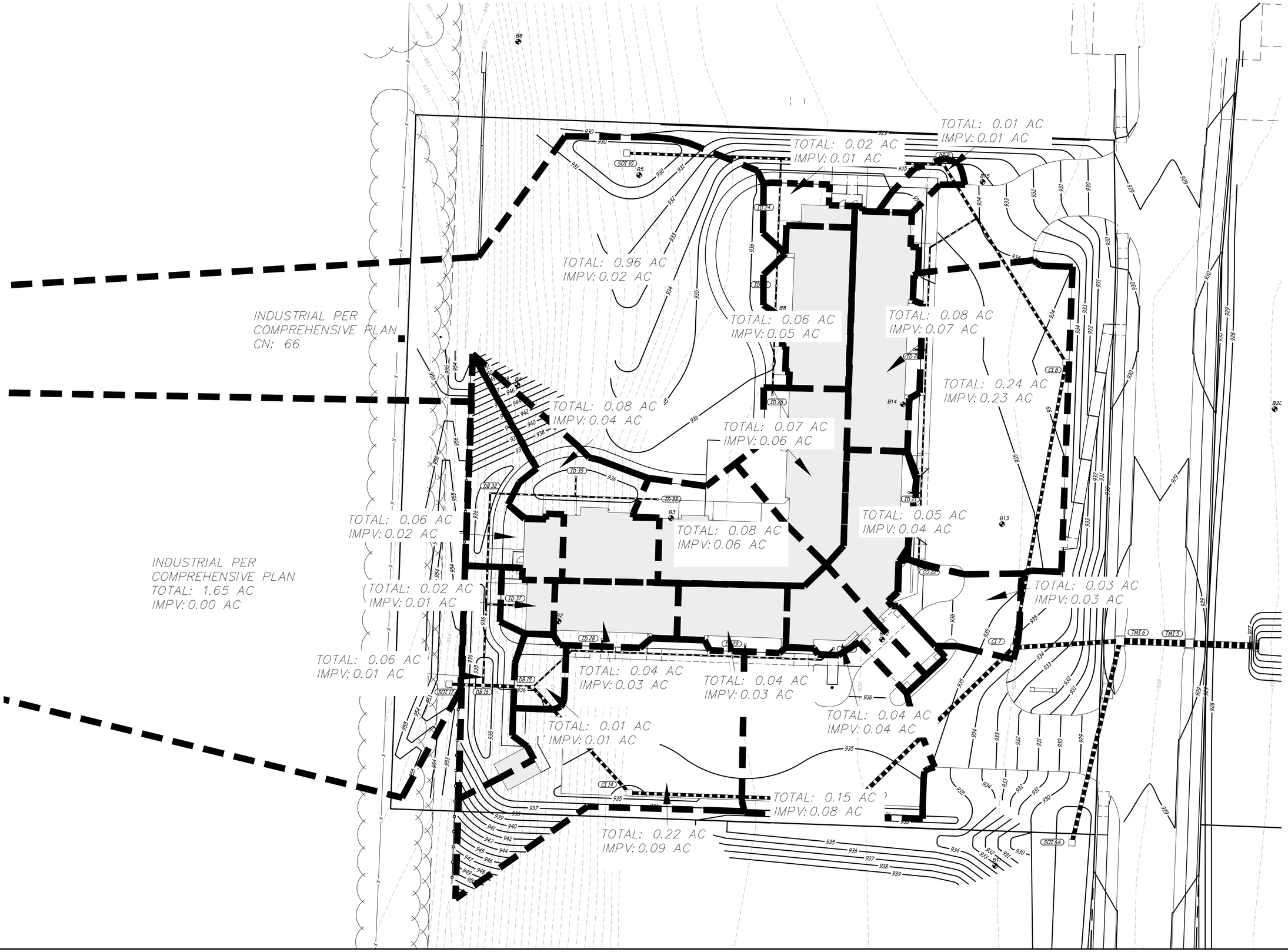
EROSION CONTROL DETAILS

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ES&S PROJECT NO. 15925

CONSTRUCTION DOCUMENTS

P:\GENERAL PROJECTS\15925\-ES-_WILSHIRE-HILLS_3-ENG\CAD\15925 COVER & DETAILS.DWG 6/30/2023



P:\GENERAL PROJECTS\15925E—JES—WILSHIRE—HILLS—3—ENG\CAD\15925 DAM (6-14-2023).DWG 6/30/2023

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N

0 1"
SCALE: 1" = 20'

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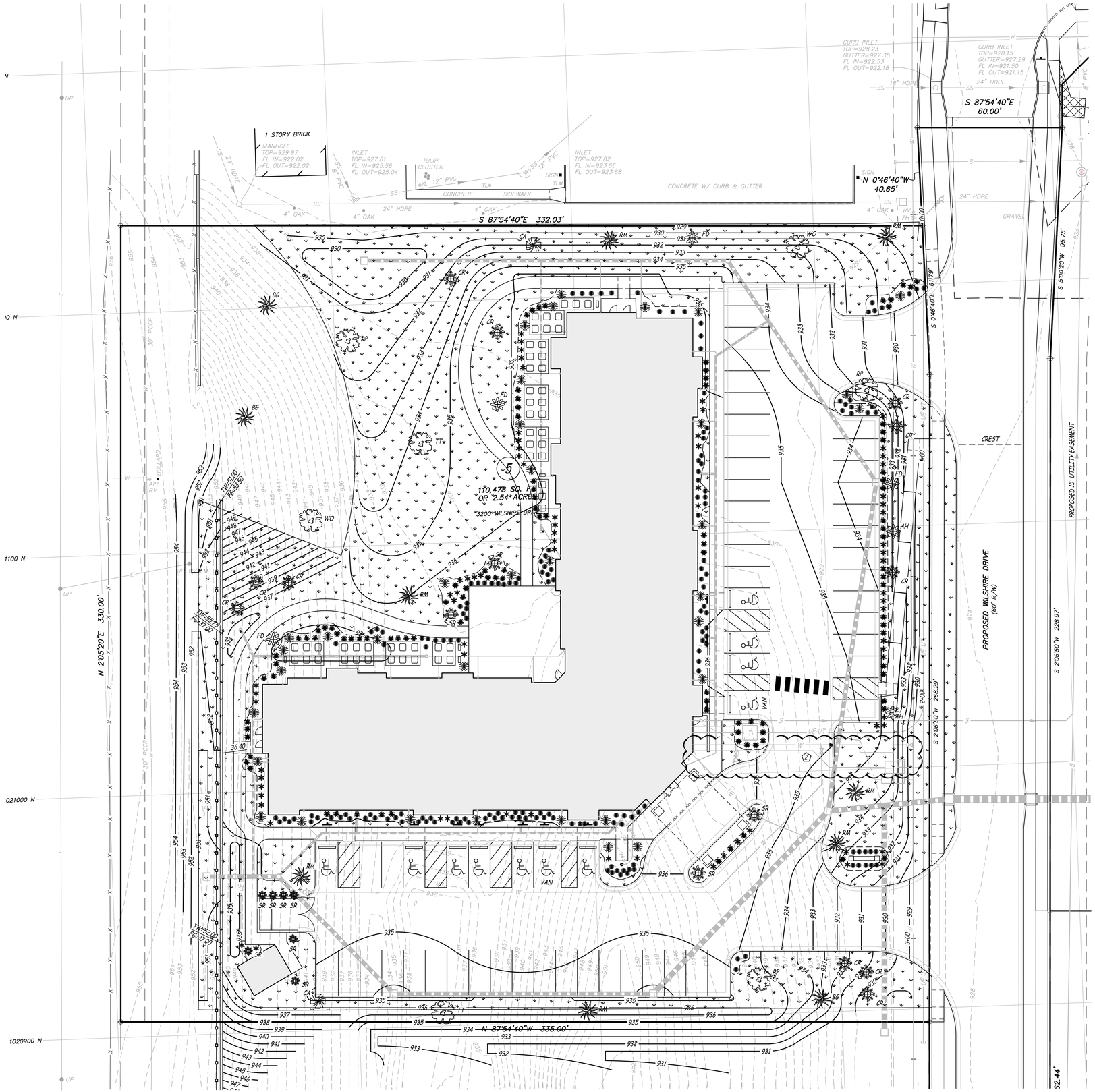
Revised

Design: ST Drawn: ST

STORM SEWER
DRAINAGE AREA MAP

Sheet
C15.01

ES&S PROJECT NO. 15925



LANDSCAPING REQUIREMENTS	
REQUIRED	PROVIDED
PARKING LOT	
1. AT LEAST 5% OF ENTIRE AREA LANDSCAPED	1. 7%
2. ONE END ISLAND OF EVERY PARKING PLANTED WITH TREES	2. YES
3. NO TREE LOCATED LESS THAN 4 FEET FROM BACK OF CURB	3. YES
4. SCREENING AT HEIGHT OF 2.5 FEET ALONG EDGE OF LOT. MINIMUM 12 SHRUBS PER 40 LINEAR FEET. SHRUBS AT LEAST 18 INCHES TALL AT TIME OF PLANTING.	4. YES
STREET FRONTAGE	
1. ONE TREE FOR EACH 30 FEET OF STREET FRONTAGE --- 330FT / 30FT = 12 TREES	1. 13 TREES
2. MINIMUM 20-FOOT LANDSCAPE STRIP ALONG LENGTH	2. YES
3. ONE SHRUB EVERY 20 FEET OF STREET FRONTAGE --- 330FT / 20FT = 16.5 SHRUBS	3. 42 SHURBS
OPEN YARD AREAS	
1. MINIMUM TWO SHRUBS PER 5,000 SQUARE FEET TOTAL AREA ---110,645 SF / 5,000 SF = 22 SHRUBS	1. 139 SHRUBS
2. ALL OPEN AREAS NOT PAVED SHALL BE SOD.	2. YES
3. ONE TREE FOR EVERY 5,000 SQUARE FEET OF LOT AREA ---110,645 SF / 5,000 SF = 22 TREES	3. 41 TREES
4. DETAILED TRASH STORAGE WITH SCREENING METHODS.	4. YES

