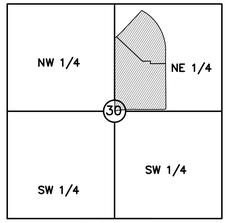
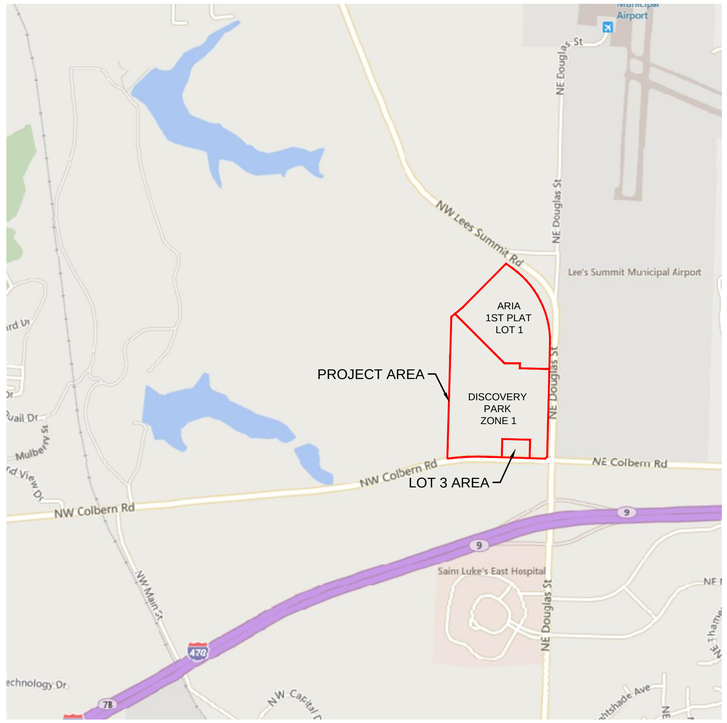
PRIVATE SITE DEVELOPMENT PLANS
FOR
THE VILLAGE AT DISCOVERY PARK LOT 3

SECTION 30, TOWNSHIP 48N, RANGE 31W
IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



S30, T48N, R31W
N.T.S.
VICINITY MAP

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER/DEVELOPER INTRINSIC DEVELOPMENT 3622 ENDEAVOR AVE. STE. 101 COLUMBIA, MO 65201 CONTACT: JOHN ODLE PHONE: 573.615.2252	UTILITY SERVICE NUMBERS NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER UTILITIES PHONE: 816-969-1900 NAME: SPIRE PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 816-471-5275 NAME: SPECTRUM PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959
ENGINEER OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: DAVID EICKMAN PHONE: 816.361.1177 EMAIL: DEICKMAN@OLSSON.COM	
SURVEYOR OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH PHONE: 816.361.1177 EMAIL: JROUDEBUSH@OLSSON.COM	
STUDIO OLSSON 1814 MAIN ST KANSAS CITY, MO 64108 CONTACT: CODY PERATT PHONE: 913.827.6232 EMAIL: CPERATT@OLSSON.COM	



OIL/GAS WELLS:

NO OIL OR GAS WELLS ARE LOCATED WITHIN PROJECT LIMITS.
INFORMATION OBTAINED FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY GEOSCIENCES TECHNICAL RESOURCE ASSESSMENT TOOL (GEOSTRAT).

FLOOD CERTIFICATION:

THE ENTIRE SITE IS LOCATED WITHIN ZONE X, "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD" AS DEPICTED ON THE FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 29095C0409G, REVISION DATE JANUARY 20, 2017.

CALL BEFORE YOU DIG 1-800-DIG-RITE MISSOURI ONE CALL SYSTEM

PROPERTY DESCRIPTION

LOT 3 OF DISCOVERY PARK ZONE 1:
DISCOVERY PARK ZONE 1 IS DESCRIBED AS:
A TRACT OF LAND IN THE NORTHEAST QUARTER OF SECTION 30 TOWNSHIP 48 NORTH, RANGE 31 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER SECTION; THENCE SOUTH 01°37'50" WEST, ON THE WEST LINE OF SAID QUARTER SECTION, 853.75 FEET TO A POINT ON THE SOUTHEAST LOT LINE OF LOT 1, LEE'S SUMMIT ROAD PUMP STATION, A SUBDIVISION RECORDED IN BOOK I 51 AT PAGE 90 IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE, AND THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE NORTH 50°41'15" EAST, ON SAID SOUTHEAST LOT LINE, 59.22 FEET; THENCE LEAVING SAID LOT LINE, SOUTH 45°00'00" EAST, 889.18 FEET; THENCE NORTH 90°00'00" EAST, 195.68 FEET; THENCE SOUTH 01°27'27" WEST, 62.94 FEET; THENCE SOUTH 88°32'29" EAST, 375.74 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF NE DOUGLAS STREET AS ESTABLISHED BY DOCUMENT NUMBER 2015E0017982 IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE ON SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 01°27'31" WEST, 1,114.58 FEET; THENCE SOUTH 46°40'17" WEST, 35.22 FEET TO THE INTERSECTION OF THE NORTHERLY RIGHT-OF-WAY LINE OF NE COLBURN ROAD AS ESTABLISHED BY A SURVEY PROVIDED BY HAMILTON STERRETT AND DOOLEY, PROJECT NUMBER 99021; THENCE ON SAID NORTHERLY RIGHT-OF-WAY LINE NORTH 88°06'56" WEST, 730.85 FEET; THENCE WESTERLY ALONG A CURVE TO THE LEFT HAVING AN INITIAL TANGENT BEARING OF NORTH 87°33'04" WEST WITH A RADIUS OF 2,904.93 FEET, A CENTRAL ANGLE OF 10°06'02" AND AN ARC DISTANCE OF 512.10 FEET TO THE SOUTHWEST CORNER OF THE SAID NORTHEAST QUARTER; THENCE NORTH 01°37'22" EAST, ON THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 30, A DISTANCE OF 1,328.05 FEET TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SAID NORTHEAST QUARTER; THENCE CONTINUING ON THE SAID WEST LINE, NORTH 01°37'50" EAST, 473.96 FEET TO THE POINT OF BEGINNING. CONTAINING 1,717,197 SQUARE FEET OR 39.42 ACRES, MORE OR LESS.

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER
DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TITLE SHEET
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/ITW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_TTL01_F2104643
date: 01.19.2024

SHEET
C100

DWG: F:\2021\04501-05000\021-04643-F\40-design\AutoCAD\final plans\Sheets\GNCV\C_TTL01_F2104643.dwg
DATE: Jan 19, 2024 8:14am
XREFS: C_PBNDY_D2104643 C_PTBLK_E2104643 C_PTBLK_F2104643
USER: aromanov

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PLANS IN THEIR POSSESSION ARE THE MOST CURRENT VERSION ISSUED, ARE FULLY COORDINATED WITH ALL SUBCONTRACTORS, AND PRESENT ON SITE AT ALL TIMES. CURRENT PLANS PREPARED BY OLSSON MAY BE OBTAINED AT THE DIRECTION OF OLSSON'S CLIENT. DIRECT REQUESTS TO OLSSON MAY REQUIRE ADDITIONAL AUTHORIZATIONS, AGREEMENTS, AND/OR FEES. PLEASE CONTACT THE ENGINEER FOR INFORMATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER, OWNER, AND DEVELOPER.
3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES AND ITEMS OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHOWN IN THE PLANS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES, AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7. THE CONTRACTOR SHALL NOT ENGAGE IN ACTIVITIES THAT MAY ENCROACH ON WATERS OF THE U.S., INCLUDING WETLANDS, UNTIL ANY NECESSARY PERMITS MAY BE OBTAINED. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL CONDITIONS DESCRIBED IN THE PERMIT.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, THE SAFETY OF ALL PERSONS INCLUDING VISITORS AND THE GENERAL PUBLIC, AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY THROUGHOUT THE PROJECT AND NOT BE LIMITED BY WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
9. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND OBTAIN ANY RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE DURING CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REPAIRING ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.
12. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER TO PERFORM A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

REFERENCES

1. ARCHITECTURAL AND STRUCTURAL ELEMENTS SHOWN IN THESE PLANS ARE FOR REFERENCE ONLY. CONTRACTORS AND SURVEYORS SHALL REFERENCE THEIR RESPECTIVE PLANS FOR DESIGN INFORMATION.
2. THE CONTRACTOR SHALL ADHERE TO THE SITE PREPARATION AND FILL RECOMMENDATIONS IN THE GEOTECHNICAL ENGINEERING REPORT ON DISCOVERY PARK LOT 3 DATED AUGUST 10TH, 2023. THE STANDARDS AND SPECIFICATIONS OF LEE'S SUMMIT, MO SHALL ALSO APPLY AND TAKE PRECEDENCE WHEN STRICTER THAN THE GEOTECHNICAL REPORT.
3. UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN THESE PLANS THE FOLLOWING SHALL APPLY;
   A. ALL CONSTRUCTION, INCLUDING THOSE LISTED BELOW, SHALL CONFORM TO THE LATEST CODES AND ORDINANCES OF LEE'S SUMMIT, MO.
   B. ALL CONSTRUCTION IN MoDOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST SPECIFICATIONS ADOPTED BY U.S. DEPARTMENT OF TRANSPORTATION AND MoDOT.
   C. ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM WITH THE CURRENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
   D. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE UTILITY COMPANIES..
   E. ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF LEE'S SUMMIT, MO AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE DELIVERY MANAGER AND COORDINATING ANY MAILBOXES THAT MAY BE DISTURBED. FAILURE TO DO SO MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.

EXISTING CONDITIONS

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INVESTIGATIONS AND MAKING THEIR OWN ASSUMPTIONS REGARDING SITE SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUDES THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. CONTACT THE ENGINEER REGARDING ANY DISCREPANCIES THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM THESE PLANS AS DESIGNED.
3. EXISTING CONDITIONS WERE DETERMINED THROUGH A VARIETY OF METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGERY, AVAILABLE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SITE IMPROVEMENTS PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.

CONSTRUCTION

1. THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY AS SHOWN IN SEPARATE PUBLIC STREET IMPROVEMENT PLANS. IF PLANS ARE NOT PROVIDED, CONTRACTOR SHALL COORDINATE AND PROVIDE CONTROLS TO THE SATISFACTION OF THE RIGHT-OF-WAY OWNER.
2. THE CONTRACTOR SHALL PROTECT ALL TREES OVER 3" CALIPER FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE ON THESE PLANS.
3. IN ADDITION TO THE CONDITIONS OF THE GEOTECHNICAL REPORT AND AS A MINIMUM THE CONTRACTOR SHALL PERFORM THE GRADING AS FOLLOWS:
   A. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. STRIPPING EXISTING TOPSOIL AND ORGANIC MATTER SHALL BE TO A MINIMUM DEPTH OF 6 INCHES. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON SITE IN AREAS DESIGNATED BY THE OWNER. CONTRACTOR SHALL REMOVE EXCESS STRIPPINGS AND EXCESS EXCAVATION WITHIN 30 DAYS OF COMPLETION OF GRADING OPERATIONS.
   B. AREAS TO RECEIVE FILL AND AREAS CUT TO SUBGRADE LEVEL SHALL BE SCARIFIED AND THE TOP 8-INCH DEPTH COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE SUBGRADE SHALL BE PROOF ROLLED WITH A MODERATELY HEAVY LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.
   C. FILL SHALL BE PLACED IN MAXIMUM OF 8 INCH LIFTS.
   D. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF 6 INCHES OVER ALL AREAS DISTURBED BY THE WORK. LARGE STONES, STICKS AND LUMPS SHALL BE REMOVED OR BROKEN UP, AND THE TOPSOIL SHALL BE LEVELED AND RAKED. ALL DISTURBED AREAS SHALL BE LANDSCAPED PER LANDSCAPE PLANS OR SHALL BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED.
   E. CONTRACTOR SHALL PROVIDE COMPACTION TEST RESULTS AS REQUIRED.
4. THE CONTRACTOR SHALL DISPOSE ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.
5. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. NOT ALL ADJUSTMENTS ARE INDICATED IN THE PLANS.
6. THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROUTES TO THE SITE AT CONCLUSION OF THE PROJECT.

SHOP DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS NOTIFIED ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND OBTAINED ENGINEER'S WRITTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED:
   A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
   B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
   C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
   D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
   E. ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.
2. SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO, THE FOLLOWING:
   A. ALL STORM SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.
   B. ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.
   C. ALL SITE FENCING AND RAILING INCLUDING ANY GATES.
   D. ALL LANDSCAPE AND RETAINING WALLS.
   E. ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN "APPROVED EQUAL" ALTERNATIVE.

EROSION CONTROL

1. CONTRACTOR SHALL CONSIDER ANY EROSION AND/OR SEDIMENT CONTROL SHOWN IN THIS PLAN SET, THE SWPPP, SEPARATE MASS GRADING AND SITE DISTURBANCE, OR ANY RELATED PLAN SET AS A MINIMUM REQUIREMENT. CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS AND INSTALLING ANY ADDITIONAL CONTROLS AS NECESSARY.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
3. AT ANY TIME DURING CONSTRUCTION THE CITY MAY REQUIRE ADDITIONAL EROSION/SILTATION CONTROL MEASURES TO BE INSTALLED. WHEN REQUIRED SUCH MEASURES SHALL BE INSTALLED WITHIN 48 HOURS OF HOURS OF NOTICE (VERBAL OR WRITTEN).
4. CONTRACTOR SHALL INSPECT ALL EROSION CONTROL DEVICES PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SCHEDULE. ALL COSTS ASSOCIATED WITH REPAIR OR RE-INSTALLATION, INCLUDING RELATED INCIDENTALS, WILL BE THE CONTRACTOR'S RESPONSIBILITY.
5. ALL DISTURBED AREAS SHALL BE LANDSCAPED, SEEDED OR SODDED, AS SHOWN ON THE LANDSCAPE PLAN.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED WITH A HEALTHY STAND OF PERMANENT VEGETATION. AREAS DISTURBED BY DEVICE REMOVAL SHALL BE IMMEDIATELY STABILIZED. SEED BLENDS OR SOD SHALL MATCH WHAT WAS USED IN AREAS SURROUNDING DISTURBANCE.
7. PRIOR TO LEAVING THE SITE THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, FLUMES, PIPES, GUTTERS, ETC. ARE CLEANED OUT AND WORKING PROPERLY.

GRADING

1. THE CONTOUR LINES AND SPOT ELEVATIONS SHOWN ARE TO FINISH GRADE, SURFACE OF PAVEMENT, TOP OF CURBS, ETC. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT PAVEMENT DEPTH FROM ELEVATIONS SHOWN.
2. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL.
3. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING AND SIDEWALKS WHEN FINISH LANDSCAPE MATERIALS ARE IN PLACE.
4. SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT, LIP OF CURB, OR FINISHED GRADE UNLESS OTHERWISE INDICATED. (SEE LEGEND)

SITE PLAN

1. ALL PAVEMENT DIMENSIONS ARE TO BACK OF CURB, OR EDGE OF PAVEMENT WHERE NO CURB IS PRESENT, UNLESS OTHERWISE NOTED.
2. INSTALLED PAVEMENT SHALL MATCH EXISTING PAVEMENT IN GRADE AND ALIGNMENT TO PROVIDE SMOOTH SURFACE TRANSITIONS. INSTALLED CURB & GUTTER SHALL MATCH EXISTING CURB & GUTTER IN SIZE AND TYPE OR CONTRACTOR SHALL INCLUDE A TRANSITION FROM NEW TO EXISTING OF NO LESS THAN 5' AS MEASURED ALONG BACK OF CURB.
3. ALL ASPHALT PAVING, IF PROPOSED, SHALL BE IN CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT ON DISCOVERY PARK LOT 3 DATED AUGUST 10TH, 2023. WHERE NOT COVERED BY THE ABOVE, ASPHALT PAVING SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF MoDOT.
4. ALL PCC PAVING, IF PROPOSED, SHALL BE IN CONFORMANCE WITH LOCAL CODES AND ORDINANCES AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT ON DISCOVERY PARK LOT 3 DATED AUGUST 10TH, 2023. WHERE NOT COVERED BY THE ABOVE, PCC PAVING SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF MoDOT.
5. CONCRETE PAVEMENT JOINTS SHALL BE CONSTRUCTED AS FOLLOWS (REFER TO HARDSCAPE PLANS FOR SPECIFIC TREATMENT OF THESE AREAS):
   A. CONTROL JOINTS SPACED AS SHOWN IN THESE PLANS OR AT INTERVALS NOT GREATER THAN 1.5x PANEL WIDTH OR 12 FEET (WHICHEVER IS SMALLER).
   B. CONTROL JOINTS SHALL BE TOOLED OR SAWCUT TO ¼ THE SLAB THICKNESS. LOCAL STANDARDS AND SPECIFICATIONS SHALL TAKE PRECEDENCE WHERE MORE STRICT THAN THOSE LISTED HERE.
   C. CONSTRUCTION JOINTS PLACED AT THE END OF EACH POUR AND WHEN PAVING OPERATIONS ARE SUSPENDED FOR 30 MINUTES OR MORE.
   D. ISOLATION JOINTS PLACED WHERE THE PAVEMENT ABUTS THE BUILDING, DRAINAGE STRUCTURES AND OTHER FIXED STRUCTURES, CONSTRUCTED WITH A 1/2" NON-EXTRUDING FILLER, CLOSED-CELL FOAM RUBBER OR A BITUMEN-TREATED FIBER-BOARD, AND WITH A THICKENED EDGE, INCREASED BY 20 PERCENT, TAPERED TO THE REGULAR THICKNESS IN 5 FEET.
   E. ALL EXPANSION JOINTS SHALL BE FILLED AND SEALED WITH A PLASTIC JOINT SEALANT MATERIAL.
6. ACCESSIBLE PARKING
   A. STALLS SHALL BE SIGNED WITH CITY/ADA APPROVED SIGN AND CONSTRUCTED IN STRICT ACCORDANCE WITH CITY/ADA CODES AND ORDINANCES.
   B. ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 2.00 PERCENT IN ANY DIRECTION. ACCESSIBLE SIDEWALKS HAVE A MAXIMUM CROSS SLOPE OF 2 PERCENT AND A MAXIMUM LONGITUDINAL SLOPE OF 5 PERCENT.
   C. STALLS SHALL BE MARKED BY THE INTERNATIONAL HANDICAPPED SYMBOL AT INDICATED PARKING SPACES. USE A SUITABLE TEMPLATE THAT WILL PROVIDE A PAVEMENT MARKING WITH SHARP EDGES AND ENDS.
7. PAVEMENT MARKINGS SHALL NOT BE APPLIED UNTIL LAYOUT, COLORS AND PLACEMENT HAVE BEEN VERIFIED WITH THE ARCHITECT AND ENGINEER. THE INSTALLED PAVEMENT IS ALLOWED TO AGE AS RECOMMENDED BY THE MANUFACTURER (MINIMUM OF 24 HOURS), AND THE PAVEMENT SURFACE HAS BEEN SWEPT AND CLEANED.
8. PAVEMENT MARKINGS SHALL INCLUDE TRAFFIC LANES, PARKING BAYS, AREAS RESTRICTED TO HANDICAPPED PERSONS, CROSSWALKS, AND OTHER DETAIL PAVEMENT MARKINGS SHOWN IN THESE PLANS.
9. ALL PARKING LOT STRIPING SHALL BE SINGLE LINE 4" WIDE WHITE STRIPES UNLESS OTHERWISE INDICATED WITHIN THESE PLANS. ALL ROAD STRIPING SHALL BE AS INDICATED WITHIN THESE PLANS.
10. CURBS AT FIRE LANES AS DESIGNATIONS BY THE FIRE MARSHAL SHALL BE PAINTED OR OTHERWISE INDICATED PER CITY OF CITY CODES AND ORDINANCES.
11. PAINT FOR MARKING PAVEMENT SHALL CONFORM TO FEDERAL HIGHWAY MARKING STANDARDS (FHMS) AND CITY OF LEE'S SUMMIT CODES AND ORDINANCES. USE FLAT BLACK, WHITE, OR YELLOW AS DIRECTED WITHIN PLANS OR IN CONFORMANCE WITH THE FHMS. UNLESS OTHERWISE SPECIFIED USE LATEX, WATER-BASE EMULSION, READY-MIXED, COMPLYING WITH FS TT-P-1952 WITH DRYING TIME OF LESS THAN 45 MINUTES.
12. APPLY ALL MARKINGS USING APPROVED MECHANICAL EQUIPMENT (WITH PROVISIONS FOR CONSTANT AGITATION OF PAINT), CAPABLE OF APPLYING THE MARKING WIDTHS AS SHOWN AND A MINIMUM WET FILM THICKNESS OF 15 MILS. USE PNEUMATIC SPRAY GUNS FOR HAND APPLICATION OF PAINT. ALL PAINTING EQUIPMENT AND OPERATIONS SHALL BE UNDER THE CONTROL OF EXPERIENCED TECHNICIANS THOROUGHLY FAMILIAR WITH EQUIPMENT AND MATERIALS AND MARKING LAYOUTS.