IRRIGATION NOTES

1. CONTRACTOR SHALL PROVIDE IRRIGATION OF ALL PLANTING BEDS AND SODDED LAWN AREAS.
2. ALL SLOPES SHALL BE TEMPORARILY IRRIGATED UNTIL VEGETATION IS FULLY ESTABLISHED.
3. IRRIGATION SYSTEM SHALL BE DESIGN BUILD. THE SYSTEM SHALL BE DESIGNED TO PREVENT OVER WATERING AND INCLUDE RAIN SHUT-OFF DEVICES.
4. IRRIGATION SHALL BE ZONED. ALL PLANTING BENDS AND TURF SHALL BE SEPARATELY ZONED.
5. CONTRACTOR SHALL SUBMIT IRRIGATION PLANS TO THE OWNER A MINIMUM OF 30 DAYS PRIOR TO PROPOSED INSTALLATION FOR APPROVAL.
6. ALL SLOPES SHALL BE TEMPORARILY IRRIGATED UNTIL VEGETATION IS FULLY ESTABLISHED.
7. IRRIGATION SYSTEM SHALL BE DESIGN BUILD. THE SYSTEM SHALL BE DESIGNED TO PREVENT OVER WATERING AND INCLUDE RAIN SHUT-OFF DEVICES.
8. IRRIGATION SYSTEM SHALL BE ZONED FOR SPECIFIC WATER NEEDS IN EACH PLANTING AREA.
9. IRRIGATION OPERATION AND MAINTENANCE MANUAL TO BE SUPPLIED BY CONTRACTOR.
10. IRRIGATION SYSTEM SHALL INCLUDE FLOW SENSOR THAT DETECTS & REPORTS HIGH FLOW CONDITIONS DUE TO BROKEN PIPES OR POPPED SPRINKLER HEADS.
11. IRRIGATION SYSTEM SHALL INCLUDE PRESSURE REGULATOR & MASTER SHUT-OFF VALVE.

LANDSCAPING NOTE

1. ALL PLANT MATERIAL SHALL BE:
   a. FREE OF DISEASE AND INSECTS.
   b. CONFORMING TO AMERICAN STANDARD FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. SPREAD TOPSOIL AMONG ALL LANDSCAPED AREAS. FOCUS ON PLANTING BEDS BEFORE DISTRIBUTING TO LAWN AREAS.
3. PLANTING MATERIALS SHALL BE OF THE FOLLOWING MINIMUM SIZE
   a. LARGE DECIDUOUS SHADE TREES (MATURE HEIGHT >45') = 3" DHB
   b. MEDIUM DECIDUOUS SHADE TREES (MATURE HEIGHT 30'-45') = 3" DHB
   c. SMALL DECIDUOUS SHADE TREES (MATURE HEIGHT 20'-30') = 2" DHB
   d. ORNAMENTAL TREE (MATURE HEIGHT <20') = 2" DHB
   e. EVERGREEN TREES: MINIMUM HEIGHT OF 8 FEET AT PLANTING.
   f. MEDIUM SHRUBS = 18-24 INCH BALLED AND BURLAPPED OR 2-GAL CONTAINER
   g. MEDIUM SHRUBS = 24-30 INCH BALLED AND BURLAPPED OR 5-GAL CONTAINER
   h. GRASS, SEED, SOD = >80% PURE LIVE SEED, 99% WEED FREE
8. LIVING LANDSCAPING SHALL BE USED TO COVER ALL OPEN GROUND SUPPLEMENTED WITH HARD WOOD MULCH.
9. ALL TRANSFORMERS, A/C UNITS, AND OTHER VISIBLE UTILITIES TO BE SCREENED WITH PLANTS.
10. LANDSCAPING SHALL BE PLANTED SUCH THAT THE MATURE SPREAD OF THE PLANT IS TO REMAIN 2' FROM THE BUILDING.
11. OWNER/TENANT/AGENT SHALL BE JOINTLY RESPONSIBLE FOR THE MAINTENANCE IN GOOD CONDITION OF PLANT MATERIAL.

SEEDING / SODDING SPECIFICATIONS

1. FINISH GRADE SHOWN ON PLAN INCLUDES 6" OF TOPSOIL RESPREAD FROM STOCKPILES.
2. ALL DISTURBED AREAS SHALL BE SEEDED OR SODDED PER SPECIFICATIONS.
3. ALL LAWN AREAS TO BE SOD.
4. IMMEDIATELY UPON COMPLETION OF FINISH GRADING IN EACH AREA, ALL LANDSCAPED AREAS SHALL BE SEEDED AND MULCHED.

SOD

ESS
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N

0 1"

SCALE: 1" = 20'

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4/17/2024

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Date

SEPTEMBER 28, 2023

Revised

1	FEBRUARY 22, 2024
2	APRIL 17, 2024

Design: ST Drawn: MJS

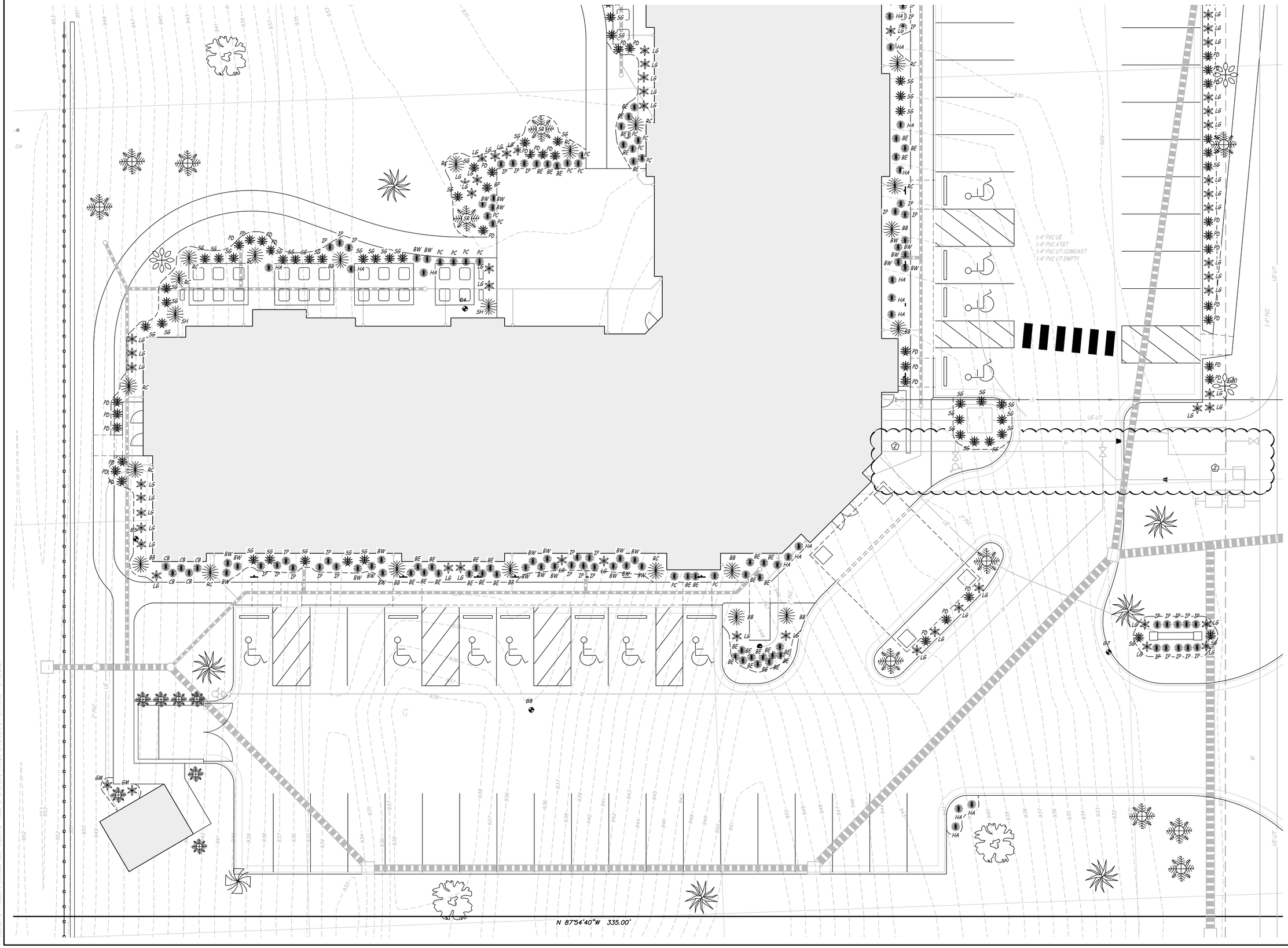
LANDSCAPE PLAN

Sheet

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ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925E-JES-WILSHIRE-HILLS-3-ENG\CAD\15925 LANDSCAPE PLAN.DWG 4/19/2024



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2	APRIL 17, 2024

Design: ST Drawn: MJS

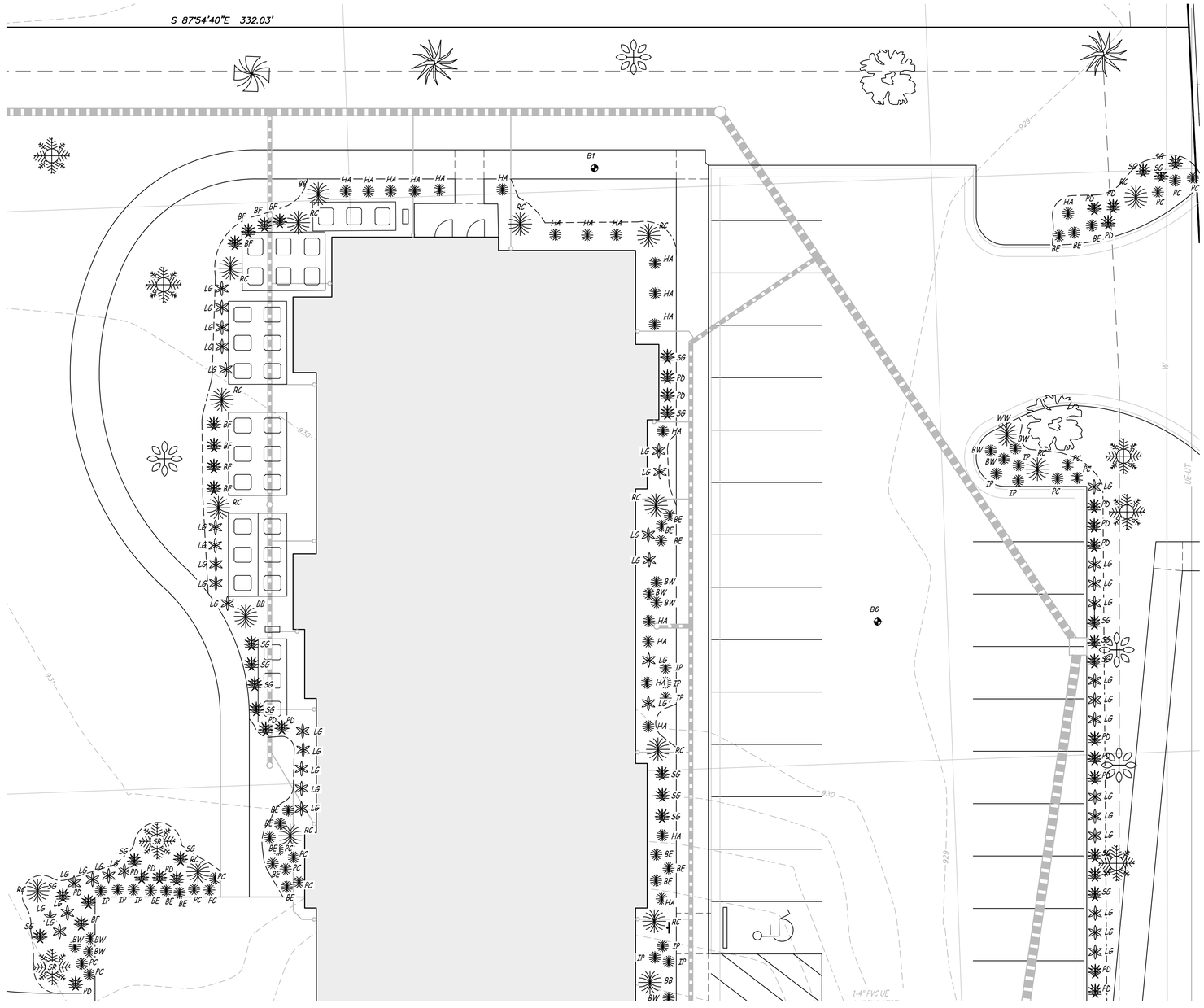
LANDSCAPE PLAN

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ES&S PROJECT NO. 15925

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0 1"

SCALE: 1" = 20'

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR

LEE'S SUMMIT JACKSON COUNTY, MO

2/22/2024

STATE OF MISSOURI
MATTHEW AARON KRIETE
NUMBER PE-2007002811
PROFESSIONAL ENGINEER

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

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Date

SEPTEMBER 28, 2023

Revised

1 FEBRUARY 22, 2024

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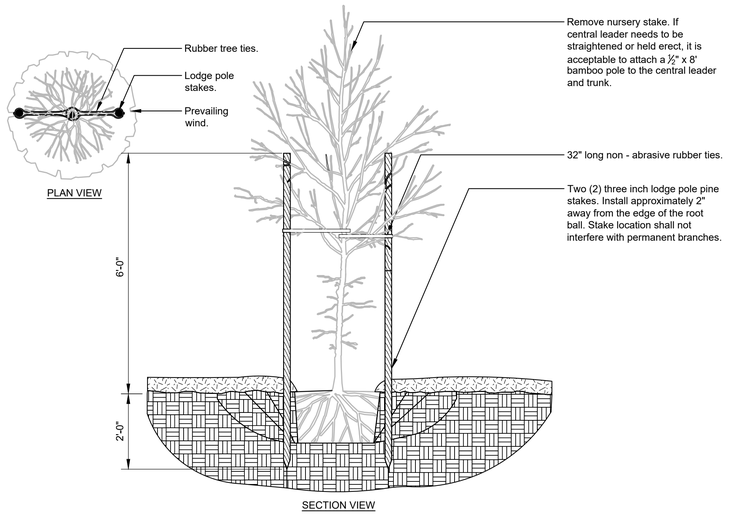
LANDSCAPE PLAN

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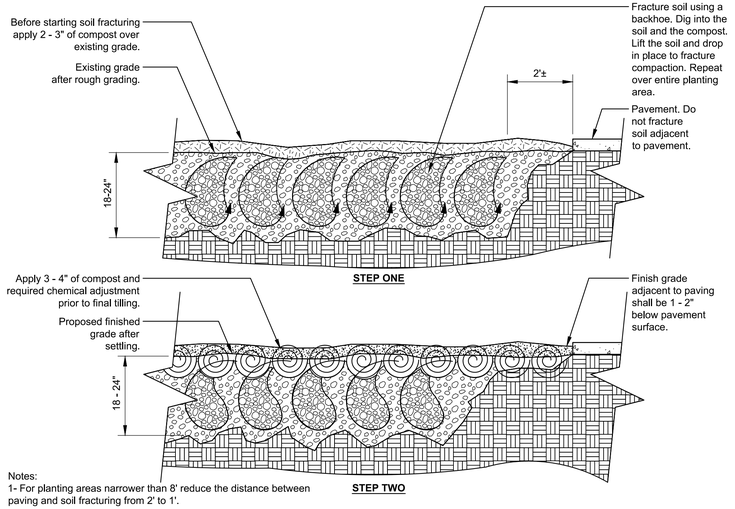
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TREE STAKING - LODGE POLES (2)

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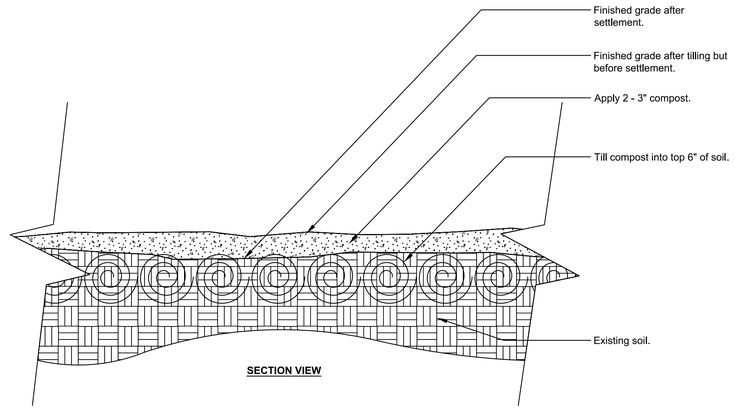
Notes:
1- For planting areas narrower than 8' reduce the distance between paving and soil fracturing from 2' to 1'.

2- See planting soil specification for additional requirements.

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MODIFIED EXISTING SOIL - COMPACTED SUB SOIL (FRACTURING)

SYMBOL	PLANT SCHEDULE								
	LARGE DECIDUOUS SHADE TREES								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	TT	2	TULIP TREE	LIRIODENDRON TULIPIFERA	60–90	30–50	FULL SUN	4–9	YES, MAY–JUNE	EASTERN U.S.
	WO	2	WHITE OAK	QUERCUS ALBA	50–80	50–80	FULL SUN	3–9	NA	EASTERN U.S.
	RP	3	RED MAPLE	ACER RUBRUM	40–70	30–50	FULL SUN–PART SHADE	3–9	YES, MARCH–APRIL	CENTRAL & EASTERN U.S.
SYMBOL	MEDIUM DECIDUOUS SHADE TREES								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	RM	7	RED SUNSET RED MAPLE	ACER RUBRUM 'RED SUNSET'	40–50	30–40	FULL SUN–PART SHADE	3–9	YES, MARCH	CENTRAL & EASTERN U.S.
	BG	3	BLACK GUM	NYSSA SYLVATICA 'WILDFIRE'	30–50	20–30	FULL SUN–PART SHADE	3–9	NA	CENTRAL & EASTERN U.S.
SYMBOL	SMALL DECIDUOUS SHADE TREES								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	AH	2	AMERICAN HORNBEAM	CARPINUS CAROLINIANA	20–35	20–35	PART SHADE–FULL SUN	3–9	NA	CENTRAL & EASTERN U.S.
	FD	4	FLOWERING DOGWOOD	CORNUS FLORIDA	15–30	15–30	FULL SUN–PART SHADE	5–9	YES, APRIL–MAY	CENTRAL & EASTERN U.S.
SYMBOL	ORNAMENTAL DECIDUOUS SHADE TREES								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	CA	2	PRAIRIFIRE CRABAPPLE	MALUS 'PRAIRIFIRE'	15–20	15–20	FULL SUN	4–8	YES, APRIL–MAY	U.S
SYMBOL	CONIFERS OR EVERGREEN TREES								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	SR	11	JUNIPER 'SKYROCKET'	JUNIPERUS SCOPULORUM 'SKYROCKET'	15–20	2–3	FULL SUN	4–9	NA	WESTERN U.S.
	CR	12	CANAERTH RED CEDAR	JUNIPERUS VIRGINIANA "CANAERTH"	20–35	8–15	FULL SUN	3–9	NA	CENTRAL & EASTERN U.S.
SYMBOL	EVERGREEN SHRUBS								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	LG	74	LITTLE GIANT DWARF ARBORVITAE'	THUJA OCCIDENTALS LITTLE GIANT	3–4	3–4	FULL SUN– PART SHADE	3–8	NA	EASTERN U.S.
SYMBOL	DECIDUOUS SHRUBS								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	RC	21	RED CHOKEBERRY	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	6–8	3–4	FULL SUN–PART SHADE	4–9	YES, APRIL	CENTRAL & EASTERN U.S.
	HA	33	SMOOTH HYDRANGEA	HYDRANGEA ARBORESCENS 'ANNABELLE'	3–5	4–6	PART SHADE	3–9	YES, JUNE–SEPTEMBER	CENTRAL & EASTERN U.S.
	BB	11	BUTTON BUSH 'SUGAR SHACK'	CEPHALANTHUS OCCIDENTALIS 'SMCOSS' SUGAR SHACK	3–4	3–4	FULL SUN–PART SHADE	4–10	YES, JUNE–JULY	CENTRAL & EASTERN U.S.
	IP	37	INDIAN PAINTBRUSH	CASTILLEJA COCCINEA	1–2	1–1.5	FULL SUN–PART SHADE	4–8	YES, SPRING–SUMMER	EASTERN U.S.
	BW	33	BUTTERFLY WEED	ASCLEPIAS TUBEROSA	1–2.5	1–2	FULL SUN	3–9	YES, JUNE–AUGUST	U.S.
	BE	43	BLACK–EYED SUSANS "GOLDSTURMM"	RUDBECKIA FULGIDA	2–3	1.5–2	FULL SUN–PART SHADE	3–9	YES, JUNE–AUGUST	U.S.
	PC	21	PURPLE CONEFLOWER	ECHINACEA PURPUREA	2–5	1–2	FULL SUN–PART SHADE	3–8	YES, JUNE–AUGUST	U.S.
SYMBOL	ORNAMENTAL GRASSES								
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
	SG	46	SWITCH GRASS	PANICUM VIRGATUM	3–6	2–3	FULL SUN	3–9	YES, AUGUST–SEPTEMBER	U.S. AND CANADA
	PD	41	PRAIRIE DROPSEED	SPOROBOLUS HETEROLEPIS	2–3	2–3	FULL SUN	3–9	YES, AUGUST–OCTOBER	U.S.