WATER MAIN

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH UTILITY OWNER.
2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF FITTING OR WALL OF VAULT.
3. COORDINATES ARE PROVIDED ALONG PIPE CENTERLINE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING INSTALLATIONS.
4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF WATER.
5. WATER PIPE TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
6. ALL PRIVATE WATER LINES SHALL BE A MINIMUM OF 48 INCHES AND MAXIMUM OF 60 INCHES BELOW THE FINISHED GRADE ELEVATIONS SHOWN HEREIN UNLESS OTHERWISE NOTED.
7. IF AN AS-BUILT OF A WATER LINE IS REQUIRED OR EXPECTED THE CONTRACTOR SHALL NOT BACKFILL THE TRENCH UNTIL AN AS-BUILT SURVEY IS CONDUCTED.
8. DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR AND AS REQUIRED BY THE UTILITY OWNER.
9. ALL EXISTING FIRE HYDRANTS ON SITE OR IN THE RIGHT-OF-WAY BETWEEN PROPERTY AND ROADWAY SHALL BE REPAINTED PER LOCAL CODES AND ORDINANCES.
10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.

DRY UTILITY

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH UTILITY OWNER.
2. ALL ON-SITE WIRING AND CABLES SHALL BE PLACED UNDERGROUND AND WITHIN CONDUIT UNLESS OTHERWISE SPECIFIED IN THESE PLANS. IF NOT SPECIFIED, ALL CONDUIT SHALL BE IN CONFORMANCE WITH UTILITY OWNER STANDARDS AND SPECIFICATIONS.
3. TELEPHONE AND COMMUNICATION SERVICE ROUTING AND CONDUITS, IF SHOWN AT ALL, ARE SUGGESTED ALIGNMENTS ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AS REQUIRED BY MEP AND RELATED PLANS AS WELL AS SERVICE PROVIDER PRIOR TO PAVEMENT INSTALLATION.
4. ALL CONDUIT SHALL BE SCHEDULE 40 PVC PIPE AND SIZED PER MEP PLANS OR AS NOTED. CONDUIT SHALL BE SUFFICIENTLY FLEXIBLE TO ALLOW IT TO CONFORM TO MINOR CHANGES IN TRENCH DIRECTION OR ELEVATION. ALL OTHER BENDS SHALL BE MADE USING PRE-FORMED SWEEPS.

ESTIMATE OF QUANTITIES

MATERIAL	UNIT	AMOUNT
EARTHWORK		
CUT	C.Y.	533.00
FILL	C.Y.	2185.00
PAVEMENT		
6" PCC PAVEMENT	S.Y.	173.11
5.5" ASPHALT PAVEMENT (LIGHT-DUTY)	S.Y.	1403.33
6.5" ASPHALT PAVEMENT (HEAVY-DUTY)	S.Y.	2907.22
4" SOLID WHITE STRIPING	L.F.	1159.00
PARKING SIGN	EA	4.00
TYPE CG-1 CURB AND GUTTER	L.F.	1803.72
RIBBON CURB	L.F.	50.00
TEMPORARY ASPHALT CURB	L.F.	397.67
5' WIDE CONCRETE SIDEWALK	L.F.	1612.00
CURB RAMPS W/ DETECTABLE WARNING	EA	2.00
STORM SEWER		
4" HDPE	L.F.	21.50
6" HDPE	L.F.	12.00
15" HDPE	L.F.	444.26
5'X3' STD CURB INLET	EA.	1.00
8" NYLOPLAST INLINE DRAIN	EA	1.00
10" NYLOPLAST INLINE DRAIN	EA	1.00
12" NYLOPLAST INLINE DRAIN W/ 12" DOMED GRATE	EA	4.00
15" NYLOPLAST DRAIN BASIN W/ SOLID GRATE	EA	1.00
15" NYLOPLAST DRAIN BASIN W/ 15" DOMED GRATE	EA	1.00
15" NYLOPLAST DRAIN BASIN W/ 18" DOMED GRATE	EA	1.00
18" NYLOPLAST DRAIN BASIN W/ 18" SOLID GRATE	EA	1.00
CONNECTION TO EXISTING STORM STRUCTURE	EA	2.00
WATER MAIN		
1" PVC IRRIGATION LINE	L.F.	3858.20
1.5" PVC IRRIGATION LINE	L.F.	66.20
2" PVC IRRIGATION LINE	L.F.	995.00
3" PVC	L.F.	48.00
6" PVC	L.F.	49.70
8" DIP	L.F.	50.00
8" C900 PVC	L.F.	647.73
3" BENDS	EA	3.00
4" BENDS	EA	1.00
8" BENDS	EA	4.00
8"X4" TEES	EA	2.00
8"X6" TEES	EA	1.00
3" GATE VALVE	EA	1.00
4" GATE VALVE	EA	1.00
8" GATE VALVE	EA	1.00
4"X3" REDUCER	EA	1.00
FIRE HYDRANT ASSEMBLY W/ TEES	EA	3.00
CHLORINATION AND CONNECTION TO EXISTING WATER STRUCTURE	EA	1.00
SANITARY SEWER		
8" WYE	EA	2.00
GREASE INTERCEPTOR	EA	1.00
DRY UTILITIES		
PVC CONDUIT FOR ELECTRIC SERVICE	LF	293.00
TRANSFORMER PAD	EA	1.00
EROSION CONTROL		
INLET PROTECTION	EA	15.00
DIVERSION BERM	L.F.	294.77
SILT FENCE	L.F.	1191.45
SEED & MULCH	AC.	1.34
RETAINING WALL	S.F.	126.84

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STATE OF MISSOURI
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NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by:	DB/BM/GS/OS/TW
checked by:	AR/JN
approved by:	DE
QA/QC by:	JS/NH
project no.:	F21-04643
drawing no.:	C_TTL01_F2104643
date:	01.19.2024

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PROJECT LOCATION MAP
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by:	DB/BM/GS/OS/TW
checked by:	AR/JN
approved by:	DE
QA/QC by:	JS/NH
project no.:	F21-04643
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USER: aromanov T_PBASE_D02104643

THE VILLAGE AT DISCOVERY PARK
LOT 4
(LOT 4 IMPROVEMENTS PER SEPARATE PLANS)

THE VILLAGE AT
DISCOVERY PARK
LOT 3

THE VILLAGE AT
DISCOVERY PARK
LOT 1

EXISTING 36" HDPE STORM SEWER
30.00' S.E.
EXISTING 18" HDPE STORM SEWER
EXISTING STORM MANHOLE
EXISTING 30" HDPE STORM SEWER
EXISTING CURB INLET
EXISTING SANITARY SEWER LINE
EXISTING SANITARY MANHOLE
15.00' D.E.
EXISTING STORM MANHOLE
EXISTING CURB INLET
EXISTING CURB INLET
EXISTING 15" HDPE STORM SEWER
EXISTING SANITARY SEWER LINE INSTALLED PER PUBLIC SANITARY SEWER PLANS FOR THE VILLAGE AT DISCOVERY PARK
EXISTING 30" HDPE STORM SEWER
DISCOVERY AVE
N01°27'31"E 230.30'
20.00' BK-BK
30.00' S.E.
15.00' D.E.
EXISTING STORM MANHOLE
EXISTING SANITARY MANHOLE
COLBERN TURN LANES TO BE INSTALLED PER ZONE 1 SITE DEVELOPMENT PLANS
N88°00'43"W 28.40'
EXISTING 8" WATER MAIN TO BE ABANDONED WITH COLBERN RD EXPANSION
EXISTING GAS LINE
15.00' B.L.
N88°00'32"W 145.03'
PROPOSED R/W LINE
EXISTING R/W LINE
EXISTING 10" GAS LINE
12.65' UE
N83°30'16"W 10.86'
N88°06'56"W 169.20'
EXISTING 5'x5' JUNCTION BOX
EXISTING 5' SIDEWALK INSTALLED WITH COLBERN RD PUBLIC IMPROVEMENTS
EXISTING 8'x3' CURB INLET
EXISTING 20" WATER MAIN
EXISTING 4'x3' CURB INLET
EXISTING 12" WATER MAIN
EXISTING FIRE HYDRANT TO BE REMOVED WITH COLBERN RD EXPANSION
EXISTING FIRE HYDRANT TO BE INSTALLED WITH COLBERN RD PUBLIC IMPROVEMENTS
EXISTING 15" HDPE STORM SEWER
NE COLBERN RD
EXISTING 18" HDPE STORM SEWER
EXISTING 15" HDPE STORM SEWER
EXISTING 18" HDPE STORM SEWER
EXISTING 6'x3' CURB INLET
EXISTING 5' SIDEWALK INSTALLED WITH COLBERN RD EXPANSION PROJECT
EXISTING 36" HDPE STORM SEWER
111.00' R/W
EXISTING COMMUNICATION LINE
EXISTING R/W LINE
EXISTING FIRE HYDRANT
PROPOSED R/W LINE
EXISTING FIRE HYDRANT
15.00' D.E.
EXISTING 36" HDPE STORM SEWER
N88°32'29"W 353.43'
EXISTING 5'x3' CURB INLET
EXISTING 36" HDPE STORM SEWER INSTALLED PER PUBLIC STORM SEWER PLANS FOR THE VILLAGE AT DISCOVERY PARK
15.00' D.E.
EXISTING 5'x5' CURB INLET
N01°27'31"E 234.12'
15.00' D.E.
EXISTING 36" HDPE STORM SEWER

EXISTING CONDITIONS LEGEND

THIS LEGEND APPLIES TO ALL SHEETS IN THIS PLAN SET. ALL VARIANCES SHALL BE NOTED IN INDIVIDUAL SHEET LEGENDS.

- EXISTING PROPERTY BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EXISTING EASEMENT
- EXISTING STORM SEWER
- FM — EXISTING PRESSURE PIPE
- SS — SS — EXISTING SANITARY SEWER
- W — W — EXISTING WATER PIPE
- P-UG — EXISTING POWER SERVICE
- P-OH — EXISTING OVERHEAD SERVICE
- COMM — EXISTING COMMUNICATION SERVICE
- 999 — EXISTING GRADE MAJOR CONTOUR
- 999 — EXISTING GRADE MINOR CONTOUR

EASEMENT LEGEND

DE DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT
BL BUILDING SETBACK EASEMENT
UE UTILITY EASEMENT

N

0' 10' 20' 40'
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EXISTING CONDITIONS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

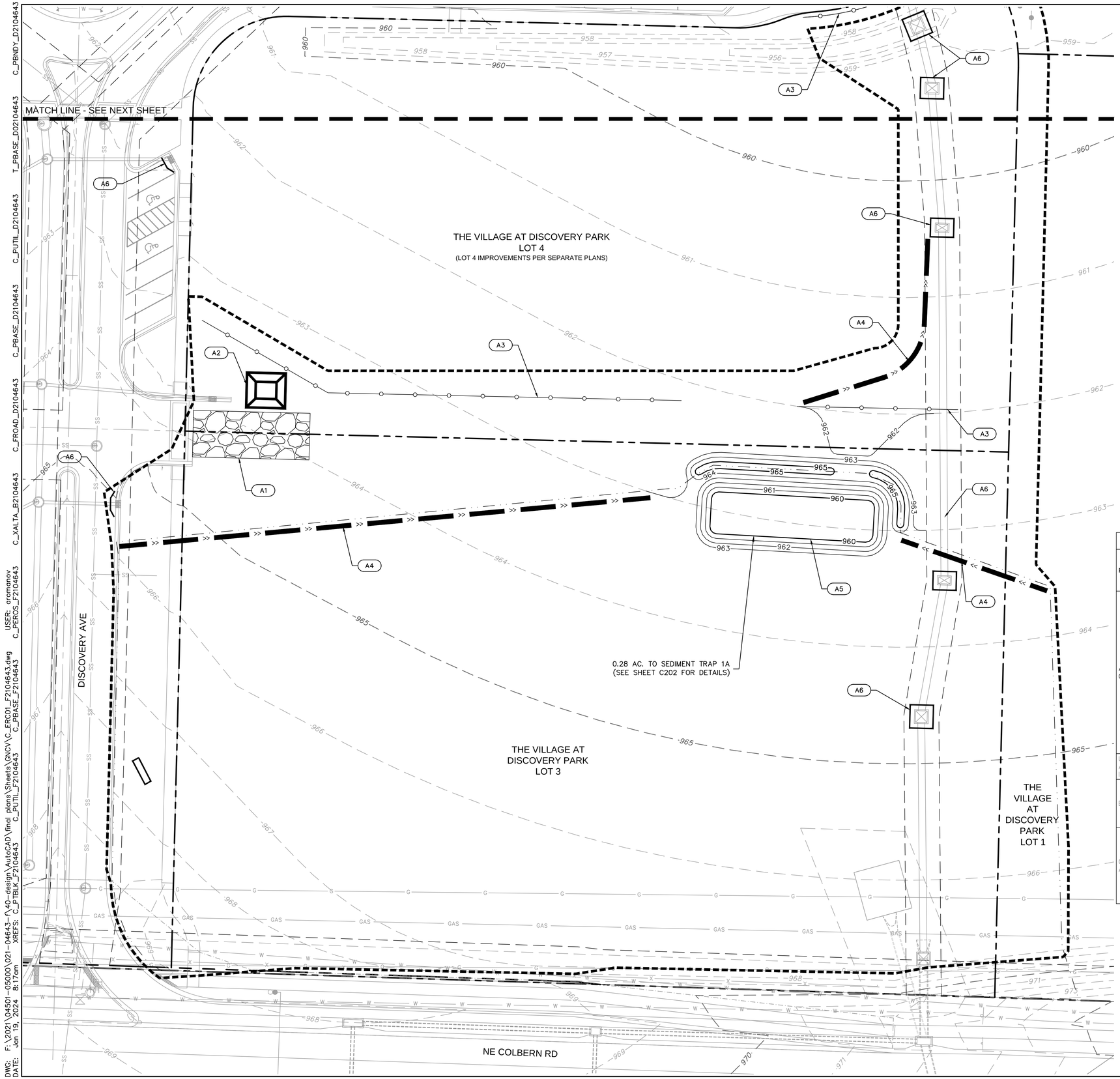
LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/ITW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_EXC01_F2104643
date: 01.19.2024

SHEET
C103

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GRADING LEGEND

- LOT LINE/PROPERTY BOUNDARY
- 999 FINISHED GRADE MAJOR CONTOUR
- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR

LEGEND	
PHASE A	
	SILT FENCE
<<	TEMPORARY DIVERSION BERM
	AREA INLET PROTECTION
	INLET PROTECTION
	CONCRETE WASHOUT
	TEMPORARY STONE CONSTRUCTION ENTRANCE
	DRAINAGE AREA TO BASIN/TRAP
	LIMITS OF DISTURBANCE

NOTE:
THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

CONTRACTOR TO KEEP SWPPP REPORTS AND MDNR PERMIT IN THE ON-SITE CONSTRUCTION OFFICE TRAILER. TRAILER LOCATION TO BE DETERMINED BY CONTRACTOR

SEDIMENT TRAPS MUST BE FULLY INSTALLED PRIOR TO ANY SITE DISTURBANCE WITHIN THE TRIBUTARY AREA.

SEDIMENT TRAPS ARE SHOWN AS NEEDED PRIOR TO DISTURBING THE SITE. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING ALL SEDIMENT RUNOFF DURING TRANSITION TO FINAL CONDITIONS AS SHOWN ON SHEET C204.

EROSION CONTROL PHASING CHART = 2.93 ACRES DISTURBED

PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES:
A – PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A2	CONCRETE WASHOUT	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A3	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A4	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05. AND CONTRACTOR SHALL ADJUST AS NECESSARY THROUGHOUT CONSTRUCTION TO ENSURE SEDIMENT REMAINS CONTROLLED ON SITE.
	A5	SEDIMENT TRAP	D	INSTALL PER APWA DETAIL ESC-08
	A6	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
B – INTERM	B1	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03
	B2	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	MAINTAIN ALL INSTALLED EROSION CONTROL DEVICES			
C – DISTURBED AREA STABILIZATION	C1	ESTABLISH SEEDING AND STABILIZATION OUTSIDE OF SEDIMENT BASIN AND TRAPS		SITE STABILIZATION PER LOCAL CODES AND ORDINANCES. AT A MINIMUM STABILIZATION SHALL CONFORM WITH APWA SECTION 2406. COORDINATE ALL STABILIZATION WITH EROSION CONTROL MEASURES INDICATED IN SITE DEVELOPMENT PLANS.