Notes:
1- See planting soil specifications for additional requirements.

MODIFIED EXISTING SOIL - COMPACTED SURFACE SOIL

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Date
SEPTEMBER 28, 2023

Revised

Design: ST Drawn: MJS

LANDSCAPE PLAN

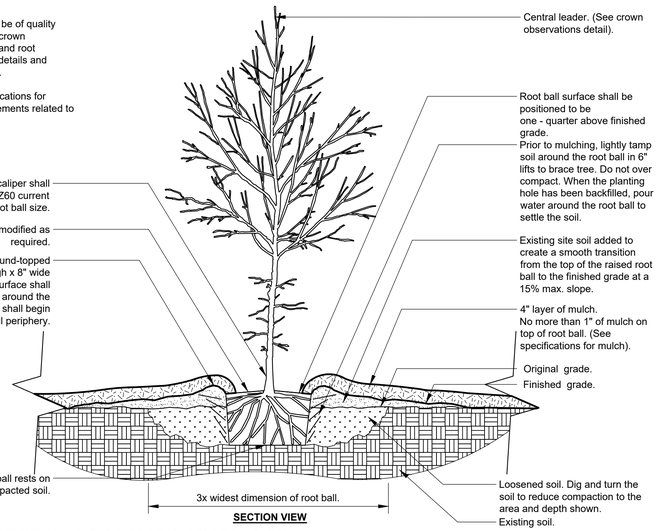
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Notes:
1- Trees shall be of quality prescribed in crown observations and root observations details and specifications.

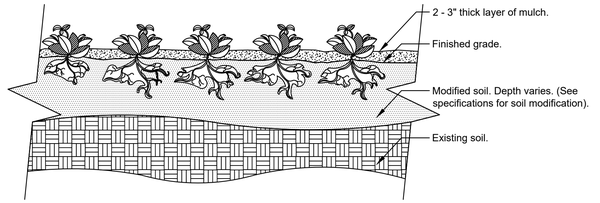
2- See specifications for further requirements related to this detail.



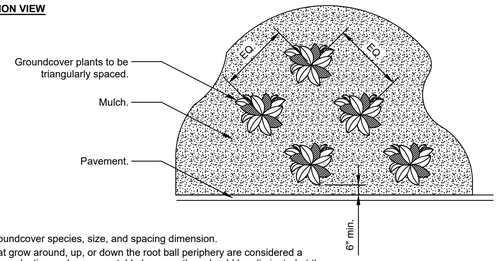
SECTION VIEW

TREE IN POORLY DRAINED SOIL

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SECTION VIEW



PLAN

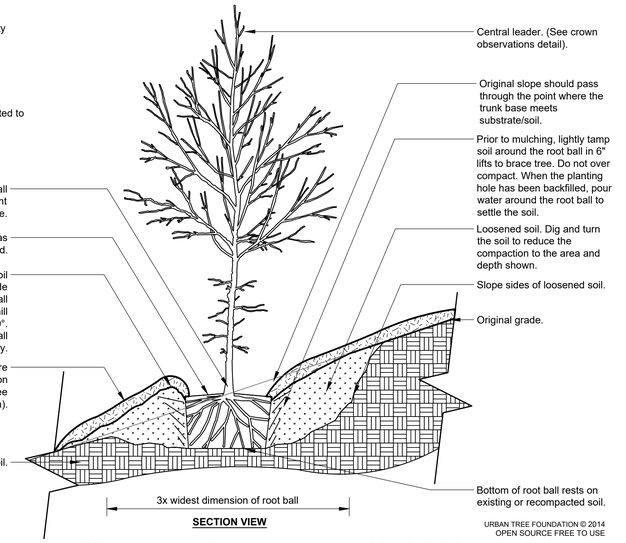
Notes:
1- See planting legend for groundcover species, size, and spacing dimension.
2- Small roots (¼" or less) that grow around, up, or down the root ball periphery are considered a normal condition in container production and are acceptable however they should be eliminated at the time of planting. Roots on the periperhy can be removed at the time of planting. (See root ball shaving container detail).
3- Settle soil around root ball of each groundcover prior to mulching.

GROUNDCOVER

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Notes:
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2- See specifications for further requirements related to this detail.

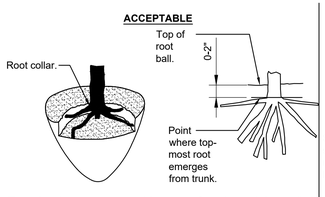


SECTION VIEW

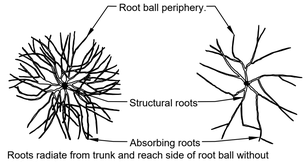
TREE ON SLOPE 5% (20:1) TO 50% (2:1) - UNMODIFIED SOIL

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ACCEPTABLE

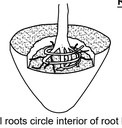


The point where top-most root(s) emerges from the trunk (root collar) should be within the top 2" of substrate. The root collar and the root ball interior should be free of defects including circling, kinked, ascending, and stem girdling roots. Structural roots shall reach the periphery near the top of the root ball.

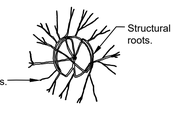


Roots radiate from trunk and reach side of root ball without defecting down or around.

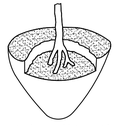
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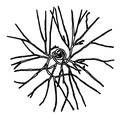
Structural roots circle interior of root ball. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



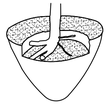
Only absorbing roots reach the periphery near the top of the root ball. Structural roots mostly wrap or are deflected on the root ball interior.



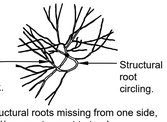
Structural roots descend into root ball interior. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



Structural roots circle and do not radiate from the trunk.



Structural roots primarily grow to one side.



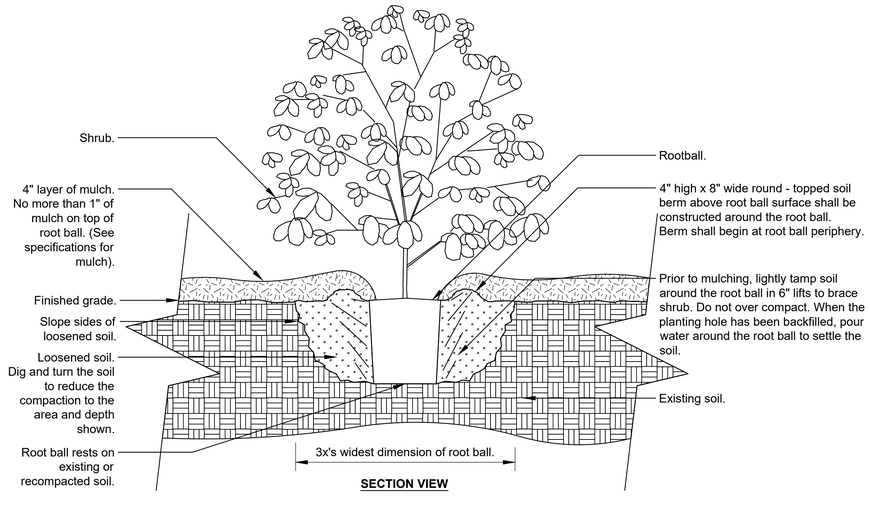
Structural roots missing from one side, and/or grow tangent to trunk.

Notes:
1- Observations of roots shall occur prior to acceptance. Roots and soil may be removed during the observation process; substrate/soil shall be replaced after the observations have been completed.

2- See specifications for observation process and requirements.

ROOT OBSERVATIONS DETAIL - BALLED AND BURLAPPED

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SECTION VIEW

Notes:
1- Shrubs shall be of quality prescribed in the root observations detail and specifications.

2- See specifications for further requirements related to this detail.

SHRUB - UNMODIFIED SOIL

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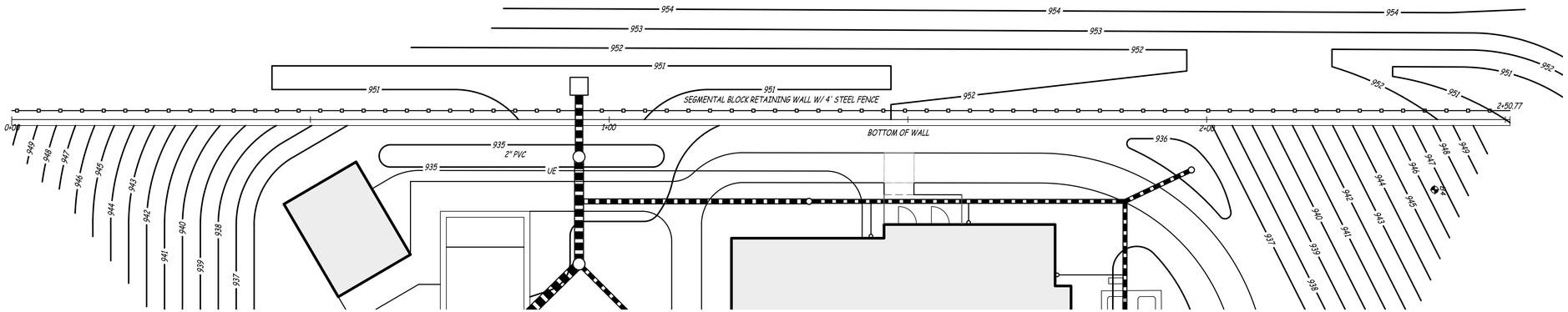
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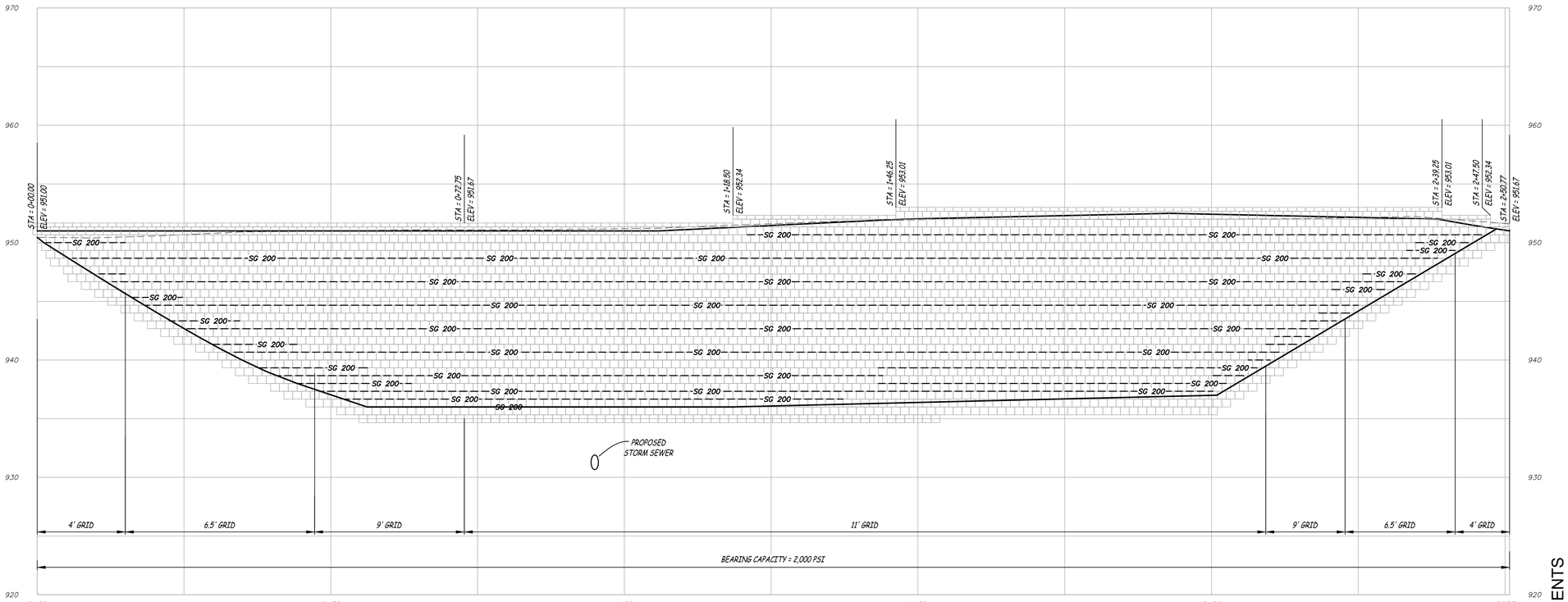
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RETAINING WALL NOTES

1. RETAINING WALL DESIGN:
   - A. STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIM BRACING, SHORING, INTERIM DRAINAGE PROVISIONS, DRAINAGE DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPPING, PAVING, CURBING, AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.
   - B. THE WALL IS NOT CONSIDERED COMPLETE UNTIL ALL FINAL GRADING AND STORMWATER CONVEYANCE IS COMPLETE.
   - C. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL FINAL GRADES DRAIN AWAY FROM THE TOP OF THE RETAINING WALL.
2. ENGINEERING SURVEYS & SERVICE SHALL BE NOTIFIED IF ANY SETTLEMENT IS OBSERVED DURING CONSTRUCTION.
3. MATERIAL PROPERTIES:
   - A. SEGMENTAL BLOCK UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C1372 HAVING A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI AND A MAXIMUM MOISTURE ABSORPTION OF 8%. ALL UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERFORMANCE OF THE CONSTRUCTION.
   - B. COMPACTED REINFORCED BACKFILL AND DRAINAGE SHALL BE FREE OF ORGANIC MATERIAL. THE ROCK SHALL BE A WELL GRADED GRAVEL OR LIMESTONE WITH A MAXIMUM PARTICLE SIZE OF 2" AND A MAXIMUM OF 20% PASSING A NO. 200 SIEVE. LIMESTONE SCREENINGS ARE NOT ACCEPTABLE FOR STRUCTURE WALL BACKFILL. MATERIAL SHALL BE MODOT TYPE 1/5 OR APPROVED EQUAL.
   - C. THE GEOGRID SHALL BE A HIGH DENSITY POLYETHYLENE EXPANDED SHEET OR POLYESTER WOVEN FIBER MATERIAL, SPECIFICALLY FABRICATED FOR USE AS SOIL REINFORCEMENT. ACCEPTABLE GEOGRID TYPES AND MANUFACTURER
     - TYPE I: SG 200 BY STRATA OR APPROVED EQUAL
   - D. DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F 405 OR ASTM F 758.
   - E. CONSTRUCTION ADHESIVE SHALL BE EXTERIOR GRADE ADHESIVE AS
4. RECOMMENDED BY THE SEGMENTAL CONCRETE WALL UNIT MANUFACTURER. EXCAVATION: IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE TO THE GRADES ON THE PLAN. EXCAVATION MEANS AND METHOD ARE ALSO THE CONTRACTOR'S RESPONSIBILITY INCLUDING: BENCHING, SHORING, STABILITY OF ALL RESPECTIVE EXCAVATIONS, AND THE EFFECTS ON ADJACENT PROPERTIES AND
5. STRUCTURES.
   FOUNDATION SOIL PREPARATION:
   - A. FOLLOWING EXCAVATION FOR THE LEVELING PAD AND THE REINFORCED SOIL ZONE, FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S GEOTECHNICAL ENGINEER TO ASSURE THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN BEARING STRENGTH. SOIL NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH SOIL MEETING THE DESIGN CRITERIA, AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
   - B. FOUNDATION SOIL IS DEFINED AS THE SOIL UNDER THE SEGMENTAL RETAINING WALL VOLUME, EXTENDING FROM THE TOE OF THE LEVELING PAD TO THE BACK OF THE REINFORCED MASS.
6. BASE LEVELING PAD SHALL BE COMPACTED WITH A VIBRATORY PLATE OR ROLLER AND COMPACTION TESTING TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D 698) AT A MOISTURE CONTENT OF -2% TO +4% OF OPTIMUM MOISTURE CONTENT.
7. PLACE DRAINAGE AGGREGATE A MINIMUM OF 12" DIRECTLY BEHIND AND BETWEEN THE UNITS AND LEVEL WITH THE TOP OF THE UNIT. PLACE REINFORCED BACKFILL DIRECTLY AGAINST DRAINAGE FILL. COMPACT DRAINAGE AGGREGATE WITH 3 PASSES OF A VIBRATORY COMPACTOR. COMPACTION TESTING OF DRAINAGE AGGREGATE IS NOT REQUIRED. EXCESS MATERIAL SHALL BE REMOVED FROM TOP OF UNITS PRIOR TO INSTALLATION OF NEXT COURSE.
8. GEOGRID INSTALLATION:
   - A. GEOGRID SHALL BE LAID AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE DRAWINGS.
   - B. THE GEOGRID REINFORCEMENT SHALL BE LAID HORIZONTALLY ON LEVEL, COMPACTED BACKFILL, AND EMBEDDED IN THE BLOCK.
   - C. THE GEOGRID SHALL BE PULLED TIGHT AFTER THE NEXT ROW OF BLOCK AND DRAINAGE AGGREGATE HAS BEEN PLACED.
   - D. THE GEOGRID SHALL BE PLACED WITH THE AXIAL STRENGTH PERPENDICULAR TO THE WALL FACE ALL LOCATIONS.
9. REINFORCED BACKFILL
   - E. MATERIAL SHALL BE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO A MINIMUM 95% OF STANDARD PROCTOR DENSITY (ASTM D 698) AT A MOISTURE CONTENT OF -2% TO +4% OF OPTIMUM MOISTURE CONTENT.
   - F. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED FROM THE BACK OF THE WALL REARWARD INTO THE EMBANKMENT TO ENSURE THAT THE GEOGRID REMAINS TIGHT.
   - G. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID. A MINIMUM BACKFILL THICKNESS OF 6" SHALL BE MAINTAINED TO OPERATE TRACKED VEHICLES OVER THE GEOGRID. TURNING OF TRACKED CONSTRUCTION EQUIPMENT SHALL BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOGRID.
10. FIELD QUALITY CONTROL:
    - H. THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR ENGAGING THE SERVICES OF AN INDEPENDENT THIRD PARTY INSPECTOR TO OBSERVE AND VERIFY ALL SOIL PROPERTIES AS WELL AS VERIFY CORRECT INSTALLATION OF ALL SYSTEM COMPONENTS TO MEET THE REQUIREMENTS OF THESE GENERAL NOTES AND DRAWINGS.
    - I. EACH LIFT OF REINFORCED BACKFILL MATERIAL AND BASE LEVELING PAD SHOULD BE COMPACTION TESTED AT A FREQUENCY OF ONE TEST PER 2,500 SQUARE FEET OR A MINIMUM OF 2 TESTS PER LIFT.