N

0' 10' 20' 40'
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DAVID L. EICKMAN
NUMBER PE-2009015436
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PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REVISIONS			
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN (PHASE A)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

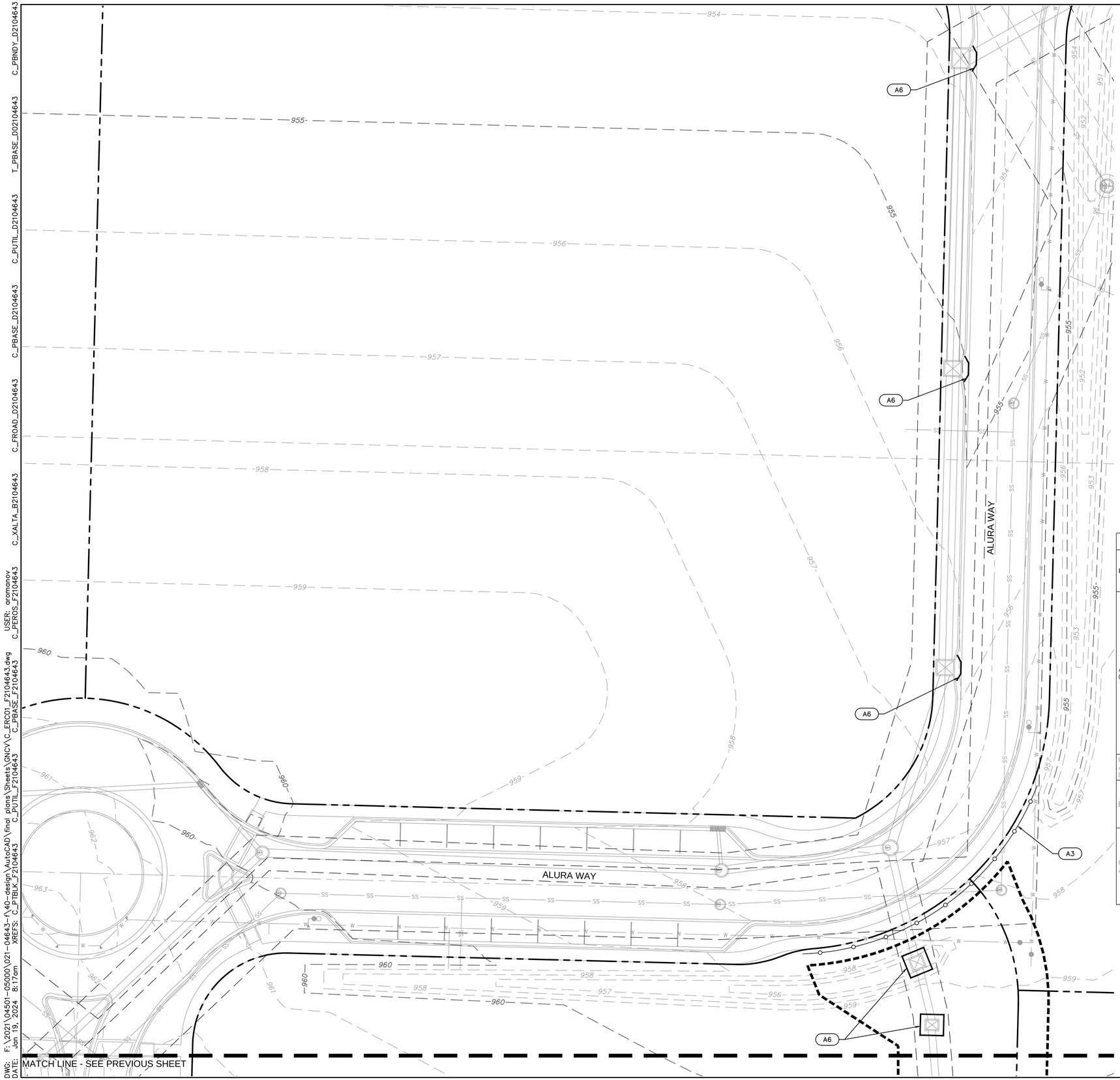
2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
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project no.: F21-04643
drawing no.: C_ERC01_F2104643
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SHEET
C200

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DATE: Jan 19, 2024 8:17am
XREFS: C_PBASE_F2104643 C_PUTIL_F2104643 C_PTBLK_F2104643



GRADING LEGEND

- LOT LINE/PROPERTY BOUNDARY
- 999 FINISHED GRADE MAJOR CONTOUR
- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR

LEGEND	
PHASE A	
	SILT FENCE
<<	TEMPORARY DIVERSION BERM
	AREA INLET PROTECTION
	INLET PROTECTION
	CONCRETE WASHOUT
	TEMPORARY STONE CONSTRUCTION ENTRANCE
	DRAINAGE AREA TO BASIN/TRAP
	LIMITS OF DISTURBANCE

NOTE:
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EROSION CONTROL PHASING CHART = 2.93 ACRES DISTURBED

PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES:
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	MAINTAIN ALL INSTALLED EROSION CONTROL DEVICES			
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N

0' 10' 20' 40'
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MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL PLAN (PHASE A CONT'D)
PRIVATE SITE DEVELOPMENT PLANS

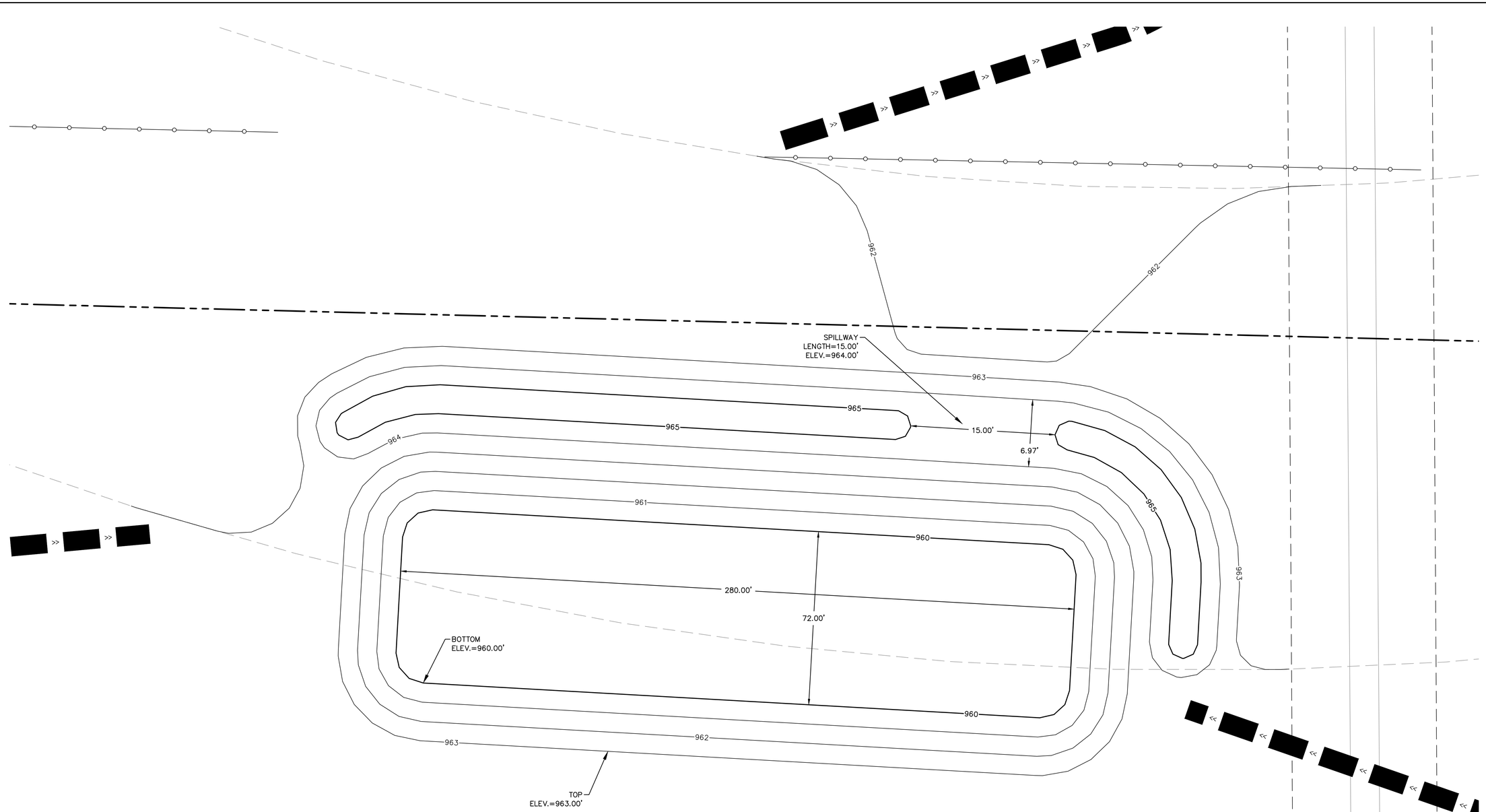
THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_ERC01_F2104643
date: 01.19.2024

SHEET
C201



SEDIMENT TRAP 1A

TRAP	TRIBUTARY AREA	REQUIRED VOLUME	BERM HEIGHT "H"	SPILLWAY HEIGHT "HO"	STORAGE VOLUME	BERM TOP WIDTH "W"	BOTTOM ELEVATION	RIPRAP ELEVATION	TOP OF BERM ELEVATION	SPILLWAY LENGTH	EXCAVATED DEPTH	EXCAVATED VOLUME	SEDIMENT CLEANOUT VOLUME	SEDIMENT CLEANOUT ELEVATION
	(AC.)	(C.F.)	(FT.)	(FT.)	(C.F.)	(FT.)	(FT.)	(FT.)	(FT.)	(FT.)	(FT.)	(C.F.)	(C.F.)	(FT.)
1A	2.46	4428.00	2	1	5404.34	2	960	964	965	15	2	1793.16	1080.87	960.76

GRADING LEGEND

- LOT LINE/PROPERTY BOUNDARY
- 999 FINISHED GRADE MAJOR CONTOUR
- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR

N

0' 2.5' 5' 10'
SCALE IN FEET

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Missouri Certificate of Authority #001592
1301 Burlington Street
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TEL 816.361.1177
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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SEDIMENT TRAP A DETAILS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

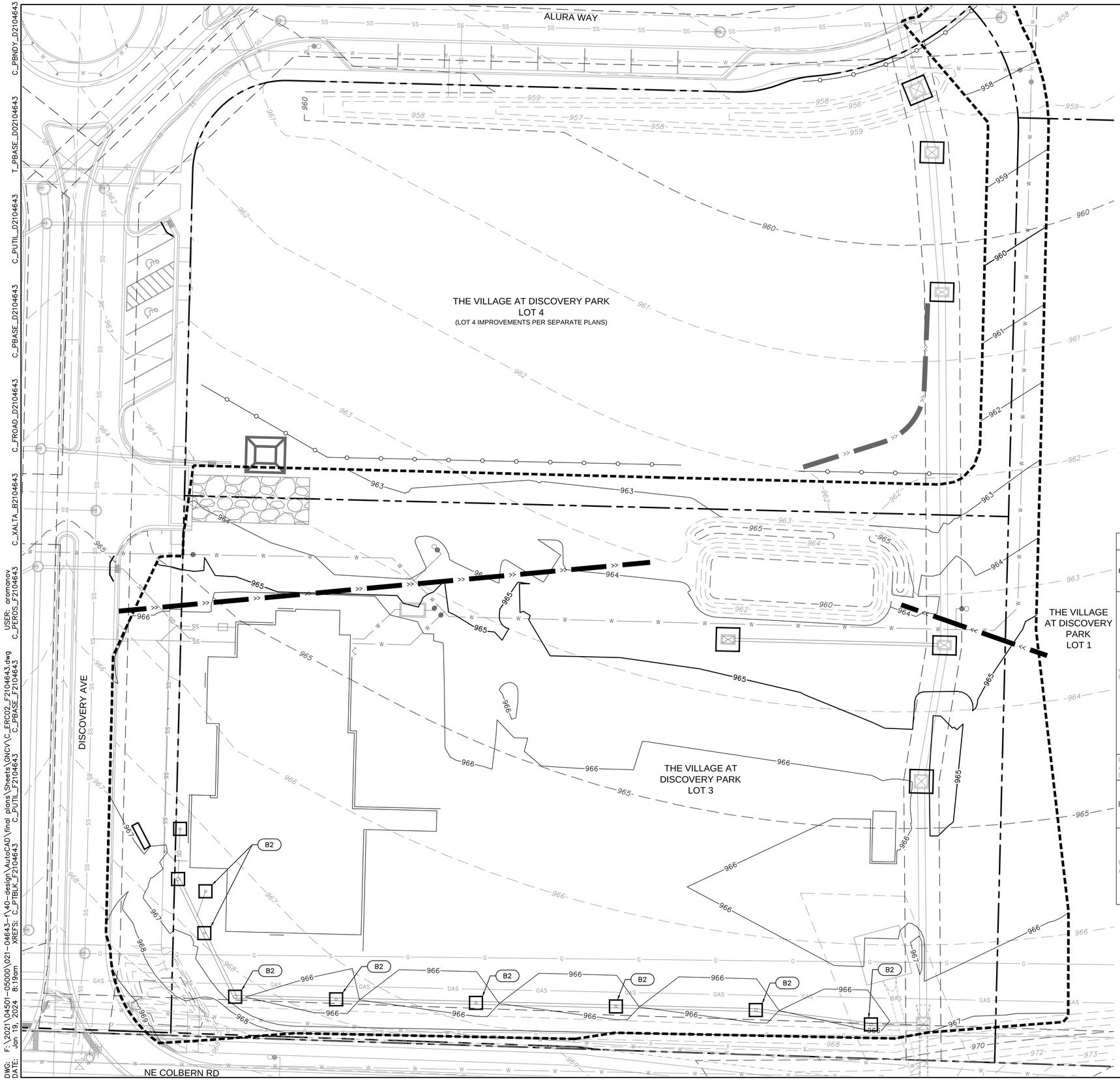
LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
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approved by: DE
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project no.: F21-04643
drawing no.: C_ERC01_F2104643
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SHEET
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GRADING LEGEND

- LOT LINE/PROPERTY BOUNDARY
- 999 FINISHED GRADE MAJOR CONTOUR
- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR

LEGEND		
PHASE A	PHASE B	
		SILT FENCE
		TEMPORARY DIVERSION BERM
		AREA INLET PROTECTION
		INLET PROTECTION
		CONCRETE WASHOUT
		TEMPORARY STONE CONSTRUCTION ENTRANCE
		DRAINAGE AREA TO BASIN/TRAP
		LIMITS OF DISTURBANCE

NOTE:
THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

CONTRACTOR TO KEEP SWPPP REPORTS AND MDNR PERMIT IN THE ON-SITE CONSTRUCTION OFFICE TRAILER. TRAILER LOCATION TO BE DETERMINED BY CONTRACTOR

SEDIMENT TRAPS MUST BE FULLY INSTALLED PRIOR TO ANY SITE DISTURBANCE WITHIN THE TRIBUTARY AREA.

SEDIMENT TRAPS ARE SHOWN AS NEEDED PRIOR TO DISTURBING THE SITE. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING ALL SEDIMENT RUNOFF DURING TRANSITION TO FINAL CONDITIONS AS SHOWN ON SHEET C204.

EROSION CONTROL PHASING CHART = 2.93 ACRES DISTURBED

PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES:
A - PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A2	CONCRETE WASHOUT	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A3	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A4	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05, AND CONTRACTOR SHALL ADJUST AS NECESSARY THROUGHOUT CONSTRUCTION TO ENSURE SEDIMENT REMAINS CONTROLLED ON SITE.
	A5	SEDIMENT TRAP	D	INSTALL PER APWA DETAIL ESC-08
	A6	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
B - INTERM	B1	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03
	B2	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	MAINTAIN ALL INSTALLED EROSION CONTROL DEVICES			
C - DISTURBED AREA STABILIZATION	C1	ESTABLISH SEEDING AND STABILIZATION OUTSIDE OF SEDIMENT BASIN AND TRAPS		SITE STABILIZATION PER LOCAL CODES AND ORDINANCES. AT A MINIMUM STABILIZATION SHALL CONFORM WITH APWA SECTION 2406. COORDINATE ALL STABILIZATION WITH EROSION CONTROL MEASURES INDICATED IN SITE DEVELOPMENT PLANS.

N

0' 10' 20' 40'
SCALE IN FEET

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER
DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL PLAN (PHASE B)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

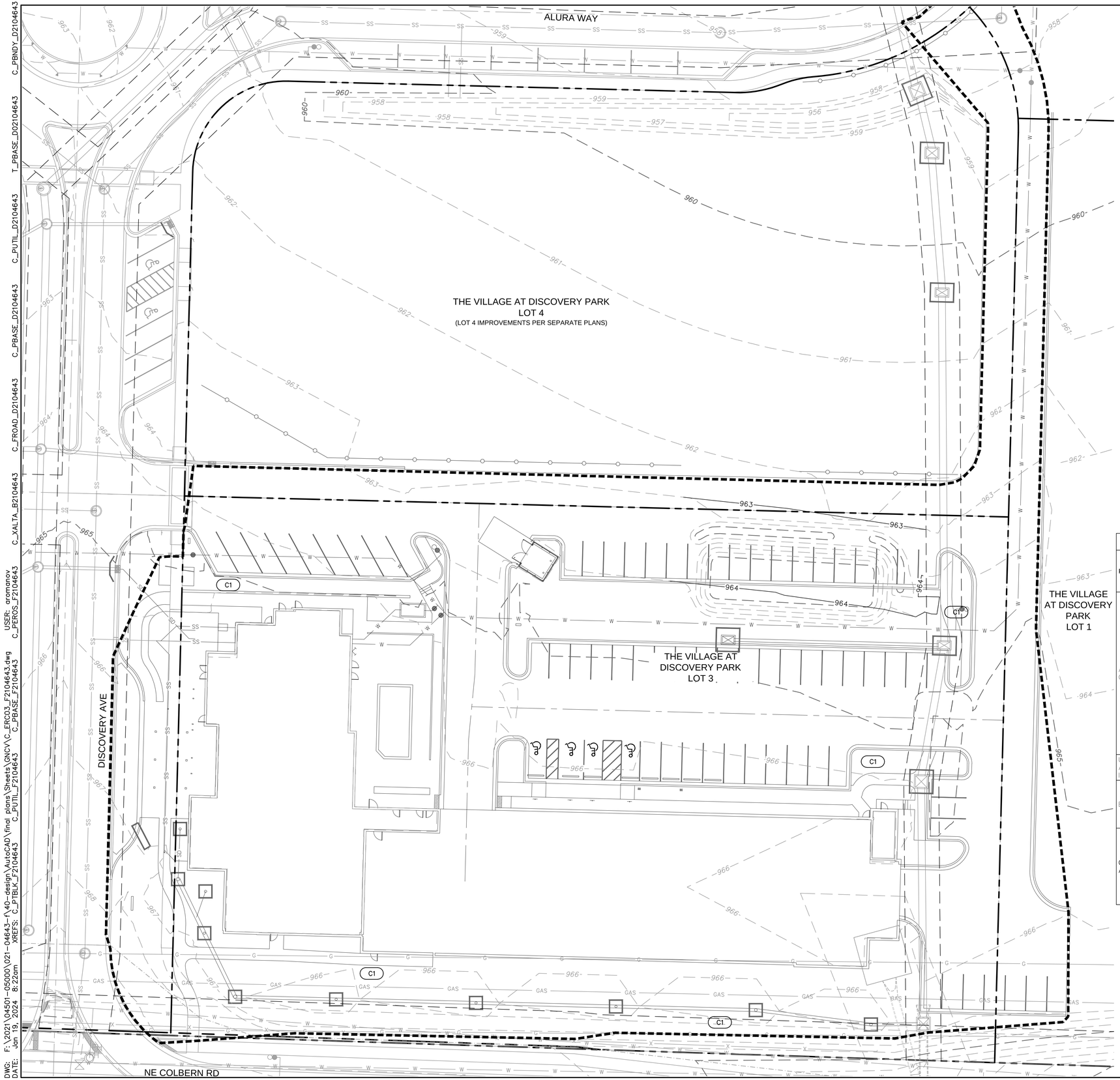
2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21.04643
drawing no.: C_ERC02_F2104643
date: 01.19.2024

SHEET
C203

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GRADING LEGEND

- LOT LINE/PROPERTY BOUNDARY
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- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR

LEGEND		
PHASE A&B	PHASE C	
		SILT FENCE
		TEMPORARY DIVERSION BERM
		INLET PROTECTION
		CONCRETE WASHOUT
		TEMPORARY STONE CONSTRUCTION ENTRANCE
		DRAINAGE AREA TO BASIN/TRAP
		LIMITS OF DISTURBANCE

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PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES:
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N

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SCALE IN FEET

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER
DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL PLAN (PHASE C)
PRIVATE SITE DEVELOPMENT PLANS

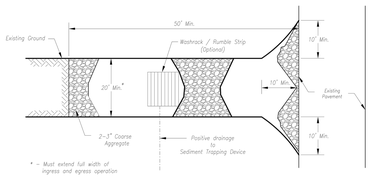
THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST
LEE'S SUMMIT, MISSOURI

2023

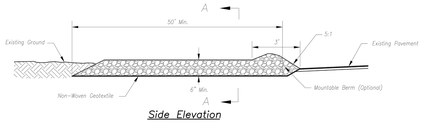
drawn by:	DB/BMI/GS/OS/ITW
checked by:	AR/JN
approved by:	DE
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SHEET
C204

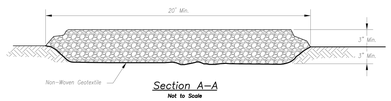
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USER: aromanov



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
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 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 sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

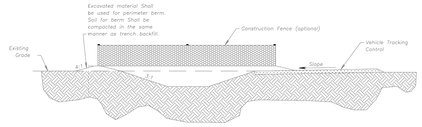
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

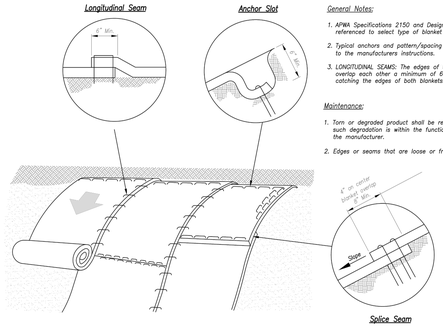


CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01
	ADOPTED: 10/24/2016

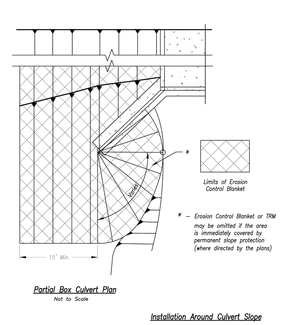


General Notes:

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

Maintenance:

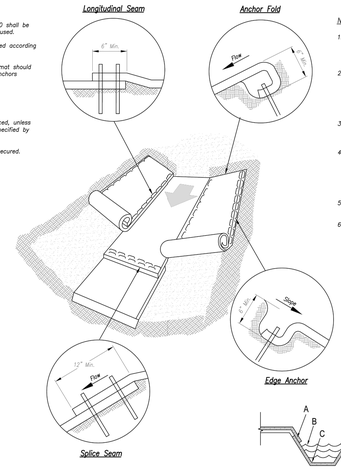
1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.



* – Erosion Control Blanket or TRM may be omitted if the area is immediately covered by permanent slope protection (where directed by the plans)

Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. SPLICE SEAM: When splices are necessary, overlap and a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.



Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

Critical Points:

A – Overlaps and seams;

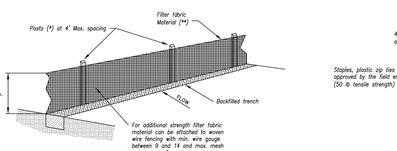
B – Projected water line;

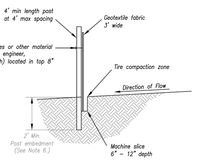
C – Channel bottom / side slope vertices;

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS	STANDARD DRAWING NUMBER ESC-02
	ADOPTED: 10/24/2016





(*) POSTS
– MIN. LENGTH 4'
– HARDWOOD 1 ¾" x 1 ¾"
– NO.2 SOUTHERN PINE 2 ⅜" x 2 ⅜"
– STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS
Not to Scale

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

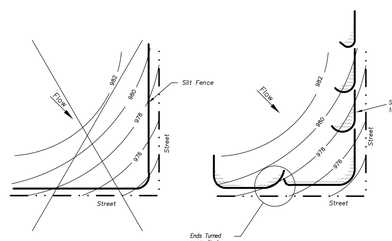
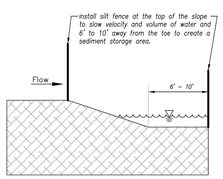
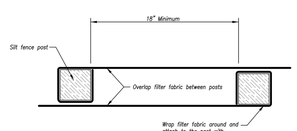


Figure A

SILT FENCE LAYOUT
Not to Scale



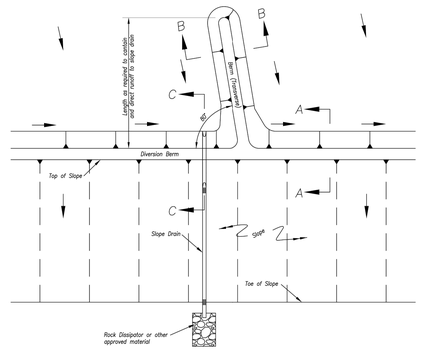


JOINING FENCE SECTIONS
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

SILT FENCE	STANDARD DRAWING NUMBER ESC-03
	ADOPTED: 10/24/2016



TYPICAL PLAN VIEW OF DIVERSION BERM AND SLOPE DRAIN

Notes for Diversion Berm:

1. Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
2. Diversion berms must be installed as a first step in the land-disturbing activity and must be functional prior to upslope land disturbance.
3. The berm should be adequately compacted to prevent failure.
4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
5. Place the berm so to minimize damages by construction operations and traffic.
6. The berm must discharge to a temporary sediment trap or stabilized area.
7. 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 diversion.
8. 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.
9. 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.

Maintenance:

1. Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
2. Breaches in the berm shall be repaired immediately.

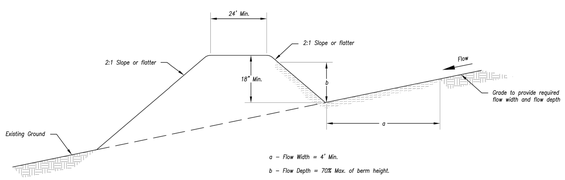
Notes for Slope Drain:

1. Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
2. Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
3. Pipe shall be secured in place as approved by Engineer.

Maintenance:

1. Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
2. Outlet conditions shall be repaired if scour is observed. Leaking or damaged section of pipe shall be repaired immediately.
3. Barriers directing water to the inlet shall be monitored for continuity and effectiveness.

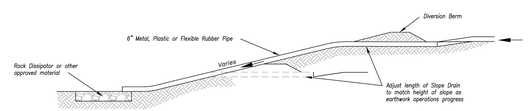
TYPICAL PROFILE OF DIVERSION BEAM
Not to Scale

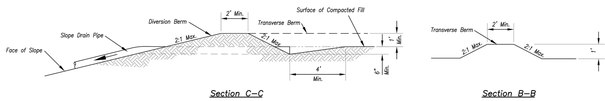


a – Flow Width = 4' Min.

b – Flow Depth = TOE Max. of berm height.

TYPICAL PROFILE OF DIVERSION BERM





TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

DIVERSION BERMS AND SLOPE DRAINS	STANDARD DRAWING NUMBER ESC-05
	ADOPTED: 10/24/2016

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL DETAIL SHEET
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

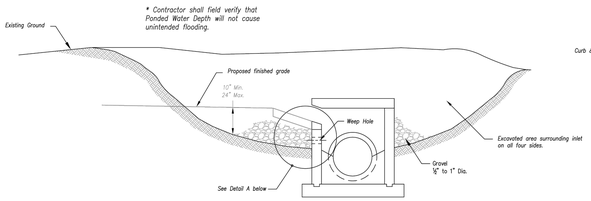
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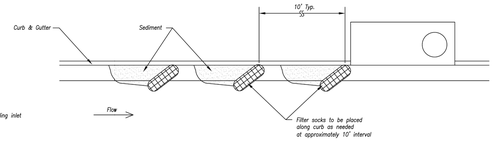
2023

drawn by: DB/BM/CB/DD/EH
checked by: ARJN
approved by: DE
QA/QC by: JS/NH
project no.: 021-04643
drawing no.: C_DTL03_F2104643
date: 01.19.2024

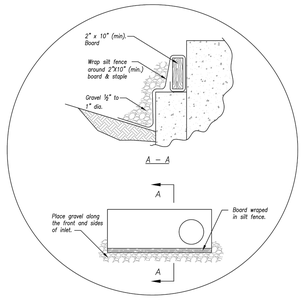
SHEET
C205

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DATE: Jan 19, 2024 8:22am XREFS: C_PTBLK_F2104643





On Grade Curb Inlet Protection



Detail A

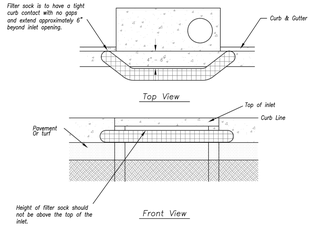
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

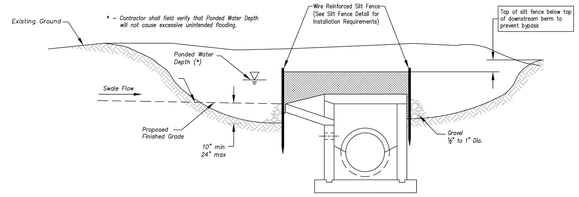


Sump Inlet Sediment Filter

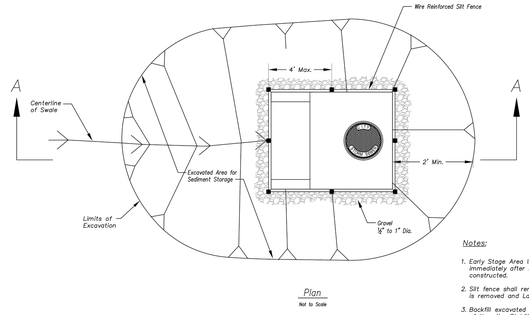
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06
	ADOPTED: 10/24/2016



Section A–A
Not to Scale

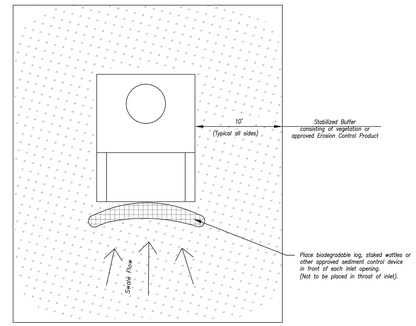


Plan
Not to Scale

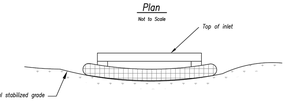
EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.



Plan
Not to Scale



Front View

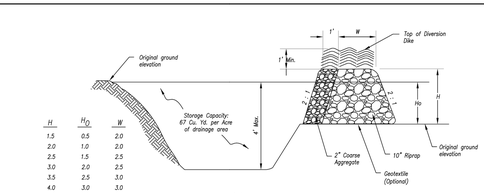
LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

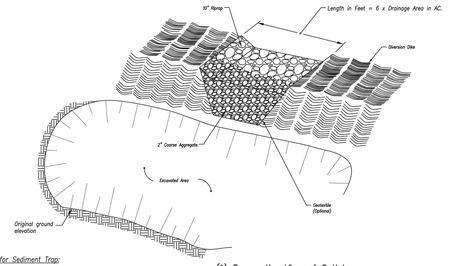
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016



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

(*) Cross Section of Outlet
Not to Scale



(*) Perspective View of Outlet
Not to Scale

(*) – *The perspective view and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.*

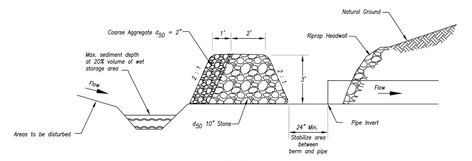
Notes for Sediment Trap:

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 stabilized 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.

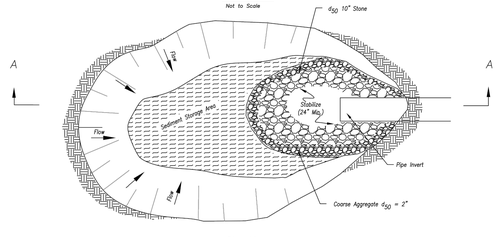
Maintenance for Sediment Trap:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP



Section A–A
Not to Scale



Plan View
Not to Scale

Notes for Sediment Trap at Culvert Opening:

1. The inlet protection device shall be constructed in a manner that will facilitate clean–out and disposal of trapped sediment and minimize interference with construction activities.
2. The inlet protection devices shall be constructed in such manner that any resultant ponding stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
3. Geometry of the design will be a horseshoe shape around the culvert inlet.
4. The toe of the riprap shall be no closer than 24" from the culvert opening to provide an acceptable emergency outlet for flows from larger storm events.
5. Storage requirements equivalent to that of temporary sediment trap.
6. 67 C.Y./Acre wet storage below base of stone.
7. 67 C.Y./Acre dry storage from base of stone to top of stone berm.

Maintenance for Sediment Trap at Culvert Opening:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP AT CULVERT OPENING

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
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SEDIMENT TRAPS	STANDARD DRAWING NUMBER ESC-08
	ADOPTED: 10/24/2016

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL DETAIL SHEET (CONT'D)
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/CB/DS/DH
checked by: ARJN
approved by: DE
QA/QC by: JS/NH
project no.: 021-04643
drawing no.: C_DTL03_F2104643
date: 01.19.2024

SHEET
C206

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C_PBASE_D2104643 T_PBASE_D2104643 C_PUTIL_D2104643 C_XALTA_B2104643

THE VILLAGE AT DISCOVERY PARK
LOT 4
(LOT 4 IMPROVEMENTS PER SEPARATE PLANS)

DISCOVERY AVENUE

LOT 3
±1.89 ACRES
PROPOSED BUILDING

NE COLBERN ROAD
111.00' R/W

CONSTRUCTION OF DRIVE AISLE SHALL BE COORDINATED BY CONTRACTORS FOR BOTH LOTS AS CONCURRENT DEVELOPMENTS.

REFER TO HARDSCAPE AMENITY PLAN SHEET L110 FOR AMENITY LOCATIONS.

INSTALL 2 CONCRETE STEPS WITH 6" RISE AND 12" TREAD EACH, PER DETAIL ON SHEET C303.

FENCE, BOLLARDS, AND PEDESTRIAN LIGHTING PER HARDSCAPE PLANS ON SHEETS L200 & L205.

SEE DETAIL A ON SHEET C301

ACCESSIBLE PARKING SIGNAGE TO BE AFFIXED TO WALL AND CENTERED ON STALL AT THE SAME HEIGHT

INSTALL 3 CONCRETE STEPS WITH 6" RISE AND 12" TREAD EACH, PER DETAIL ON SHEET C303.

EXISTING EASEMENT TO BE ABANDONED

N: 1012467.0174
E: 2822716.5621

N: 1012363.2277
E: 2822713.9194

0' 10' 20' 40'
SCALE IN FEET

GENERAL SITE LEGEND

SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND. THIS LEGEND APPLIES TO ALL SHEETS IN THIS PLAN SET. VARIANCES SHALL BE NOTED ON EACH INDIVIDUAL SHEET.

- PROPOSED WATER
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED UNDERGROUND POWER
- INSTALL STRAIGHT BACK "WET" CURB & GUTTER PER DETAIL ON SHEET C302
- INSTALL STRAIGHT BACK "DRY" CURB & GUTTER PER DETAIL ON SHEET C302
- INSTALL RIBBON CURB PER DETAIL ON SHEET C303
- INSTALL CURB & GUTTER PER "CURB & GUTTER DETAIL AT RAMP" ON SHEET C302

CURB ELEVATIONS SHALL TRANSITION SMOOTHLY OVER A MIN. OF 3' HORIZONTALLY. SEE GRADING PLANS FOR DETAILS AND EXCEPTIONS

- PROPOSED HEAVY-DUTY ASPHALT PAVEMENT SEE SHEET C302
- PROPOSED LIGHT-DUTY ASPHALT PAVEMENT SEE SHEET C302
- PROPOSED FULL DEPTH PCC PAVEMENT SEE SHEET C302
- PROPOSED CONCRETE SIDEWALK PAVEMENT SEE SHEET C302
- PROPOSED BUILDING
- PROPOSED BUILDING GARAGE
- DETECTABLE SURFACE
- (X) STALL COUNT

KEYNOTES

1. PAINTED ADA SYMBOL. SEE DETAIL ON SHEET C107
2. ADA PARKING SIGN PER DETAIL ON SHEET C303
3. ADA PARKING SIGN WITH VAN-ACCESSIBLE SIGN PER DETAIL ON SHEET C303
4. FENCING. SEE LANDSCAPE PLANS
5. TRASH ENCLOSURE PER ARCHITECTURAL PLANS
5a. TRASH ENCLOSURE PAD FOR LOT 4. CONTRACTORS OF CONCURRENT DEVELOPMENTS TO COORDINATE
6. ADA SIDEWALK RAMP
7. BOLLARD. NOT USED
8. MARRIOTT MONUMENT SIGN. SEE HARDSCAPE PLANS
9. DIRECTIONAL SIGN MONUMENT. SEE HARDSCAPE PLANS
10. CHARGING STATION
11. RETAINING WALL PER GRADING PLANS AND DETAIL ON SHEETS C401 AND C403.
12. CONCRETE TURNDOWN WITH GUARD RAIL PER GRADING PLANS ON SHEETS C401 REFER TO HARDSCAPE PLANS FOR MORE DETAILS
13. TEMPORARY ASPHALT CURB

EASEMENT LEGEND

DE DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT
BL BUILDING SETBACK EASEMENT
UE UTILITY EASEMENT

SITE DATA TABLE

INFORMATION	QUANTITY
BUILDING AREA	22,735 (GROUND FLOOR) 83,218 (TOTAL GROSS FLOOR)
FLOOR AREA RATION (FAR)	1.014
NUMBER OF GUEST ROOMS	126
LOT AREA	82,097 SQ. FT. / 1.88 AC.
REQUIRED GARAGE PARKING	46
PROPOSED GARAGE PARKING	38
REQUIRED SURFACE PARKING	64
PROPOSED SURFACE PARKING	72
IMPERVIOUS COVERAGE	60,548 SQ. FT. / 73.75%

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MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE PLAN
PRIVATE SITE DEVELOPMENT PLANS

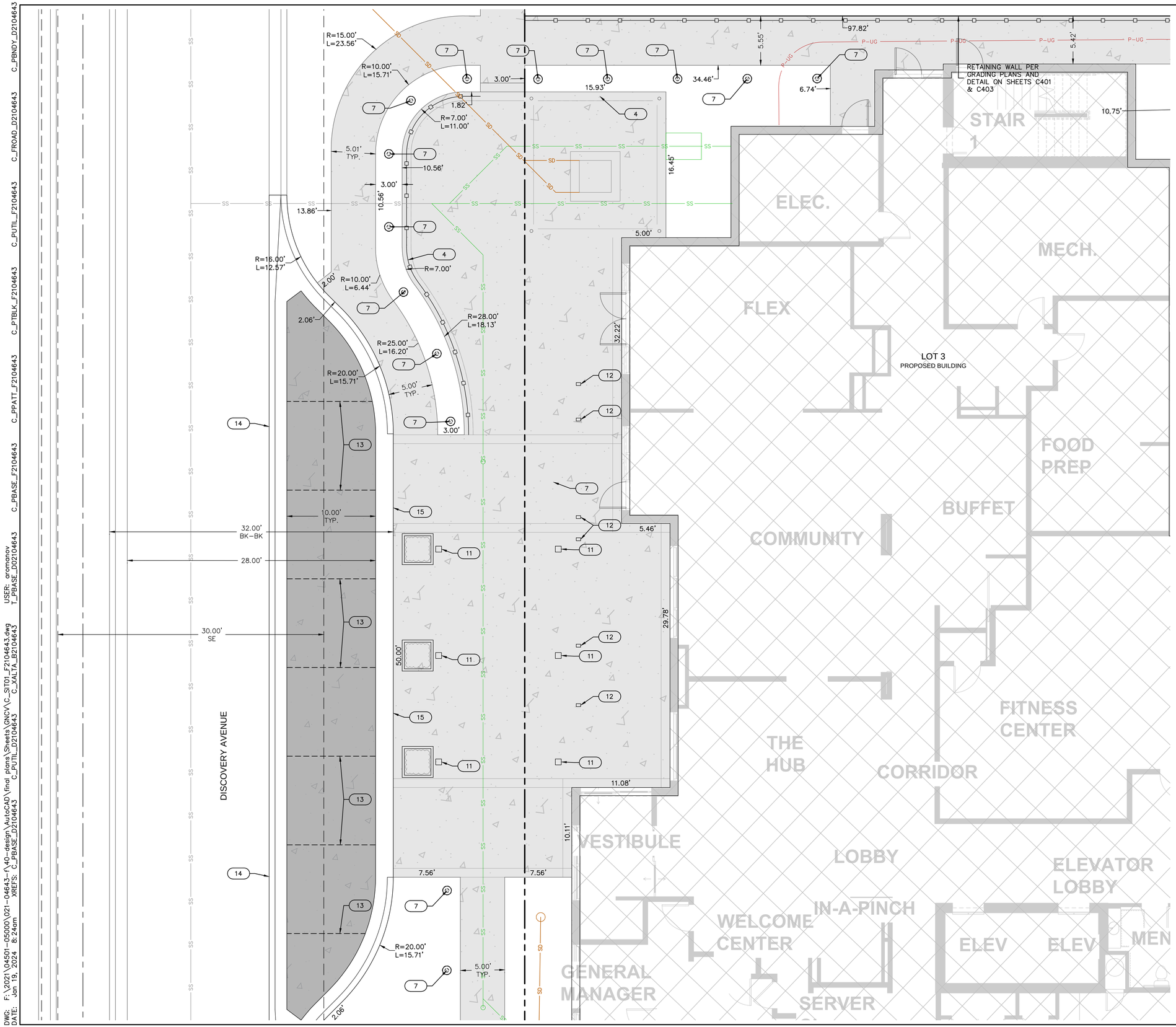
THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST
LEE'S SUMMIT, MISSOURI

2023

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approved by: DE
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project no.: F21-04643
drawing no.: C_SIT01_F2104643
date: 01.19.2024

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GENERAL SITE LEGEND

SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND. SEE SHEET C300 FOR GENERAL SITE LEGEND.

- W W — PROPOSED WATER
- SS SS — PROPOSED SANITARY
- SD SD — PROPOSED STORM SEWER
- P-UG P-UG — PROPOSED UNDERGROUND POWER
- INSTALL STRAIGHT BACK "WET" CURB & GUTTER PER DETAIL ON SHEET C302
- INSTALL STRAIGHT BACK "DRY" CURB & GUTTER PER DETAIL ON SHEET C302
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- INSTALL CURB & GUTTER PER "CURB & GUTTER DETAIL AT RAMP" ON SHEET C302

CURB ELEVATIONS SHALL TRANSITION SMOOTHLY OVER A MIN. OF 3' HORIZONTALLY. SEE GRADING PLANS FOR DETAILS AND EXCEPTIONS

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- PROPOSED FULL DEPTH PCC PAVEMENT SEE SHEET C302
- PROPOSED CONCRETE SIDEWALK PAVEMENT SEE SHEET C302
- PROPOSED BUILDING
- PROPOSED BUILDING GARAGE

KEYNOTES

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3. ADA PARKING SIGN WITH VAN-ACCESSIBLE SIGN PER DETAIL ON SHEET C303
4. FENCING. SEE LANDSCAPE PLANS
5. TRASH ENCLOSURE PER ARCHITECTURAL PLANS
6. ADA SIDEWALK RAMP
7. BOLLARD. SEE HARDSCAPE PLANS
8. MARRIOTT MONUMENT SIGN. SEE ARCHITECTURAL PLANS
9. DIRECTIONAL SIGN MONUMENT. SEE ARCHITECTURAL PLANS
10. CHARGING STATION
11. PORTE COCHERE COLUMNS. STRUCTURE PER ARCHITECTURAL PLANS
12. OVERHANG CANOPY COLUMNS. STRUCTURE PER ARCHITECTURAL PLANS
13. TRANSVERSE CONTRACTION JOINT PER DETAIL ON SHEET C302
14. CURB & GUTTER PER "CURB & GUTTER DETAIL AT RAMP" ON SHEET C302. REFER TO GRADING PLANS FOR SPOT ELEVATIONS
15. RIBBON CURB PER DETAIL ON SHEET C303. REFER TO GRADING PLANS FOR SPOT ELEVATIONS

EASEMENT LEGEND

DE DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT

N

0' 2.5' 5' 10'
SCALE IN FEET

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE PLAN (CONT'D)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

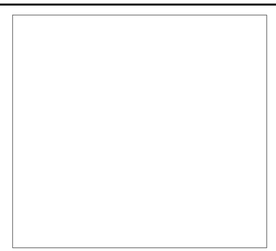
LEE'S SUMMIT, MISSOURI

2023

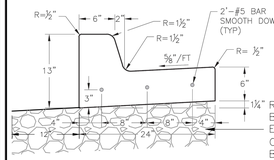
drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_SIT01_F2104643
date: 01.19.2024

SHEET
C301

DWG: F:\2021\04501-05000\021-04643-R\40-design\AutoCAD\final plans\Sheets\GNCV\C_DTL01_F2104643.dwg USER: aromanov
DATE: Jan 19, 2024 8:24am XREFS: C_PBASE_D2104643 C_FROAD_D2104643 C_PBNDY_D2104643 C_PUTIL_D2104643 C_PTBLK_F2104643 C_PBASE_F2104643 C_PUTIL_F2104643 T_PBASE_D02104643 C_XALTA_B2104643

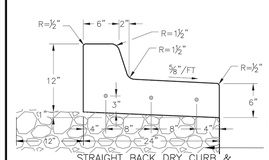






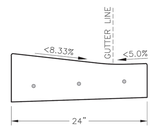
STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



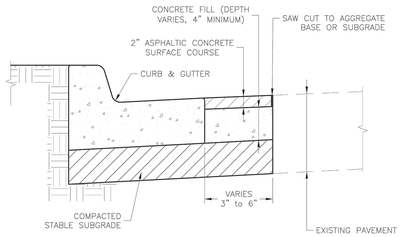


STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)





CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



CURB REPLACEMENT DETAIL

GENERAL NOTES

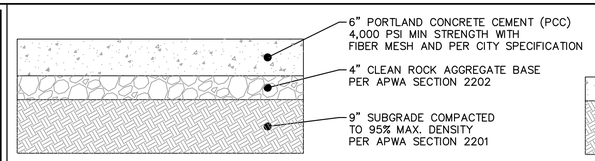
1. ¾" ISOLATION JOINTS WITH 3 (2'–#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.

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

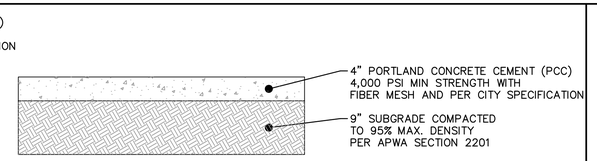
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

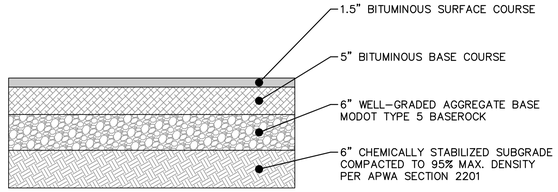
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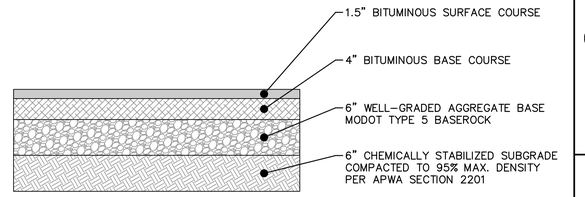
FULL DEPTH PCC SECTION
NOT TO SCALE



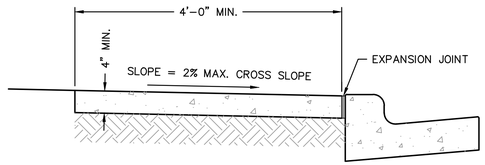
PCC SIDEWALK SECTION
NOT TO SCALE



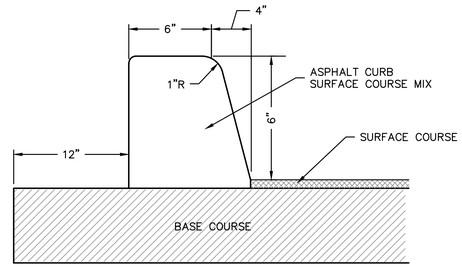
HEAVY-DUTY ASPHALT SECTION
NOT TO SCALE



LIGHT-DUTY ASPHALT SECTION
NOT TO SCALE



STANDARD CONCRETE WALK DETAIL
NOT TO SCALE



TEMPORARY ASPHALT CURB
NOT TO SCALE

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Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE DETAILS (1 OF 2)
PRIVATE SITE DEVELOPMENT PLANS

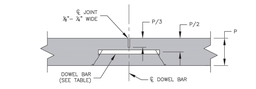
THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: ARJN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_DTL01_F2104643
date: 01.19.2024

SHEET
C302



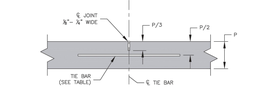
NOTE:
TRANSVERSE CONTRACTION JOINTS FOR CONCRETE PAVEMENT OR BASE WIDENING SHALL MATCH EXISTING JOINTS.

1 TRANSVERSE CONTRACTION JOINT

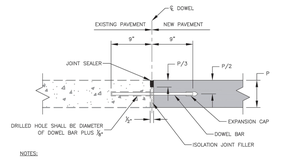


NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

3 TRANSVERSE CONSTRUCTION JOINT

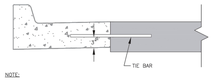


2 LONG. CONTRACTION/CONSTRUCTION JOINT



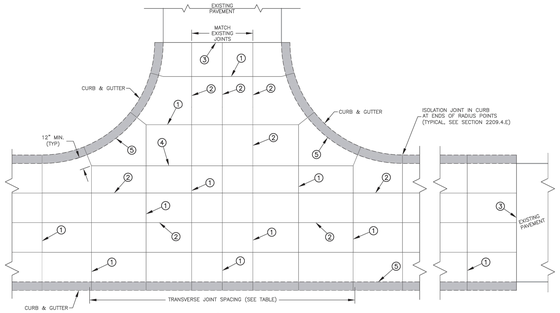
NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

4 TRANSVERSE ISOLATION JOINT



NOTE:
- JOINT NOT NEEDED IF CURB & GUTTER IS MONOLITHICALLY POURED.

5 LONG. CONSTRUCTION JOINT (CURB & GUTTER)



JOINT SPACING/INTERSECTION DETAIL

TABLE

PCCP THICKNESS (P)	DOWEL SIZE	TIE BAR SIZE	DOWEL SPACING	TIE BAR SPACING	MAX. TRANS. SPACING	MAX. LONG. SPACING
6"	N/A	#5 x 30"	N/A	30" CTRS.	12'	12'
7"	1" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	14'	14'
8"	1 ¼" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	14'
≥9"	1 ¼" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	15'

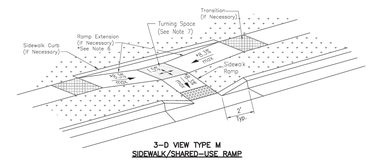
GENERAL NOTES:
- THE FINAL POSITION OF ALL DOWELS AND TIE BARS SHALL BE PERPENDICULAR TO THE PLANE OF THE JOINT AND PARALLEL TO THE SURFACE OF THE PAVEMENT AND PARALLEL TO EACH OTHER.
- ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.
- DOWEL BARS SHALL BE PLACED AT 9 INCHES FROM LONGITUDINAL JOINTS.
- TIE BARS SHALL BE PLACED AT 30 INCHES FROM LONGITUDINAL JOINTS.
- PANEL LENGTH TO WIDTH RATIO SHALL NOT EXCEED 1.5 TO 1.
- DOWEL BASKET SHIPPING WIRE SHALL NOT BE CUT.
- CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC JOINTING PLAN AT LEAST TWO WEEKS BEFORE PAVING OPERATIONS.
- IN ACCORDANCE WITH 2208-4.D, ALL JOINTS SHALL BE SEALED, INCLUDING CURB & GUTTER.

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

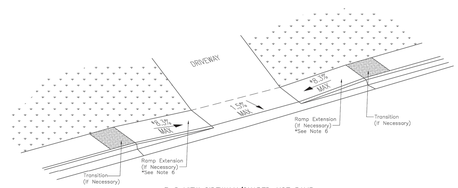
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: TYPICAL PAVEMENT JOINT DETAILS

Drawn By: MJF
Checked By: GMB
Date: 05/2021
Proj. #:

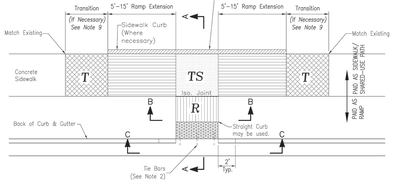
GEN-9



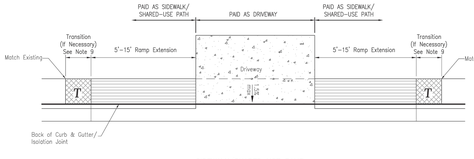
3-D VIEW TYPE M
SIDEWALK/SHARED-USE RAMP



3-D VIEW SIDEWALK/SHARED-USE RAMP
AT DRIVEWAY



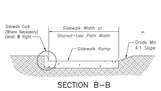
TYPE M SIDEWALK/SHARED-USE RAMP
Not to Scale



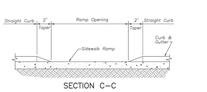
SIDEWALK/SHARED USE RAMP
AT DRIVEWAY WITH ADJOINING CURB

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).



SECTION B–B

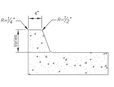


SECTION C–C

TYPE M SIDEWALK RAMP
Not to Scale



CURB & GUTTER DETAIL AT RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

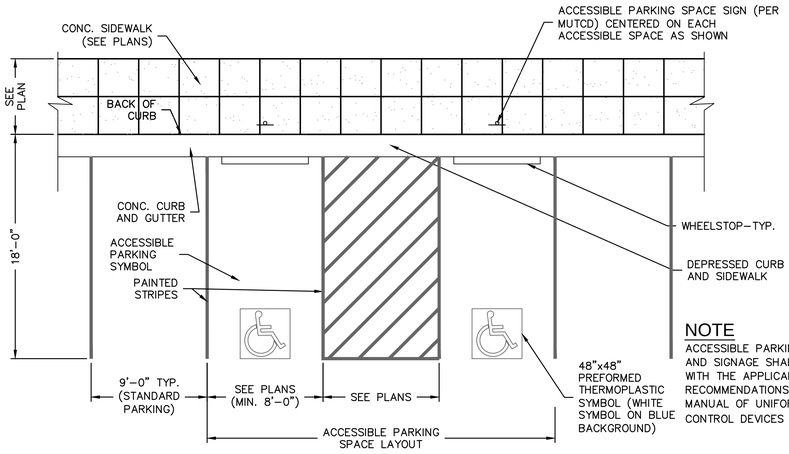
LEGEND
- R — SIDEWALK RAMP
- TS — TURNING SPACE
- DETECTABLE WARNING SURFACE
- T — TRANSITION

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: MJF
Checked By: DL
Date: 05/2021
Proj. #:

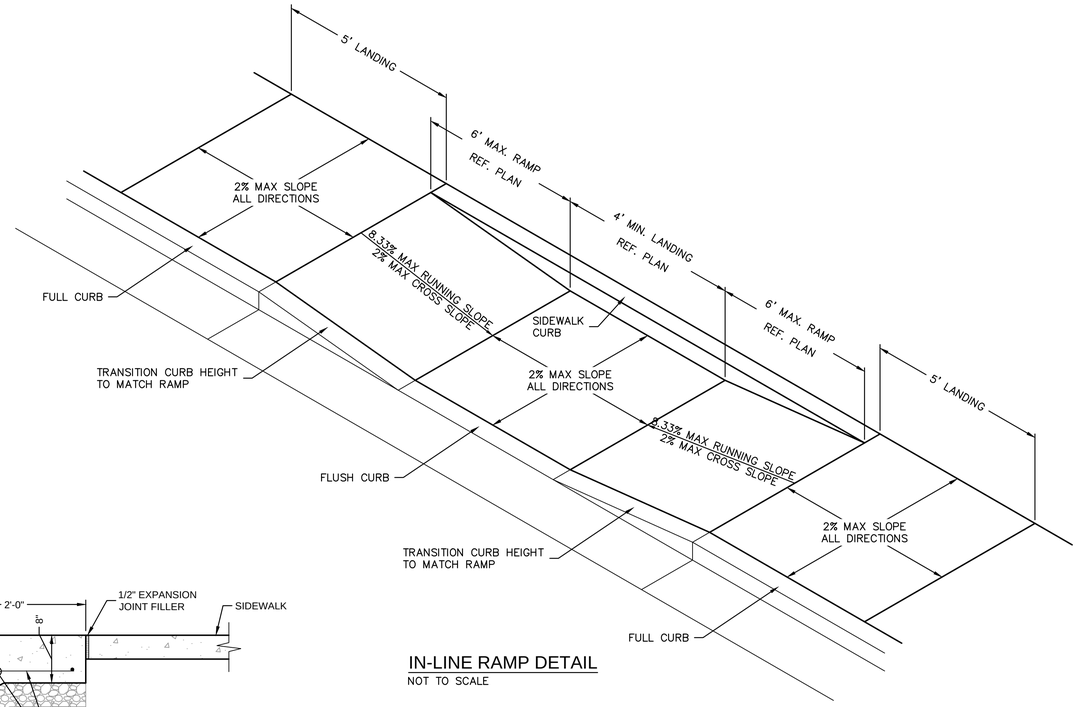
GEN-3B



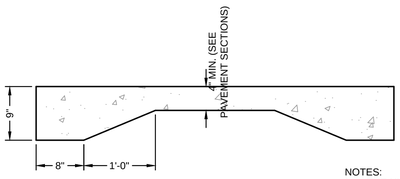
NOTE

ACCESSIBLE PARKING SYMBOL AND SIGNAGE SHALL COMPLY WITH THE APPLICABLE RECOMMENDATIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

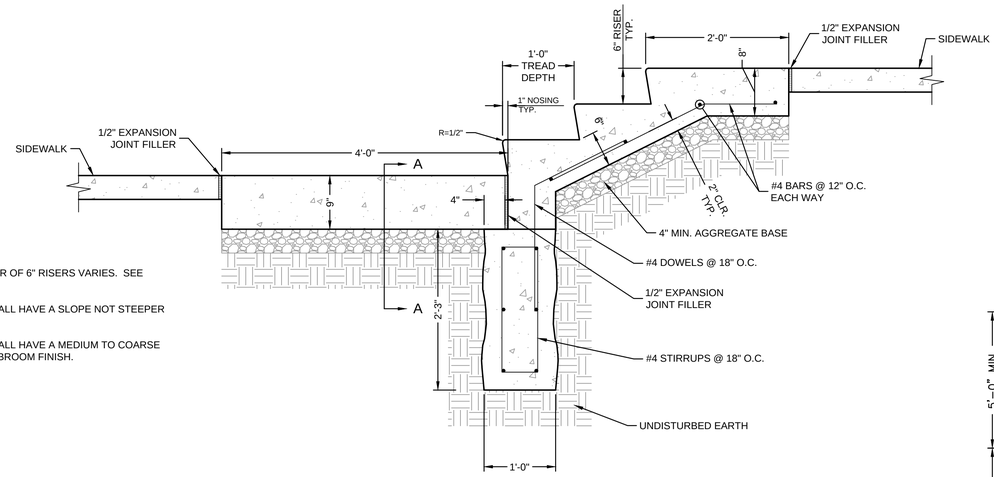
TYPICAL ADA PARKING SPACE LAYOUT DETAIL
NOT TO SCALE



IN-LINE RAMP DETAIL
NOT TO SCALE

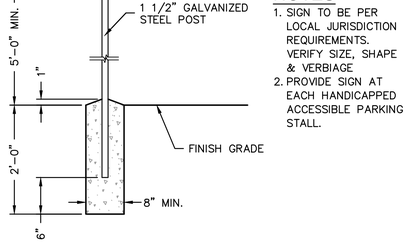


SECTION A-A



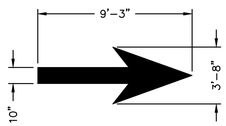
NOTES:
1. THE NUMBER OF 6" RISERS VARIES. SEE PLAN.
2. TREADS SHALL HAVE A SLOPE NOT STEEPER THAN 1:48.
3. TREADS SHALL HAVE A MEDIUM TO COARSE TEXTURED BROOM FINISH.