RETAINING WALL
SCALE – HORIZ. 1" = 10'
VERT. 1" = 5'

WALL PROPERTIES		
BACKSLOPE	6:1 (9.46 DEGREES)	H:V
TOESLOPE	3:1 (18.43 DEGREES)	H:V
BATTER	5.36	DEGREES
SETBACK	1"	INCHES
SURCHARGE		
DEAD LOAD	0	PSF
LIVE LOAD	100	PSF

BLOCK PROPERTIES	
BLOCK TYPE	VERSA-LOK
BLOCK STYLE	SQUARE FOOT

ASSUMED DESIGN SOIL PARAMETERS			
	DESCRIPTION	ϕ (DEGREES)	γ (PCF)
FOUNDATION SOIL	CRUSHED LIMESTONE	38	130
RETAINED SOIL	CLAY SOIL	19	106
REINFORCED BACKFILL	CRUSHED LIMESTONE	38	130

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1775 West Main Street, Sedalia, MO 65301
660-826-8818
www.ess-inc.com
MO Engineering Corp. # 2004005018

N

0 1"
SCALE: 1" = 10'

WILSHIRE HILLS PHASE III
3200 NE WILSHIRE DR
LEE'S SUMMIT JACKSON COUNTY, MISSOURI

2/23/2024
STATE OF MISSOURI
JOSHUA DAVID LEHMEN
NUMBER PE-2012000779
PROFESSIONAL ENGINEER
Joshua David Lehmen

JOSHUA D. LEHMEN
PROFESSIONAL ENGINEER
PE-2012000779

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date
JULY 13, 2023

Revised
1 FEBRUARY 22, 2024

Design: JL Drawn: MJS

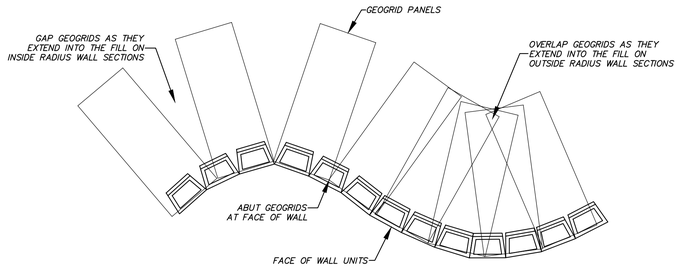
RETAINING WALL PLAN

Sheet
RW1.01

ES&S PROJECT NO. 15925

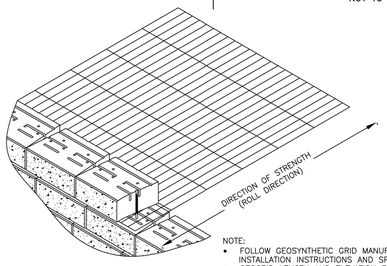
CONSTRUCTION DOCUMENTS

P:\GENERAL PROJECTS\15925E--JES-WILSHIRE-HILLS--3-ENG\CAD\15925 WALL PLAN .DWG 2/27/2024



WALL RADIUS DETAIL

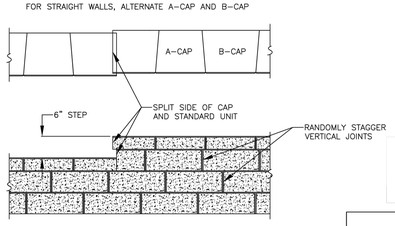
NOT TO SCALE



NOTE:
- FOLLOW GEOSYNTHETIC GRID MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS
- GEOGRID LENGTH AND ELEVATION PLACEMENT SHALL BE DETERMINED BY WALL DESIGN ENGINEER

GEOSYNTHETIC INSTALLATION DETAIL

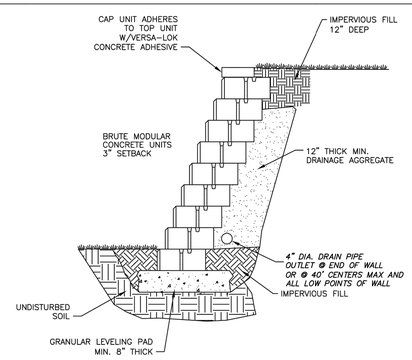
SCALE: NONE



CAPPING DETAIL—PROFILE

STEP AT TOP OF WALL

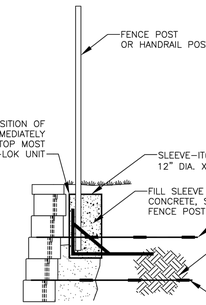
SCALE: NONE



TYPICAL SECTION—UNREINFORCED RETAINING WALL

SCALE: NONE

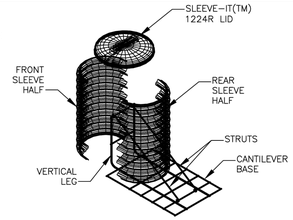
*FENCING SYSTEMS APPROVED FOR USE WITH SLEEVE-IT(TM) 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK-UP TO 8-FT, PRIVACY -UP TO 6-FT (WOODEN, PVC, METAL). POST SIZE 4"X4" MAX.



FENCE POST DETAIL W/ SLEEVE-IT(TM) 1224R

SQUARE FOOT UNIT-WITH SLEEVE-IT(TM) 1224R

SCALE: NONE

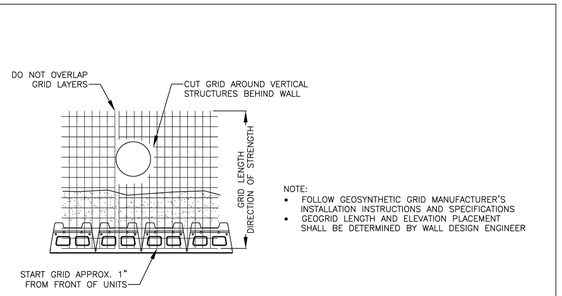


SLEEVE-IT(TM) ISO 1224R

SYSTEM COMPONENTS

SCALE: NONE

SEE SLEEVE-IT(TM) SYSTEM MANUFACTURER, STRATA SYSTEMS FOR COMPLETE SPECIFICATIONS, AND TECHNICAL GUIDANCE

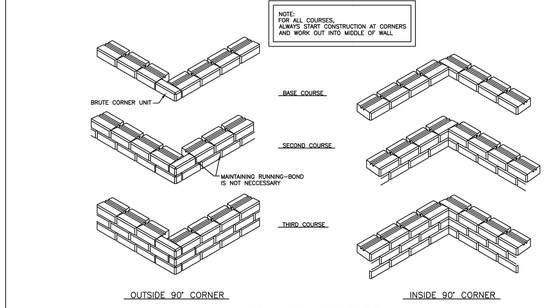


NOTE:
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- GEOGRID LENGTH AND ELEVATION PLACEMENT SHALL BE DETERMINED BY WALL DESIGN ENGINEER

GEOSYNTHETIC AT STRUCTURES BEHIND WALL

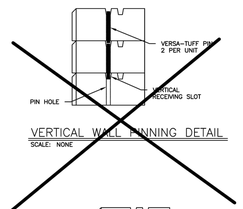
SQUARE FOOT UNIT

SCALE: NONE



INSTALLATION SEQUENCE

SCALE: NONE



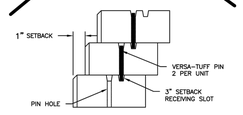
VERTICAL WALL PINNING DETAIL

SCALE: NONE



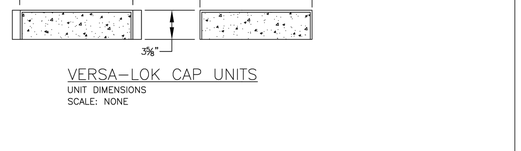
VERSA-LOK BRUTE PIN

SCALE: NONE



3" SETBACK PINNING DETAIL

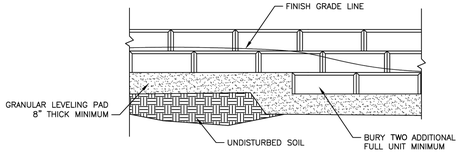
SCALE: NONE



VERSA-LOK CAP UNITS

UNIT DIMENSIONS

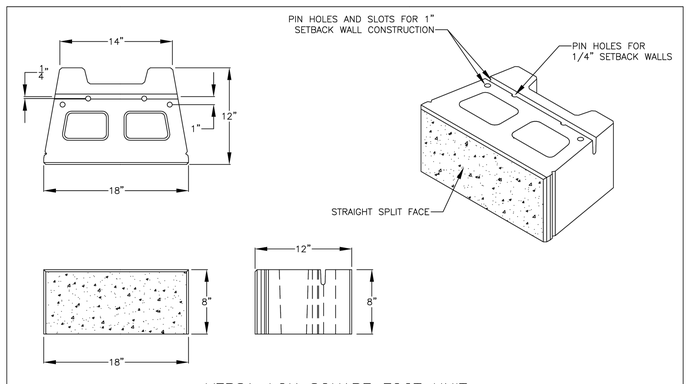
SCALE: NONE



NOTE:
-LIMIT CHANGES IN BASE ELEVATION TO 8" PER STEP TO AVOID DIFFERENTIAL SETTLEMENT
-STEP OFTEN ENOUGH TO MAINTAIN MINIMUM REQUIRED EMBEDMENT

STEPPING BASE DETAIL

SCALE: NONE



VERSA-LOK SQUARE FOOT UNIT

UNIT DIMENSIONS

SCALE: NONE

THESE PRELIMINARY DETAILS ARE INTENDED AS AN AID IN DESIGNING ATTRACTIVE, DURABLE RETAINING WALLS WITH VERSA-LOK STANDARD UNITS. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION OR MATERIAL FOR THE USE CONTEMPLATED, AND ITS MANNER OF USE, IS THE SOLE RESPONSIBILITY OF THE USER. A FINAL PROJECT SPECIFIC DESIGN SHOULD BE PREPARED BY A QUALIFIED, LICENSED, PROFESSIONAL ENGINEER.