CONCRETE STAIR
NOT TO SCALE

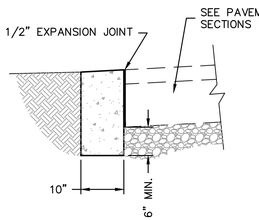


NOTES
1. SIGN TO BE PER LOCAL JURISDICTION REQUIREMENTS. VERIFY SIZE, SHAPE & VERBIAGE
2. PROVIDE SIGN AT EACH HANDICAPPED ACCESSIBLE PARKING STALL.

ACCESSIBLE PARKING SPACE SIGNAGE
NOT TO SCALE

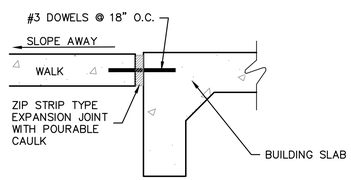


LANE DIRECTION ARROW
NOT TO SCALE



GENERAL NOTES:
1. 3/4" ISOLATION JOINTS WITH 5/8" DIA. X 2' SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 1" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. FIX DOWEL BARS WITH BAR SUPPORTS.
4. DEPTH OF CURB SHALL BE A MINIMUM OF 8" THROGH HANDICAP ACCESSRAMP.

CONCRETE "RIBBON" CURB
NOT TO SCALE



SIDEWALK TO BUILDING SLAB CONNECTION DETAIL
NOT TO SCALE

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1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER
DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE DETAILS (2 OF 2)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

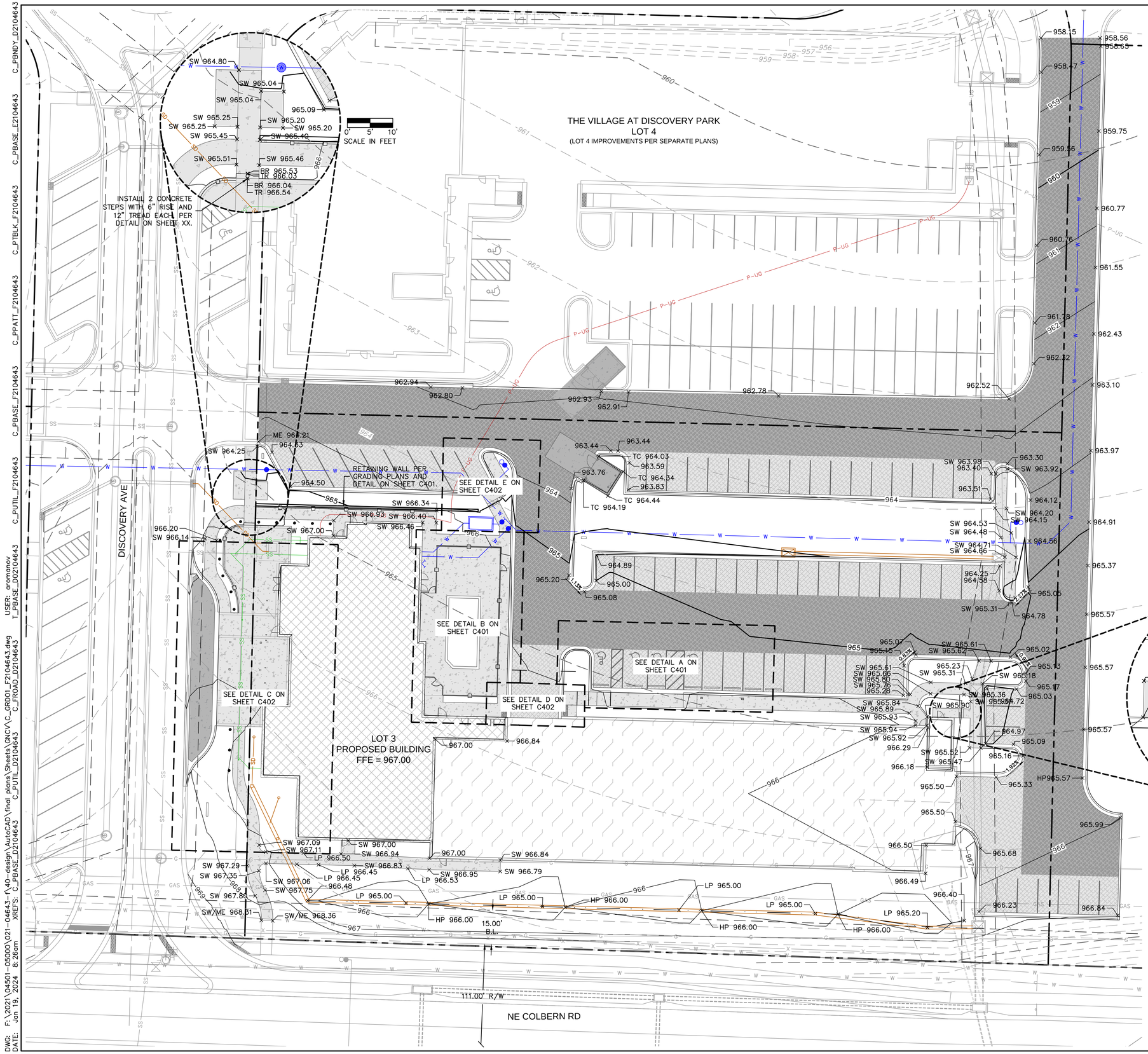
LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_DTL01_F2104643
date: 01.19.2024

SHEET
C303

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C_XALTA_B2104643 T_PBASE_D02104643 C_PBASE_F2104643 C_PUTIL_F2104643 C_PTBLK_F2104643



GRADING PLAN LEGEND
SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

- 999 — FINISHED GRADE MAJOR CONTOUR
- 999 — FINISHED GRADE MINOR CONTOUR
- 999 — EXISTING GRADE MAJOR CONTOUR
- 999 — EXISTING GRADE MINOR CONTOUR
- GRADE BREAK

SPOT ELEVATION LEGEND

ALL SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT/LIP OF CURB OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED AS BELOW.

HP HIGH POINT
LP LOW POINT
ME MATCH EXISTING
HFG HIGH FINISHED GRADE ADJACENT TO WALL
LFG LOW FINISHED GRADE ADJACENT TO WALL
SW SIDEWALK
TR TOP OF RISER
BR BOTTOM OF RISER
TC TOP OF CURB AT BACK

EASEMENT LEGEND

DE STORM DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT

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TEL 816.361.1177
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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER
DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GRADING PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

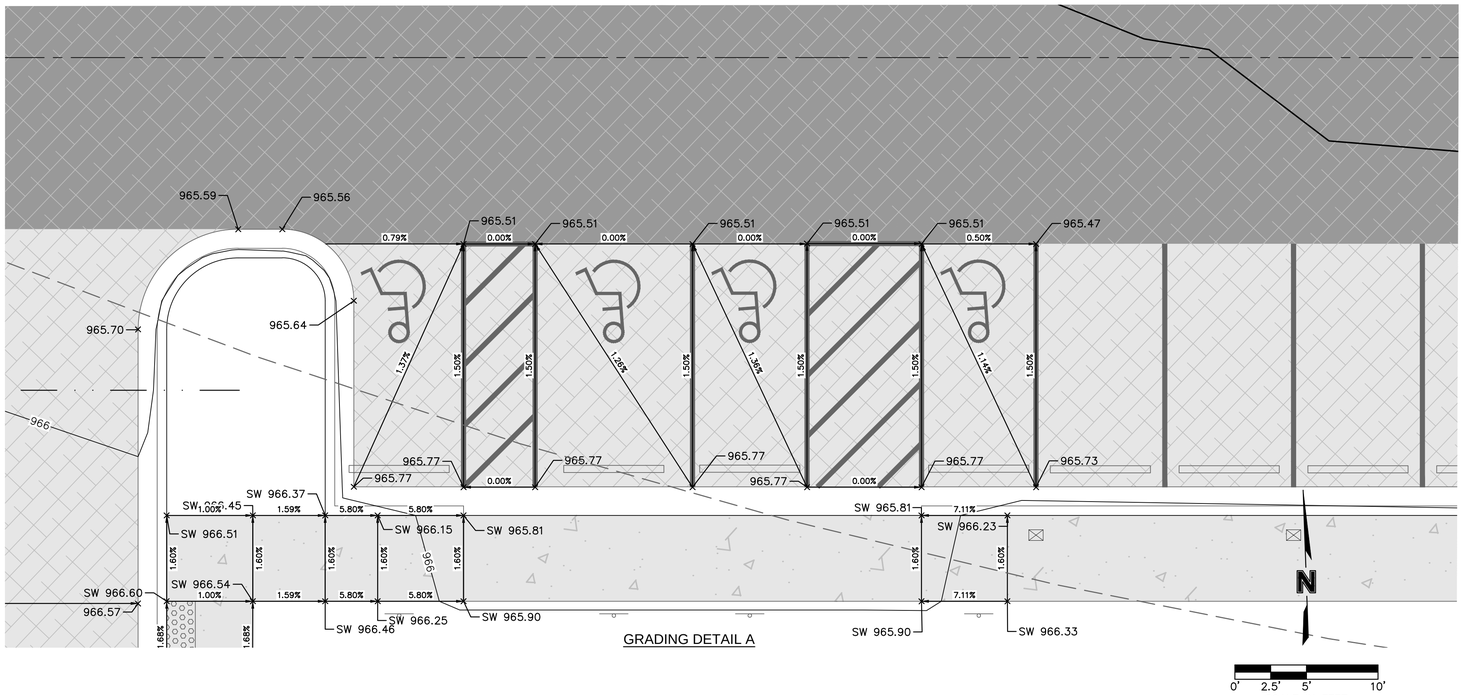
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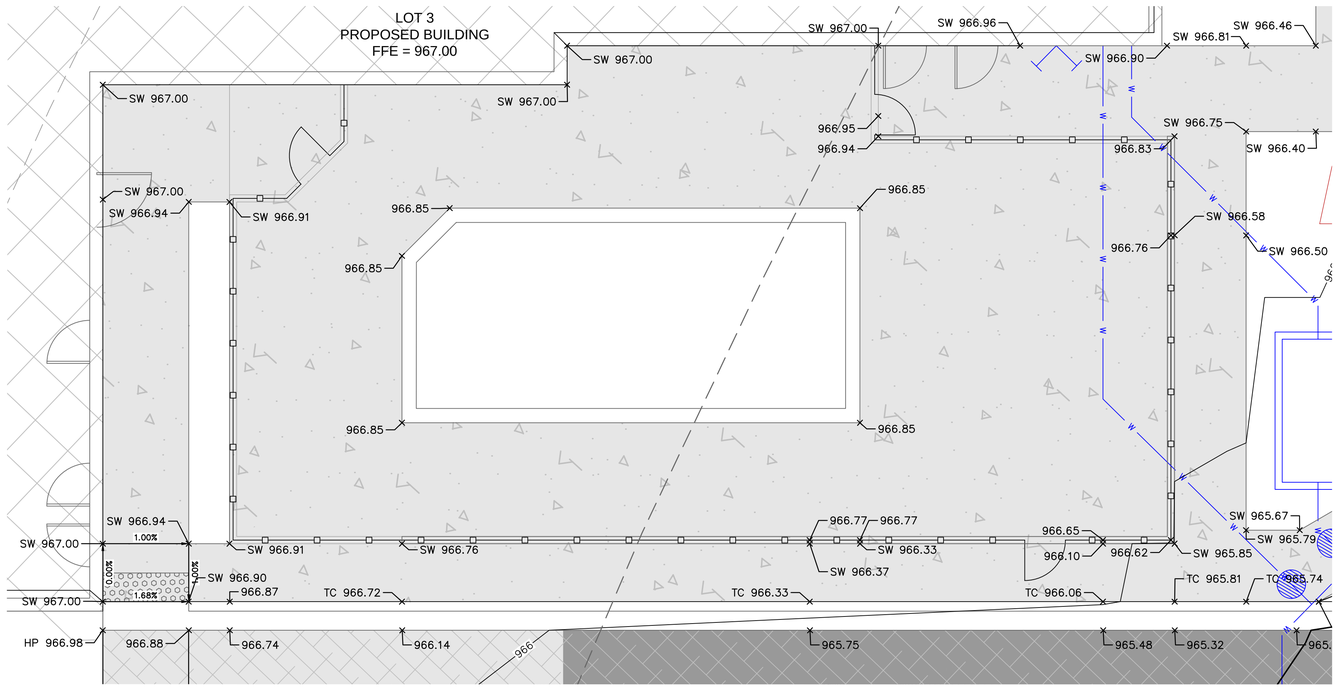
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GRADING DETAIL A



GRADING DETAIL B

GRADING PLAN LEGEND

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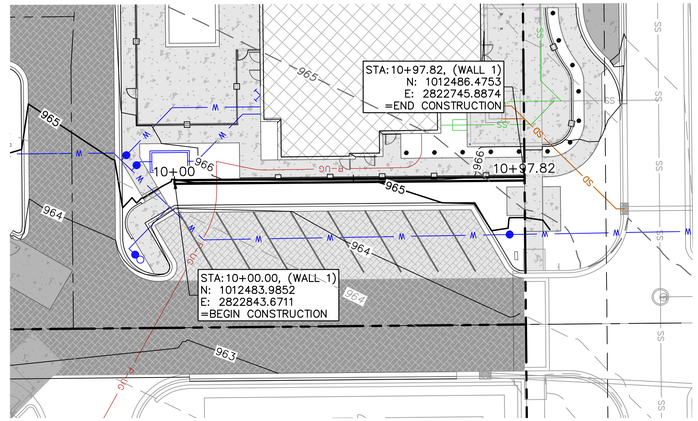
EASEMENT LEGEND

DE STORM DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT

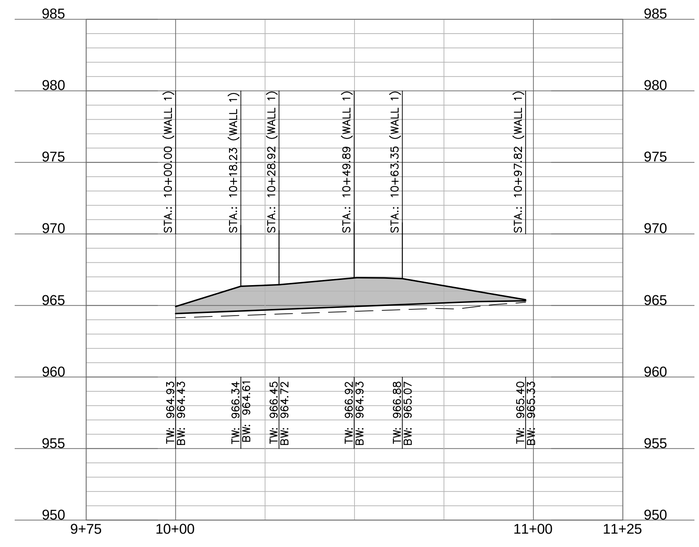
SPOT ELEVATION LEGEND

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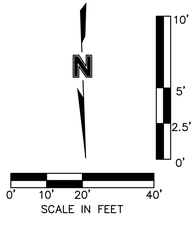
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LP LOW POINT
ME MATCH EXISTING
HFG HIGH FINISHED GRADE ADJACENT TO WALL
LFG LOW FINISHED GRADE ADJACENT TO WALL
SW SIDEWALK
TR TOP OF RISER
BR BOTTOM OF RISER
TC TOP OF CURB AT BACK



WALL 1 (9+75 - 11+25)