VERSA-LOK® Retaining Wall Systems (800)770-4525 fax(651)770-4089 6348 Hwy36 Stw1, Oakdale,MN 55128 Solid Solutions.™

BRUTE DETAILS	SCALE: AS NOTED
	DRAWN BY: PPS
UNREINFORCED RETAINING WALL	CHECKED BY:
	DATE: 10/04
	DWG. NO.: brute unreinforced wall

VERSA-LOK SQUARE FOOT DETAILS	SCALE: 3/4"=1'
	DRAWN BY: PPS
FENCEPOST WITH SLEEVE IT	CHECKED BY:
	DATE: 10/2007
	DWG. NO.: sf fencepost with sleeve it

BRUTE DETAILS	SCALE: AS NOTED
	DRAWN BY: PPS
PINNING	CHECKED BY:
	DATE: 10/04
	DWG. NO.: brute pinning

VERSA-LOK SQUARE FOOT DETAILS	SCALE: 1 1/2"=1'
	DRAWN BY: PPS
CAP UNITS	CHECKED BY:
	DATE: 10/2007
	DWG. NO.: sf cap units

VERSA-LOK SQUARE FOOT DETAILS	SCALE: 1 1/2"=1'
	DRAWN BY: PPS
SQUARE FOOT UNIT	CHECKED BY:
	DATE: 10/2007
	DWG. NO.: square foot unit

BRUTE DETAILS	SCALE: AS NOTED
	DRAWN BY: PPS
BASE STEPPING	CHECKED BY:
	DATE: 10/04
	DWG. NO.: brute base stepping

VERSA-LOK SQUARE FOOT DETAILS	SCALE: 3/4"=1'
	DRAWN BY: PPS
CORNER DETAILS	CHECKED BY:
	DATE: 10/04
	DWG. NO.: brute corner details

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660-826-8818
www.ess-inc.com
MO Engineering Corp. # 2004005018

N

0 1"

SCALE: 1" = 10'

WILSHIRE HILLS PHASE III

3200 NE WILSHIRE DR

LEE'S SUMMIT JACKSON COUNTY, MISSOURI

7/13/2023

STATE OF MISSOURI JOSHUA DAVID LEHMEN NUMBER PE-2012000779 PROFESSIONAL ENGINEER

JOSHUA D. LEHMEN
PROFESSIONAL ENGINEER
PE-2012000779

IF ORIGINAL SIGNATURE OR DIGITAL AUTHENTICATION IS NOT PRESENT THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

Date

JULY 13, 2023

Revised

1 FEBRUARY 23, 2024

Design: JL Drawn: MJS

RETAINING WALL DETAILS

Sheet

RW2.01

CONSTRUCTION DOCUMENTS

ES&S PROJECT NO. 15925

P:\GENERAL PROJECTS\15925—JES-WILSHIRE-HILLS-3-ENG\CAD\15925 WALL PLAN .DWG 2/27/2024

FINISH LEGEND

CARPET:
CPT-1 MOHAWK GROUP: UNCHARTED RESTORE TILE, 359 ECOACTIVE, BRICK ASHLAR PATTERN
CPT-2 MOHAWK GROUP: UNCHARTED SOLVE II TILE, 359 ECOACTIVE, BRICK ASHLAR PATTERN
CP-1 MOWHAWK GROUP: BROADLOOM, BIGLOW NEW BASICS II, 26OZ, # 7928 MAJOLICA TIN
WOM-1 SHAW: PATH TILE - 5T034, PORTABELLA #34761, QUARTER TURN

LUXURY VINYL PLANK:
LVP-1 MOHAWK REXFORD COLLECTION: 12MIL, RP811, #890 STURDY BROWN

SHEET VINYL:
SV-1 MOHAWK PORTICO COLLECTION: #592 COOL SANDS

PORCELAIN TILE:
POR-1 DALTILE: ARTICULO, AR09 COLUMN GRAY, 18" X 18"; GROUT 1/8" MAPEI #93 WARM GRAY
POR-2 DALTILE: ARTICULO, AR09 COLUMN GRAY, 12" X 24"; GROUT 1/8" MAPEI #93 WARM GRAY, RUNNING BOND 33% OVERLAP
POR-3 DALTILE: ARTICULO, AR09 COLUMN GRAY, 6" X 24"; GROUT 1/8" MAPEI #93 WARM GRAY, RUNNING BOND 33% OVERLAP

FRP WALL PANEL:
FRP-1 MARLITE ARTIZAN VISUAL WALL PANELS, VERIFY COLOR WITH OWNER

BASE:
WB-1 WOOD BASE, FJ623, 9/16" X 3.25" COLONIAL, PT3; WOOD SHOE MOLD, FJ129, 7/16" X 11/16" COLONIAL, PT3
RB-1 RUBBER BASE, STYLE AND COLOR BY OWNERSHIP

PAINT:
PT-1 SHERWIN WILLIAMS, SW 7044 AMAZING GRAY, EGGSHELL
PT-2 SHERWIN WILLIAMS, SW 7042 SHOJI WHITE, FLAT
PT-3 SHERWIN WILLIAMS, SW 7042 SHOJI WHITE, SEMI-GLOSS
PT-4 SHERWIN WILLIAMS, SW 7069 IRON ORE, SEMI-GLOSS
PT-5 SHERWIN WILLIAMS, SW 7015 REPOSE GRAY, EGGSHELL
PT-6 SHERWIN WILLIAMS, SW 7017 DORIAN GRAY, EGGSHELL
PT-7 SHERWIN WILLIAMS, SW 7633 TAUPE TONE, EGGSHELL
PT-8 SHERWIN WILLIAMS, SW 7046 ANONYMOUS, EGGSHELL
PT-9 SHERWIN WILLIAMS, SW 9143 CADET, EGGSHELL
PT-10 SHERWIN WILLIAMS, SW 9127 AT EASE SOLDIER, EGGSHELL
PT-11 SHERWIN WILLIAMS, SW 9168 ELEPHANT EAR, EGGSHELL
PT-12 SHERWIN WILLIAMS, SW 7048 URBANE BRONZE, EGGSHELL
PT-13 SHERWIN WILLIAMS, SW 7048 URBANE BRONZE, SEMI-GLOSS

FINISH ABBREVIATIONS:
BCR BELOW CHAIR RAIL, VERIFY WITH PLANS AND OWNER
ACR ABOVE CHAIR RAIL, VERIFY WITH PLANS AND OWNER

WINDOW COMMENTS:
1. GLAZING DEEMED TO BE IN A HAZARDOUS LOCATION PER 2406.4 IBC 2018 SHALL BE TEMPERED/SAFETY GLAZING.

2. EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY MANUFACTURER'S DESIGNATION PER 2406 IBC 2018.

3. CONFIRM OPERATION OF SASH LOCKS AT TYPE 'A' UNITS WILL BE WITHIN 48" REQUIRED REACH RANGE. RE: A117.1-2009 SECTION 1003.9 & 1004.5.

4. ALL WINDOWS IN PUBLIC SPACES RECEIVE TRIM; RE: SPECS FOR TRIM PROFILE.

5. REFERENCE EXTERIOR ELEVATIONS FOR EXTERIOR WINDOW TRIM.

6. REFER TO CODE SHEET G-100 FOR ALL FIRE RATINGS

7. WINDOWS ON AND ABOVE SECOND FLOOR MUST HAVE WINDOW OPENING CONTROL DEVICES THAT COMPLY WITH ASTM F 2090.

8. WINDOW LOCATIONS PER A-400S UNO.

9. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 POUNDS (22.2 N) MAXIMUM.

PUBLIC DOOR COMMENTS:
1. FINAL HARDWARE SCHEDULE AND FINAL GROUPS TO BE DETERMINED BY DOOR SUB-CONTRACTOR. VERIFY FINAL HARDWARE INSTALLATION WITH CLIENT AND ARCHITECT.

2. DOOR BEING USED FOR EGRESS SHALL BE IN ACCORDANCE WITH IBC 2018 SECT. 1008 AND SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE.

3. ALL FRAMES TO BE 2" UNLESS OTHERWISE NOTED.

4. PAINT / STAIN ALL DOORS AND FRAMES.

5. VERIFY KEYING SCHEDULE WITH OWNER. ALL KEYS TO BE GIVEN TO OWNER AT SUBSTANTIAL COMPLETION.

6. DOOR SIGHTS AT UNIT ENTRY DOORS. RE: G-300 FOR HI/VI DOOR SIGHT

7. MT (TIMELY) FRAMES TO RECEIVE FIELD INSTALLED WOOD TRIM, TYP. ALL LOCATIONS.

8. ALL DOOR HARDWARE TO BE LEVER TYPE HARDWARE, UNLESS OTHERWISE NOTED.

9. ALL COMMON AREA RATED DOORS TO HAVE **SMOKE SEALS (GASKETS), CLOSURES AND LATCH** HARDWARE.

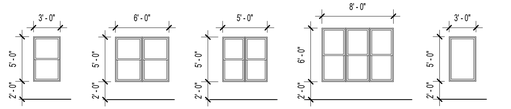
10. UNIT DOORS TO HAVE SPRING HINGES & LATCH TYP UNO.

11. ALL DOORS TO HAVE 32 CLEAR WIDTH PER SECTION 404.2.2 (ICC A117.1-2009).

PUBLIC ROOM FINISH COMMENTS:
1. PAINT BULKHEADS

GENERAL NOTES:
1. BASE FINISH
   A. RB-1 = VINYL TOED/TOELESS - STANDARD COLOR; EXTEND BASE 4" MIN.