LANDSCAPING WALL PLAN & PROFILE



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GRADING PLAN DETAILS (1 OF 2)
PRIVATE SITE DEVELOPMENT PLANS

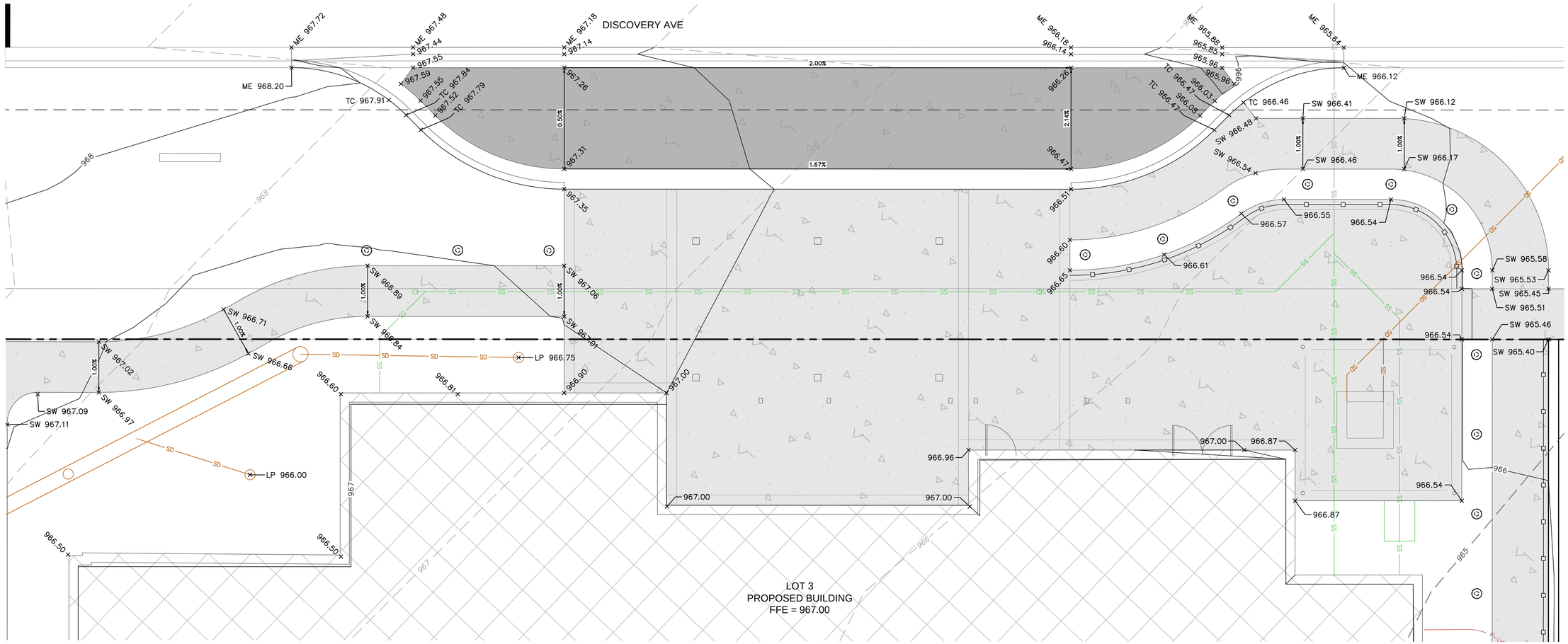
THE VILLAGE AT DISCOVERY PARK LOT 3
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LEE'S SUMMIT, MISSOURI

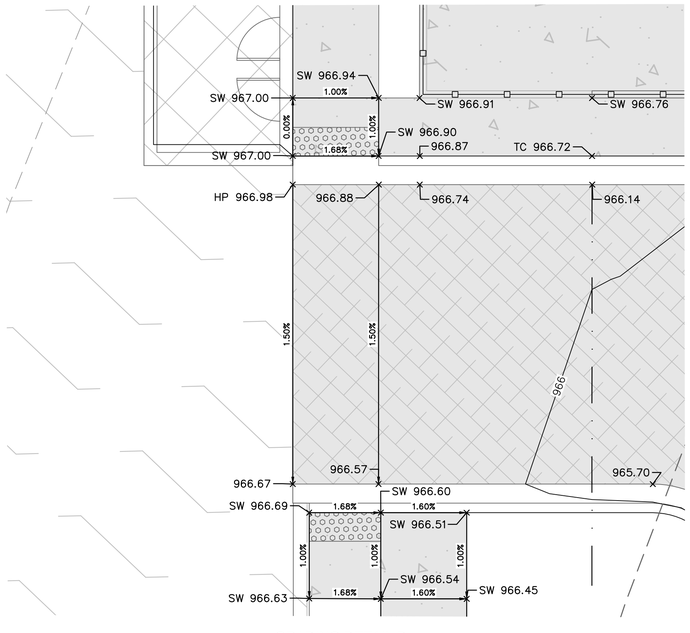
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approved by:	DE
QA/QC by:	JS/NH
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drawing no.:	C_GRD01_F2104643
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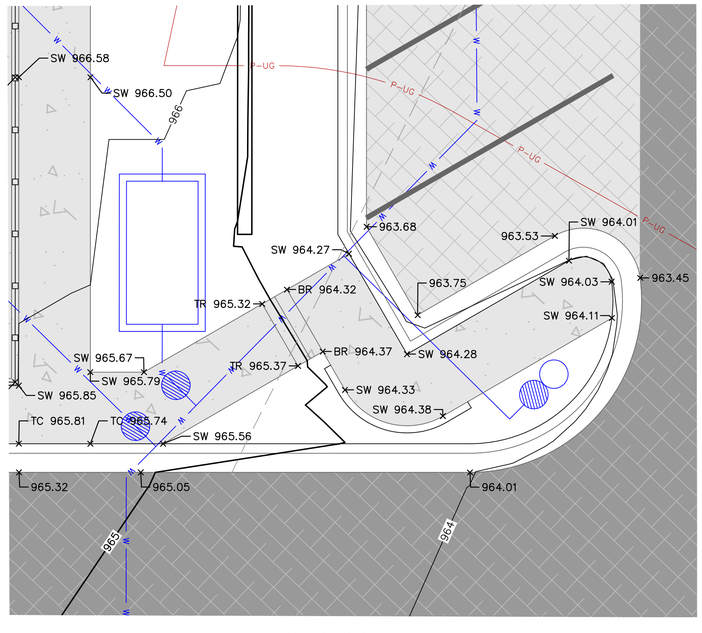
SHEET
C401



GRADING DETAIL C



GRADING DETAIL D



GRADING DETAIL E

N

0' 2.5' 5' 10'

SCALE IN FEET

GRADING PLAN LEGEND

SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

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SW SIDEWALK
TR TOP OF RISER
BR BOTTOM OF RISER
TC TOP OF CURB AT BACK

EASEMENT LEGEND

DE STORM DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT

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DAVID EICKMAN, P.E.
MO# 2009015436

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GRADING PLAN DETAILS (2 OF 2)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

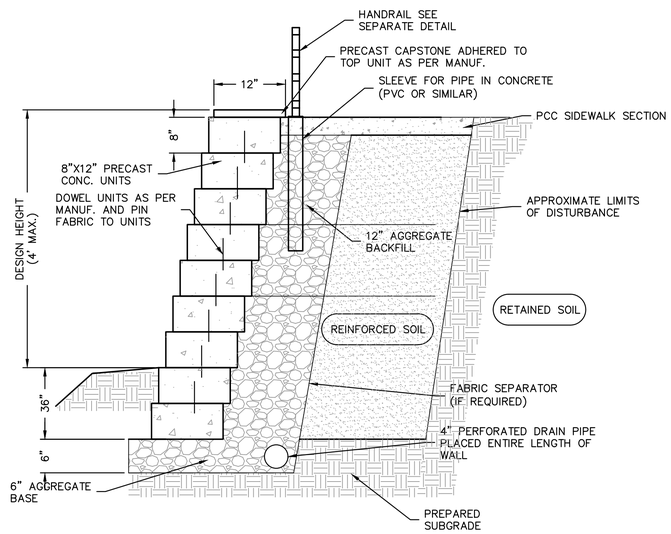
LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
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USER: aromonov
T_PBASE_D02104643



RETAINING WALL DETAIL

NOT TO SCALE

RETAINING WALL NOTES

1. MANUFACTURER, COLOR AND TYPE OF THE WALL SHALL BE COORDINATED WITH THE ARCHITECT AND THE OWNER. THE DETAILS PROVIDED HERE ARE FOR GENERAL GUIDANCE ONLY. THE WALL SHALL BE "DESIGN–BUILD" PROVIDED COMPLETE IN–PLACE BY THE CONTRACTOR.

2. THE WALL SHALL BE DESIGNED BY THE INSTALLER ACCORDING TO THE WALL UNIT MANUFACTURER'S DESIGN CRITERIA. THE DESIGN SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER AND THE CITY OF LEE'S SUMMIT AS A SHOP DRAWING FOR REVIEW. ALL DESIGN CALCULATIONS AND DESIGN CRITERIA, (ANGLE OF FRICTION, SOIL WEIGHT, ETC.), SHALL BE SUBMITTED WITH THE SHOP DRAWING. ALL DESIGN MUST BE SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI.

3. FACTORS OF SAFETY SHALL BE AS FOLLOWS:
   1.5 AGAINST REINFORCEMENT GRID PULLOUT OR RUPTURE
   1.5 AGAINST EXTERNAL SLIDING FAILURE
   2.0 AGAINST OVERTURNING

4. THE DESIGN, DIMENSIONS, AND MATERIAL SHOWN IN THIS DETAIL ARE GENERAL IN NATURE. THE AGGREGATE MATERIALS, GEOGRID SYSTEM, AND INSTALLATION SHALL BE AS WALL UNIT MANUFACTURER'S REQUIREMENTS.

5. SEE SPECIFICATIONS FOR MATERIAL SELECTION AND OTHER REQUIREMENTS.

6. WALL DESIGN SHALL INCLUDE GLOBAL STABILITY.

7. RETAINING WALL SHALL PROVIDE POSITIVE INTERLOCKING BETWEEN BLOCKS AND GRID.

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PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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GRADING DETAILS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
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SHEET
C403

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USER: aromanov

STORM SEWER KEYNOTES

ST1A STORM LINE A. SEE SHEET C501.
ST1B STORM LINE B, SEE SHEET C502.

ST2 NOT USED

ST3 NOT USED

ST4 INSTALL 8" NYLOPLAST INLINE DRAIN
RIM ELEV=966.75
FL INV OUT=964.25 (4" HDPE)

ST5 INSTALL APPROXIMATELY 21.5 LF OF 4" HDPE @ 2.00% AND CONNECT TO STRUCTURE STM A8
FL INV @ STM A8=963.82 (4" HDPE)

ST6 CONNECT TO DRAIN BASIN STM K1 AND INSTALL 4" HDPE STORM SEWER LINE WITH ASSOCIATED BENDS AND WYES @ 2.00% MIN. AND EXTEND TO FIRE PIT. PROVIDE 24" OF COVER MIN.
FL INV @ STM K1=958.30 (4" HDPE)

ST7 INSTALL 10" NYLOPLAST INLINE DRAIN
RIM ELEV=966.00
FL INV OUT=963.50 (6" HDPE)

ST8 INSTALL APPROXIMATELY 12.0 LF OF 6" HDPE @ 10.83% AND CONNECT TO 15"X6" WYE INSTALLED WITH STORM LINE A
FL INV @ WYE=962.20

THE VILLAGE AT DISCOVERY PARK
LOT 4
(LOT 4 IMPROVEMENTS PER SEPARATE PLANS)

LOT 3
PROPOSED BUILDING
FFE = 967.00

DISCOVERY AVENUE

NE COLBERN ROAD

30.00' S.E.
15.00' D.E.
15.00' B.L.
111.00' R/W

UTILITY PLAN LEGEND

SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

W — W — PROPOSED WATER
SS — SS — PROPOSED SANITARY
SD — SD — PROPOSED STORM SEWER
P-UG — PROPOSED UNDERGROUND POWER

EASEMENT LEGEND

DE DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT
BL BUILDING SETBACK EASEMENT
UE UTILITY EASEMENT

POWER LINE KEYNOTES

EVERGY TO PROVIDE FINAL DESIGN OR APPROVAL OF SHOWN DESIGN.

P1 APPROXIMATELY 269 L.F. OF UNDERGROUND CONDUIT FOR ELECTRIC SERVICE PER EVERGY STANDARDS AND REQUIREMENTS
P2 INSTALL TRANSFORMER PAD PER EVERGY STANDARDS AND REQUIREMENTS. SIZING PER MEP PLANS AND EVERGY DESIGN. EVERGY TO PLACE TRANSFORMER AND PULL WIRE.
P3 APPROXIMATELY 24 L.F. OF UNDERGROUND CONDUIT FOR ELECTRIC SERVICE PER EVERGY STANDARDS AND REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR CONTINUATION
P4 INSTALL LEVEL 2 CHARGING STATIONS PER CHARGEPOINT'S SPECIFICATIONS AND INSTALLATION PROCEDURE.

WATER MAIN KEYNOTES

*SEE SHEETS C600 & C601 FOR WATER MAIN PLAN & PROFILE

W1 CONNECT TO 8"X6" TEE INSTALLED ON WATER LINE A AND INSTALL 6" GATE VALVE. REFER TO PLAN & PROFILE ON SHEET C601.

W2 INSTALL 49.7 LF OF 6" PVC WITH 42" MIN. COVER FIRE SERVICE LINE TO THE BUILDING. REFER TO MEP PLANS FOR CONTINUATION INSIDE THE BUILDING.

W3 CONNECT TO 8"X4" TEE INSTALLED ON WATER LINE A, INSTALL 4" GATE VALVE, AND INSTALL 4"X3" REDUCER. REFER TO PLAN & PROFILE ON SHEET C601.

W4 INSTALL 48.0 LF OF 3" PVC WITH 42" MIN. COVER DOMESTIC SERVICE LINE TO THE BUILDING. REFER TO MEP PLANS FOR CONTINUATION INSIDE THE BUILDING.

W5 COORDINATE THE LOCATION OF THE FIRE DEPARTMENT CONNECTION WITH THE ARCHITECT

W6 INSTALL 8" PVC WATER LINE A. SEE SHEETS C600–C601 FOR MORE DETAILS.

W7 INSTALL FIRE HYDRANT. SEE SHEET C600.

W8 TEMPORARY STRAIGHT SET FIRE HYDRANT. SEE SHEETS C600–C601 FOR MORE DETAILS.

W9 INSTALL FIRE HYDRANT. SEE SHEET C601.

W10 INSTALL 3" WATER METER VAULT PER DETAIL ON SHEET C603

W11 INSTALL 8" GATE VALVE

W12 FIRE HYDRANT TO BE INSTALLED WITH SEPARATE PUBLIC WATER MAIN EXTENSION PLANS (PL2023144)

SANITARY SEWER KEYNOTES

SN1 CONNECT TO EXISTING 8" SANITARY SEWER LATERAL INSTALLED WITH PUBLIC SANITARY SEWER EXTENSION PLANS FOR THE VILLAGE AT DISCOVERY PARK ZONE 1. INSTALL 8"X8" WYE.
FL INV @ END OF STUB=961.62

SN2 4" PVC FOOD WASTE CONNECTION AT THE BUILDING
FL INV @ BLDG=964.00

SN3 INSTALL GREASE INTERCEPTOR. REFER TO MEP PLANS FOR MORE DETAILS ON THE INTERCEPTOR.
FL INV IN=963.90
FL INV OUT=963.90

SN4 INSTALL APPROXIMATELY 34.5 L.F. OF 4" PVC FOOD WASTE LINE @ 2.00% MIN, 7.00% MAX AND CONNECT TO 8"X4" WYE. REFER TO PLUMBING PLANS FOR CONTINUATION OF SERVICE LINE INSIDE THE BUILDING.

SN5 8" PVC SANITARY SERVICE CONNECTION AT THE BUILDING.
FL INV @ BLDG=964.50

SN6 INSTALL APPROXIMATELY 34.0 L.F. OF 8" PVC SANITARY SERVICE LINE @ 8.47%. REFER TO PLUMBING PLANS FOR CONTINUATION OF SANITARY SEWER SERVICE LINE INSIDE THE BUILDING

SN7 8" PVC SANITARY SERVICE CONNECTION AT THE BUILDING.
FL INV @ BLDG=962.67

SN8 INSTALL APPROXIMATELY 104.0 L.F. OF 8" PVC SANITARY SERVICE LINE @ 1.00% AND CONNECT TO 8"X8" WYE. REFER TO PLUMBING PLANS FOR CONTINUATION OF SANITARY SEWER SERVICE LINE INSIDE THE BUILDING

SN9 INSTALL SANITARY SEWER CLEANOUT

0' 10' 20' 40'
SCALE IN FEET

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UTILITY PLAN
PRIVATE SITE DEVELOPMENT PLANS

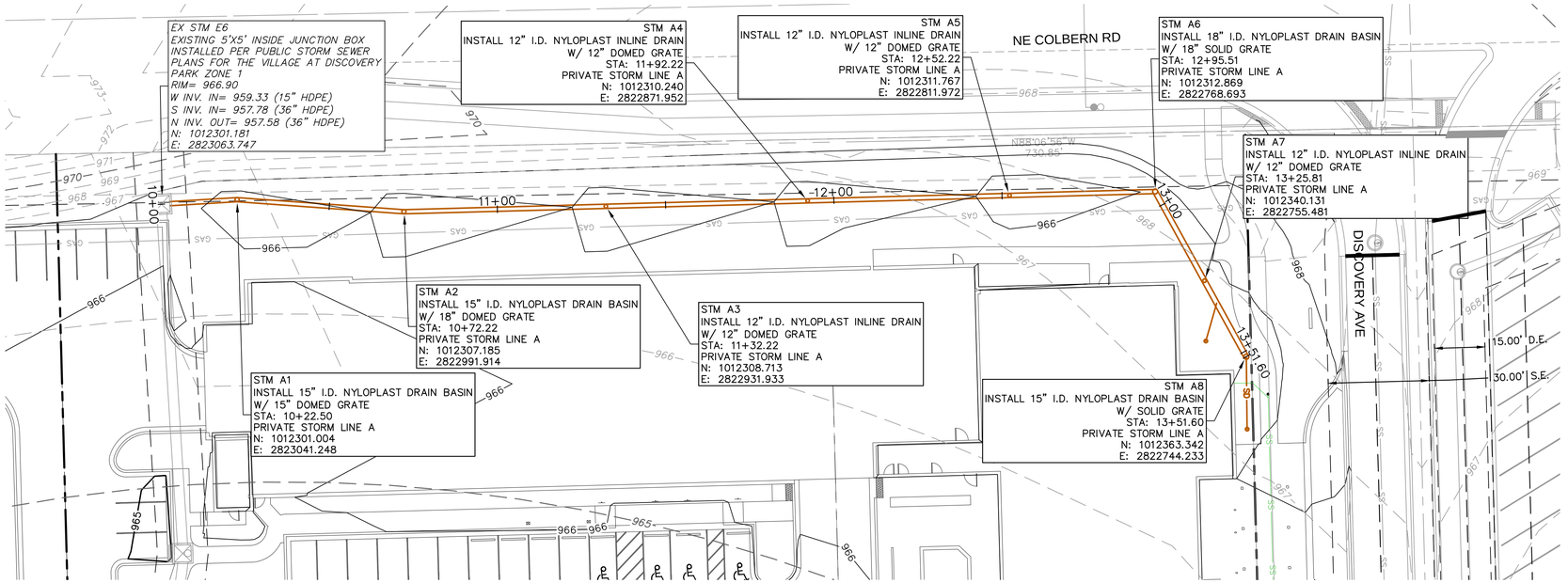
THE VILLAGE AT DISCOVERY PARK LOT 3
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LEE'S SUMMIT, MISSOURI

2023

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approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_UTL01_F2104643
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SHEET
C500