WINDOW TYPES



A SINGLE SINGLE-HUNG
B DOUBLE SINGLE-HUNG
C DOUBLE SINGLE-HUNG
D TRIPLE SINGLE-HUNG
E FIXED INTERIOR SINGLE TEMPERED

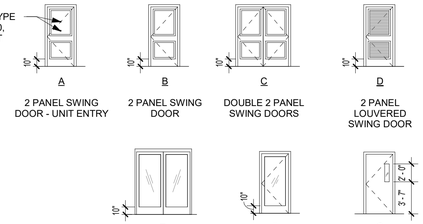
WINDOW SCHEDULE

Type Mark	Width	Height	Comments
A	3' - 0"	5' - 0"	
B	6' - 0"	5' - 0"	
C	5' - 0"	5' - 0"	
D	8' - 0"	6' - 0"	
E	3' - 0"	5' - 0"	

REFERENCE A-500s FOR DOOR AND WINDOW DETAILS

DOOR TYPES

DOOR SIGHTS AT TYPE "A" UNITS PER G-300, ONE SIGHT ONLY AT TYPE "B" UNITS



A 2 PANEL SWING DOOR - UNIT ENTRY
B 2 PANEL SWING DOOR
C DOUBLE 2 PANEL SWING DOORS
D 2 PANEL LOUVERED SWING DOOR
E DOUBLE GLASS PANEL SWING DOOR
F SINGLE GLASS PANEL SWING DOOR
G SINGLE SWING DOOR WITH LITE

PUBLIC ROOM FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
1000	VESTIBULE	WOM-1	WB-1	TBD BY OWNER	PT-2	
1001	LOBBY/MAIL	CPT-1	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
1002	OFFICE	CPT-1	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
1002.1	FILE	CPT-1	WB-1	PT-1	PT-2	
1003	SPRINKLER	SV-1	RB-1	--	PT-2	
1004	MECH.	SV-1	WB-1	--	PT-2	
1005	COMMUNITY	LVP-1	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
1006	UTILITY	SV-1	WB-1	--	PT-2	
1007	RR	LVP-1	RB-1	TBD BY OWNER	PT-2	
1008	ELEV. EQUIP.	SV-1	RB-1	--	PT-2	
2001	MULTI-PURPOSE	LVP-1	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
2002	RR	LVP-1	RB-1	TBD BY OWNER	PT-2	
3001	MEETING	CPT-1	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
3002	FITNESS	CPT-1	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
3003	RR	LVP-1	RB-1	TBD BY OWNER	PT-2	
C1-1	CORRIDOR	CPT-2	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
C1-2	CORRIDOR	CPT-2	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
C1-3	CORRIDOR	CPT-2	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
C2-1	CORRIDOR	CPT-2	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
C2-2	CORRIDOR	CPT-2	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
C2-3	CORRIDOR	CPT-2	WB-1	PT-6 BCR / PT-5 ACR	PT-2	
E1-1	ELEV.	POR-2	--	--	PT-2	
E1-2	ELEV.	POR-2	--	--	PT-2	
E1-3	ELEV.	POR-2	--	--	PT-2	
S1-1	STAIR 1	CP-1	WB-1	PT-5	PT-2	
S1-2	STAIR 1	CP-1	WB-1	PT-5	PT-2	
S1-3	STAIR 1	CP-1	WB-1	PT-5	PT-2	
S2-1	STAIR 2	CP-1	WB-1	PT-5	PT-2	
S2-2	STAIR 2	CP-1	WB-1	PT-5	PT-2	
S2-3	STAIR 2	CP-1	WB-1	PT-5	PT-2	

3 POR-3 AT FIREPLACE SURROUND, CABS. W/ PL COUNTER W/ SPLASH; PROVIDE F.R.P. WALL PROTECTION WITHIN 2 FT. OF SERVICE SINKS, URINALS, AND WATER CLOSETS TO A HEIGHT OF 4 FT. A.F.F.

3 CABS. W/ PL COUNTER W/ SPLASH; PROVIDE F.R.P. WALL PROTECTION WITHIN 2 FT. OF SERVICE SINKS, URINALS, AND WATER CLOSETS TO A HEIGHT OF 4 FT. A.F.F.

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3 CABS. W/ PL COUNTER W/ SPLASH; PROVIDE F.R.P. WALL PROTECTION WITHIN 2 FT. OF SERVICE SINKS, URINALS, AND WATER CLOSETS TO A HEIGHT OF 4 FT. A.F.F.

DOOR SCHEDULE - PUBLIC

Mark	Width	Height	Thickness	Type Mark	Door Material	Door Finish	Frame Material	Frame Finish	Fire Rating	Comments	Hardware Group
1000	6' - 0"	7' - 0"	0' - 1 3/4"	E	ALUM.	PRE-FINISH	ALUM. MT-1	PRE-FINISH		CLOSER, ACCESSIBLE CONTROLS, PUSH PULL BARS, WEATHER GASKET, TEMPERED, RAIN DRIP, THRESHOLD	3
1001	6' - 0"	6' - 8"	0' - 1 3/4"	E	ALUM.	PRE-FINISH	ALUM. MT-1	PRE-FINISH		CLOSER, ACCESSIBLE CONTROLS, PUSH PULL BARS, WEATHER GASKET, TEMPERED, KEY FOB OPERATION, MOTION SENSORS, EMERGENCY REQUEST TO EXIT BUTTON	4
1002	3' - 0"	6' - 8"	0' - 1 3/4"	F	ALUM.	PRE-FINISH	TIMELY MT-1	PT	20 MIN.	CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE, TEMPERED	11
1002.1	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT		LATCH HARDWARE	7
1003	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT	45 MIN.	CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE	9
1003.0	3' - 0"	6' - 8"	0' - 1 3/4"	B	HM	PT	HM MT-1	PT		CLOSER, WEATHER GASKET, THRESHOLD, RAIN DRIP, LATCH HARDWARE	8
1004	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT	45 MIN.	LATCH HARDWARE	12
1005	6' - 0"	6' - 8"	0' - 1 3/4"	E	ALUM.	PRE-FINISH	TIMELY MT-1	PT	20 MIN.	SPRING HINGES, SMOKE SEALS, SWEEPS, LATCH HARDWARE, TEMPERED	13
1005.0	3' - 0"	7' - 0"	0' - 1 3/4"	F	ALUM.	PRE-FINISH	ALUM. MT-1	PRE-FINISH		CLOSER, ACCESSIBLE CONTROLS, PUSH PULL BARS, WEATHER GASKET, TEMPERED, RAIN DRIP, THRESHOLD	14
1006	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT	45 MIN.	SPRING HINGES, SMOKE SEALS, SWEEPS, LATCH HARDWARE	16
1007	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT	20 MIN.	SPRING HINGES, SMOKE SEALS, SWEEPS, LATCH HARDWARE	6
1008	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT	45 MIN.	CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE	9
2002	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT	20 MIN.	SPRING HINGES, SMOKE SEALS, SWEEPS, LATCH HARDWARE	6
3001	6' - 0"	6' - 8"	0' - 1 3/4"	E	ALUM.	PRE-FINISH	TIMELY MT-1	PT	20 MIN.	SPRING HINGES, SMOKE SEALS, SWEEPS, LATCH HARDWARE, TEMPERED	10
3002	3' - 0"	6' - 8"	0' - 1 3/4"	F	ALUM.	PRE-FINISH	TIMELY MT-1	PT	20 MIN.	SPRING HINGES, SMOKE SEALS, SWEEPS, LATCH HARDWARE, TEMPERED	15
3003	3' - 0"	6' - 8"	0' - 1 3/4"	B	WD S.C.	PT	TIMELY MT-1	PT	20 MIN.	SPRING HINGES, SMOKE SEALS, SWEEPS, LATCH HARDWARE	6
C1-1	3' - 0"	7' - 0"	0' - 1 3/4"	F	ALUM.	PRE-FINISH	ALUM. MT-1	PT		CLOSER, ACCESSIBLE CONTROLS, PUSH PULL BARS, WEATHER GASKET, TEMPERED, RAIN DRIP, THRESHOLD, PANIC HARDWARE, LATCH HARDWARE	2
C2-1	3' - 0"	7' - 0"	0' - 1 3/4"	F	ALUM.	PRE-FINISH	ALUM. MT-1	PT		CLOSER, ACCESSIBLE CONTROLS, PUSH PULL BARS, WEATHER GASKET, TEMPERED, RAIN DRIP, THRESHOLD, PANIC HARDWARE, LATCH HARDWARE	2
S1-1	3' - 0"	6' - 8"	0' - 1 3/4"	G	HM	PRE-FINISH	HM MT-1	PT	60 MIN.	PANIC HARDWARE, CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE, PANIC HARDWARE, KICK PLATE, MAG HOLD	5
S1-1.0	3' - 0"	7' - 0"	0' - 1 3/4"	F	ALUM.	PRE-FINISH	ALUM. MT-1	PT		CLOSER, KEY FOB OPERATION, WEATHER GASKET, TEMPERED, LATCH HARDWARE, PANIC HARDWARE	1
S1-2	3' - 0"	6' - 8"	0' - 1 3/4"	G	HM	PRE-FINISH	HM MT-1	PT	60 MIN.	PANIC HARDWARE, CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE, PANIC HARDWARE, KICK PLATE, MAG HOLD	5
S1-3	3' - 0"	6' - 8"	0' - 1 3/4"	G	HM	PRE-FINISH	HM MT-1	PT	60 MIN.	PANIC HARDWARE, CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE, PANIC HARDWARE, KICK PLATE, MAG HOLD	5
S2-1	3' - 0"	6' - 8"	0' - 1 3/4"	G	HM	PRE-FINISH	HM MT-1	PT	60 MIN.	PANIC HARDWARE, CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE, PANIC HARDWARE, KICK PLATE, MAG HOLD	5
S2-1.0	3' - 0"	7' - 0"	0' - 1 3/4"	F	ALUM.	PRE-FINISH	ALUM. MT-1	PT		CLOSER, KEY FOB OPERATION, WEATHER GASKET, TEMPERED, LATCH HARDWARE, PANIC HARDWARE	1
S2-2	3' - 0"	6' - 8"	0' - 1 3/4"	G	HM	PRE-FINISH	HM MT-1	PT	60 MIN.	PANIC HARDWARE, CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE, PANIC HARDWARE, KICK PLATE, MAG HOLD	5
S2-3	3' - 0"	6' - 8"	0' - 1 3/4"	G	HM	PRE-FINISH	HM MT-1	PT	60 MIN.	PANIC HARDWARE, CLOSER, SMOKE SEALS, SWEEPS, LATCH HARDWARE, PANIC HARDWARE, KICK PLATE, MAG HOLD	5

PRINTS ISSUED
10/30/23 PERMIT SUBMITTAL

REVISIONS:
1 12/15/23 Addendum 1 - Response to City Comments
3 04/19/24 Addendum 3 - Response to City Comments #2

rosemann & ASSOCIATES P.C.
ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING
1526 Grand Boulevard
Kansas City, MO 64108-1404
p: 816.472.1448
w: www.rosemann.com

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSEN
NUMBER A-7365
REGISTERED ARCHITECT
04/19/24

WILSHIRE HILLS III
LEE'S SUMMIT, MISSOURI
MHDC Project No. #22-057 MT

SHEET TITLE
WINDOW / DOOR / FINISH SCHEDULES

PROJECT NUMBER: 23034

SHEET NUMBER:

A-600

4/19/2024 2:22:43 PM
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