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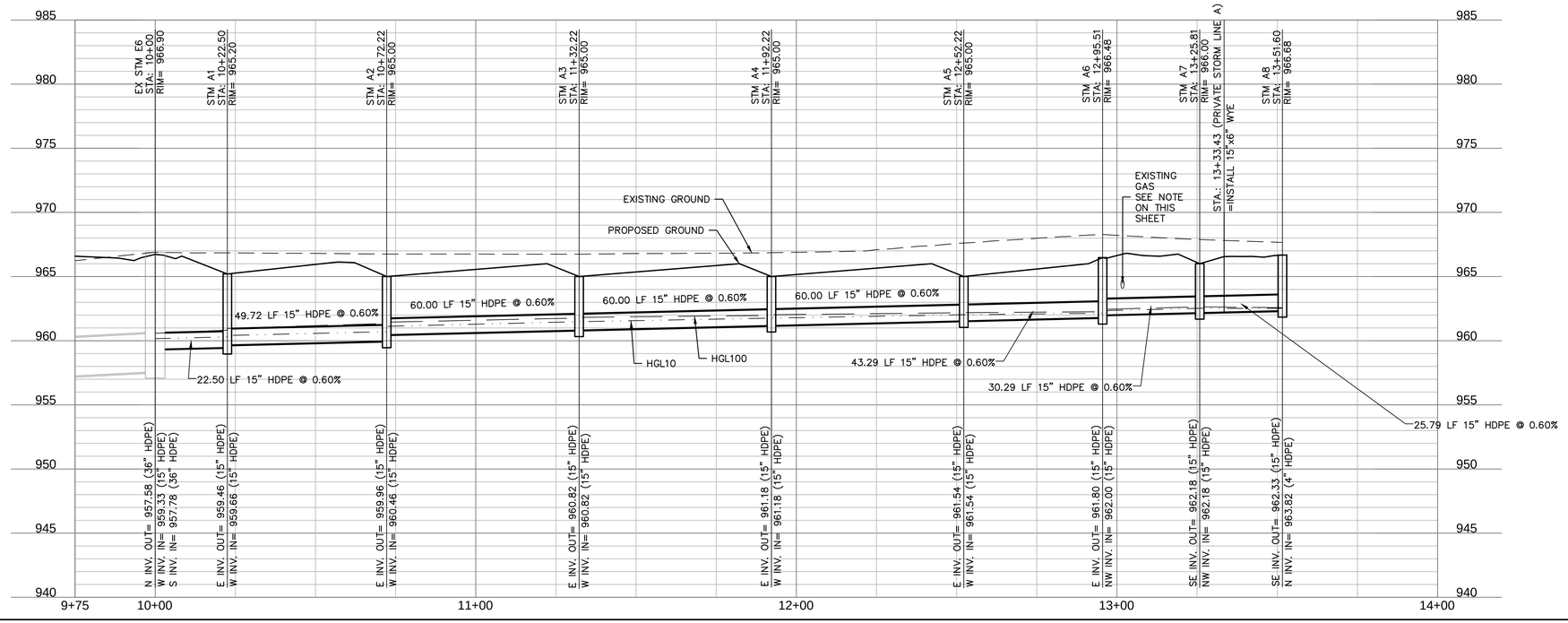
STORM SEWER PLAN LEGEND
SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

- W — W — PROPOSED WATER
- SS — SS — PROPOSED SANITARY
- SD — SD — PROPOSED STORM SEWER
- P-UG — PROPOSED UNDERGROUND POWER

NOTES:

1. RIM ELEVATIONS PROVIDED FOR NYLOPLAST DRAIN BASINS ARE AT TOP OF PIPE/COLLAR AND DO NOT INCLUDE GRATE.
2. EXISTING GAS MAIN SHOWN IS APPROXIMATE. CONTRACTOR TO LOCATE THE GAS MAIN AND PROTECT AT ALL TIME. COORDINATE THE WORK WITH SPIRE AND ENGINEER IF LOCATION IS DIFFERENT FROM THE PLAN.

PRIVATE STORM LINE A (9+75 - 14+00)



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STORM SEWER PLAN & PROFILE (LINE A)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

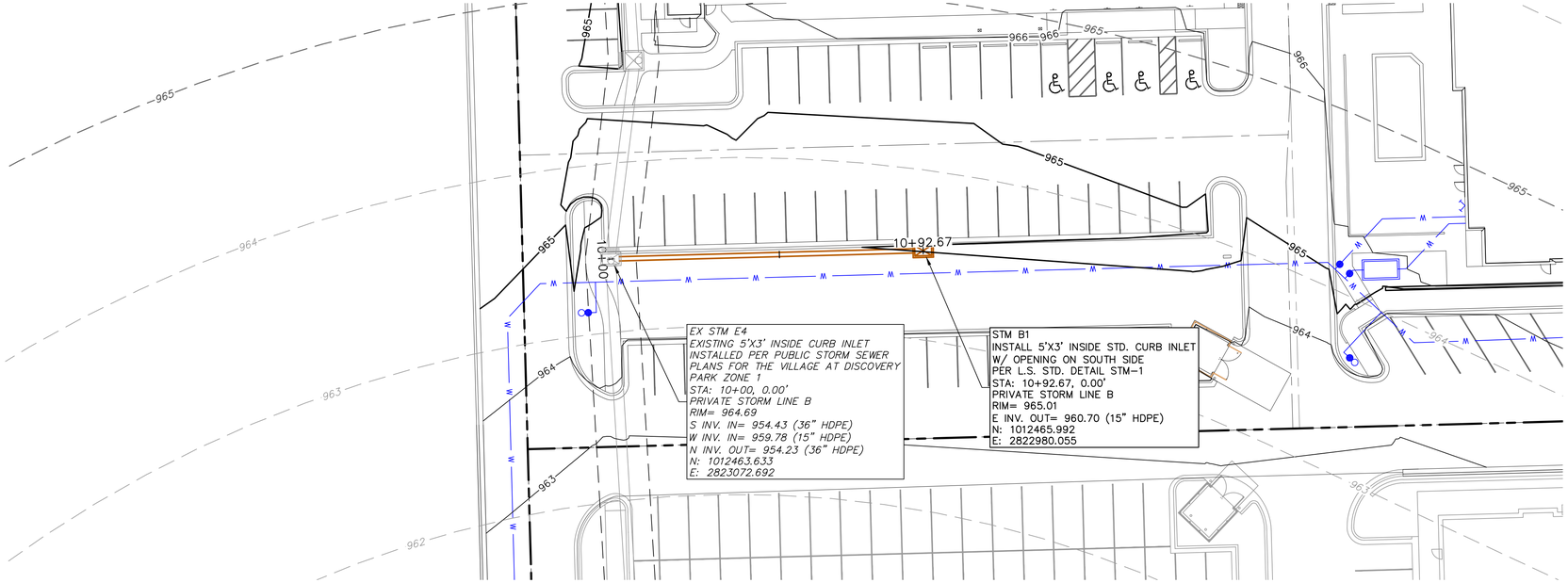
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SHEET
C501

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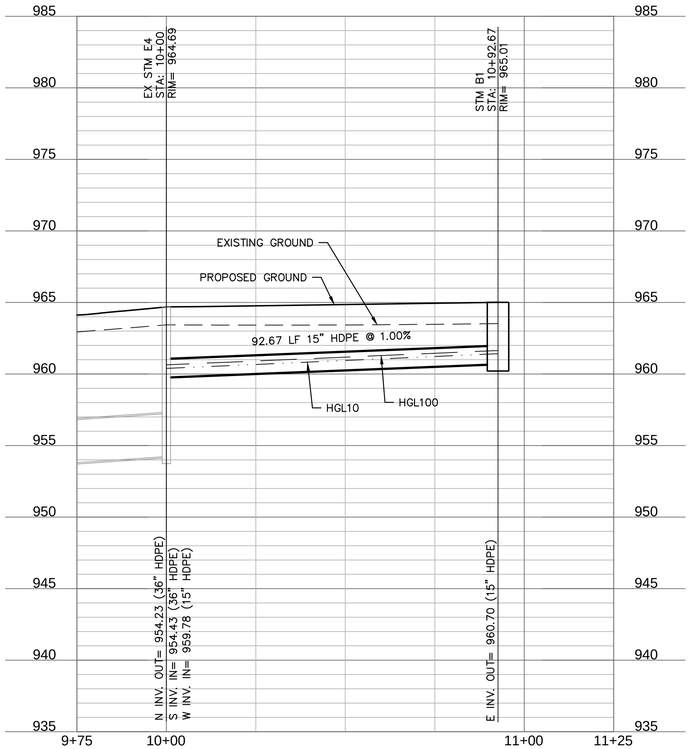


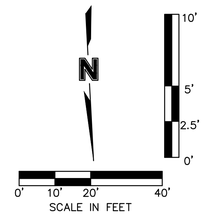
*RIM ELEVATIONS PROVIDED FOR NYLOPLAST DRAIN BASINS ARE AT TOP OF PIPE/COLLAR AND DO NOT INCLUDE GRATE.

STORM SEWER PLAN LEGEND
SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

- W — W — PROPOSED WATER
- SS — SS — PROPOSED SANITARY
- SD — SD — PROPOSED STORM SEWER
- P-UG — PROPOSED UNDERGROUND POWER

PRIVATE STORM LINE B (9+75 - 11+25)





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Missouri Certificate of Authority #001592
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TEL 816.361.1177
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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER
DAVID EICKMAN, P.E.
MO# 2009015436

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

STORM SEWER PLAN & PROFILE (LINE B)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_STM01_F2104643
date: 01.19.2024

SHEET
C502

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USER: aromanov

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XREFS:
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DWG:
DATE: Jan 19, 2024 8:31am

THE VILLAGE AT DISCOVERY PARK
LOT 4
(LOT 4 IMPROVEMENTS PER SEPARATE PLANS)

LOT 3
PROPOSED BUILDING
FFE = 967.00

DISCOVERY AVENUE

NE COLBERN ROAD

STM B1
A=0.51 ac.
C=0.83

STM A1
A=0.10 ac.
C=0.83

STM A2
A=0.10 ac.
C=0.83

STM A3
A=0.10 ac.
C=0.83

STM A4
A=0.10 ac.
C=0.51

STM A5
A=0.12 ac.
C=0.83

STM A6
STM A7
STM A8
STM B1
EX STM E3
EX STM E4
EX STM E5
EX STM E6

30.00' S.E.
15.00' D.E.
15.00' B.L.
111.00' R/W

959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975

UTILITY PLAN LEGEND

SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

- W — PROPOSED WATER
- SS — PROPOSED SANITARY
- SD — PROPOSED STORM SEWER
- P-UG — PROPOSED UNDERGROUND POWER

EASEMENT LEGEND

DE DRAINAGE EASEMENT
SE SANITARY SEWER EASEMENT
BL BUILDING SETBACK EASEMENT
UE UTILITY EASEMENT

0' 10' 20' 40'
SCALE IN FEET

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORMWATER MANAGEMENT PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST
LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21.04643
drawing no.: C_STM02_F2104643
date: 01.19.2024

SHEET
C503

Inlet Design Table									
10 Year Return Frequency									
Inlet ID	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Drainage Area	C	Tc	i	K	Peak Flow
	(cfs)	(cfs)	(%)	(ac)		(min)	(in/hr)		(cfs)
STM A1	0.61	0.00	100.00%	0.10	0.83	5.00	7.35	1.00	0.61
STM A2	0.61	0.00	100.00%	0.10	0.83	5.00	7.35	1.00	0.61
STM A3	0.61	0.00	100.00%	0.10	0.83	5.00	7.35	1.00	0.61
STM A4	0.61	0.00	100.00%	0.10	0.83	5.00	7.35	1.00	0.61
STM A5	0.73	0.00	100.00%	0.12	0.83	5.00	7.35	1.00	0.73
STM A7	0.55	0.00	100.00%	0.09	0.83	5.00	7.35	1.00	0.55
STM A8	0.24	0.00	100.00%	0.04	0.83	5.00	7.35	1.00	0.24
STM B1	3.11	0.00	100.00%	0.51	0.83	5.00	7.35	1.00	3.11

Inlet Design Table									
100 Year Return Frequency									
Inlet ID	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Drainage Area	C	Tc	i	K	Peak Flow
	(cfs)	(cfs)	(%)	(ac)		(min)	(in/hr)		(cfs)
STM A1	1.03	0.00	100.00%	0.10	0.83	5.00	10.32	1.25	1.03
STM A2	1.03	0.00	100.00%	0.10	0.83	5.00	10.32	1.25	1.03
STM A3	1.03	0.00	100.00%	0.10	0.83	5.00	10.32	1.25	1.03
STM A4	1.03	0.00	100.00%	0.10	0.83	5.00	10.32	1.25	1.03
STM A5	1.24	0.00	100.00%	0.12	0.83	5.00	10.32	1.25	1.24
STM A7	0.93	0.00	100.00%	0.09	0.83	5.00	10.32	1.25	0.93
STM A8	0.41	0.00	100.00%	0.04	0.83	5.00	10.32	1.25	0.41
STM B1	5.26	0.00	100.00%	0.51	0.83	5.00	10.32	1.25	5.26

Storm Sewer Design Calculation Table													
10 Year Return Frequency													
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)	Upstream Top Elev. (ft)
STM A1	EX STM E6	22.50	959.47	959.33	0.62	15	0.013	3.96	4.59	5.09	0.83	960.30	965.20
STM A2	STM A1	49.72	959.96	959.66	0.60	15	0.013	3.35	4.38	5.02	0.75	960.71	965.00
STM A3	STM A2	60.00	960.82	960.46	0.60	15	0.013	2.74	4.15	5.00	0.66	961.48	965.00
STM A4	STM A3	60.00	961.18	960.82	0.60	15	0.013	2.13	3.51	5.00	0.58	961.76	965.00
STM A5	STM A4	60.00	961.54	961.18	0.60	15	0.013	1.52	3.07	5.00	0.49	962.03	965.00
STM A6	STM A5	43.29	961.80	961.54	0.60	15	0.013	0.79	2.31	5.00	0.35	962.15	966.48
STM A7	STM A6	30.29	962.18	962.00	0.59	15	0.013	0.79	2.90	4.98	0.35	962.53	966.00
STM A8	STM A7	25.79	962.33	962.18	0.58	15	0.013	0.24	1.46	4.92	0.19	962.52	966.56
STM B1	EX STM E4	92.67	960.71	959.78	1.00	15	0.013	3.11	4.77	6.47	0.71	961.42	965.01

Storm Sewer Design Calculation Table													
100 Year Return Frequency													
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)	Upstream Top Elev. (ft)
STM A1	EX STM E6	22.50	959.47	959.33	0.62	15	0.013	6.70	5.46	5.09	1.25	960.82	965.20
STM A2	STM A1	49.72	959.96	959.66	0.60	15	0.013	5.67	4.62	5.02	1.25	961.35	965.00
STM A3	STM A2	60.00	960.82	960.46	0.60	15	0.013	4.64	4.56	5.00	0.95	961.77	965.00
STM A4	STM A3	60.00	961.18	960.82	0.60	15	0.013	3.61	3.90	5.00	0.80	961.98	965.00
STM A5	STM A4	60.00	961.54	961.18	0.60	15	0.013	2.58	3.50	5.00	0.64	962.18	965.00
STM A6	STM A5	43.29	961.80	961.54	0.60	15	0.013	1.34	2.70	5.00	0.46	962.26	966.48
STM A7	STM A6	30.29	962.18	962.00	0.59	15	0.013	1.34	3.37	4.98	0.46	962.64	966.00
STM A8	STM A7	25.79	962.33	962.18	0.58	15	0.013	0.41	1.69	4.92	0.25	962.58	966.56
STM B1	EX STM E4	92.67	960.71	959.78	1.00	15	0.013	5.26	5.63	6.47	0.93	961.64	965.01

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORMWATER CALCULATIONS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_STM03_F2104643
date: 01.19.2024

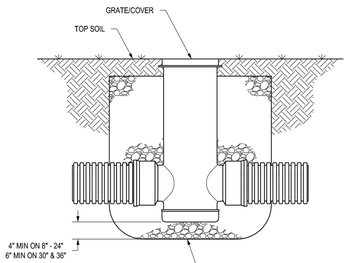
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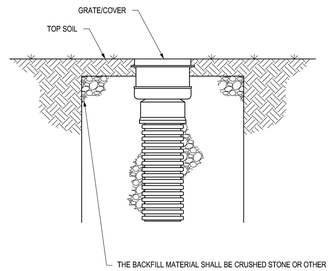
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USER: aromanov
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NON TRAFFIC INSTALLATION

DRAIN BASIN



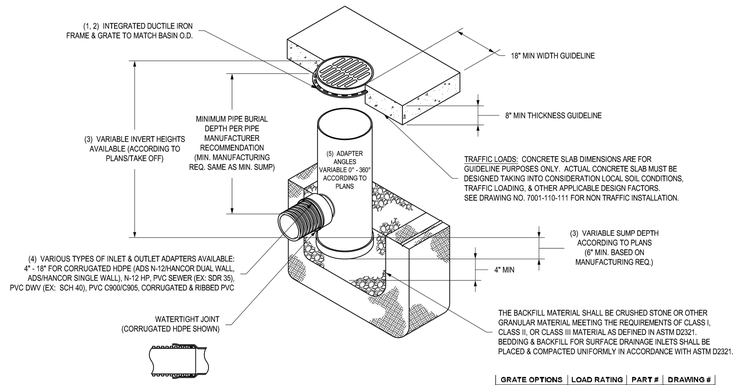
INLINE DRAIN



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DATE 9-30-09			
REVISED BY NMH	PROJECT NO./NAME	TITLE	DRAIN BASIN & INLINE DRAIN NON TRAFFIC INSTALLATION
DATE 03-11-16			
DWG SIZE A	SCALE 1:25 SHEET 1 OF 1	DWG NO.	7001-110-111 REV F

NYLOPLAST 18" DRAIN BASIN: 2818AG _ _ X

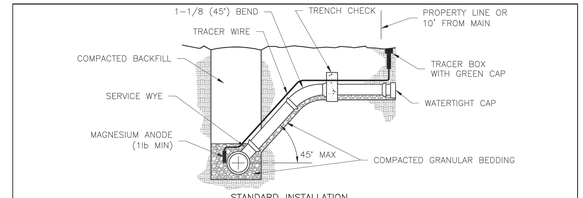


GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1899DSP	7001-110-212
STANDARD	MEETS H-20	1899DSS	7001-110-213
SOLID COVER	MEETS H-20	1899DSC	7001-110-214
DOME	N/A	1899DSD	7001-110-215
DROP IN GRATE	LIGHT DUTY	1801DI	7001-110-074

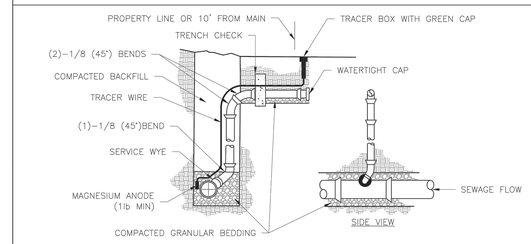
1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-005.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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DATE 04-03-06			
REVISED BY NMH	PROJECT NO./NAME	TITLE	18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DATE 03-14-16			
DWG SIZE A	SCALE 1:30 SHEET 1 OF 1	DWG NO.	7001-110-191 REV E



STANDARD INSTALLATION
NOT TO SCALE



VERTICAL RISER
NOT TO SCALE

NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

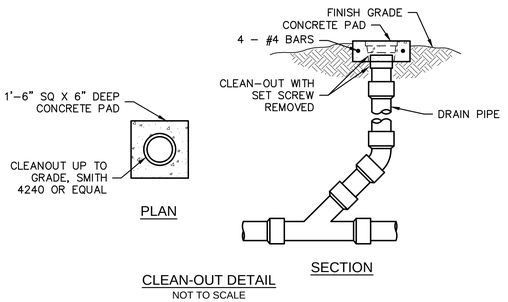
LS

LEE'S SUMMIT
MISSOURI
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SANITARY SEWER STUB DETAIL

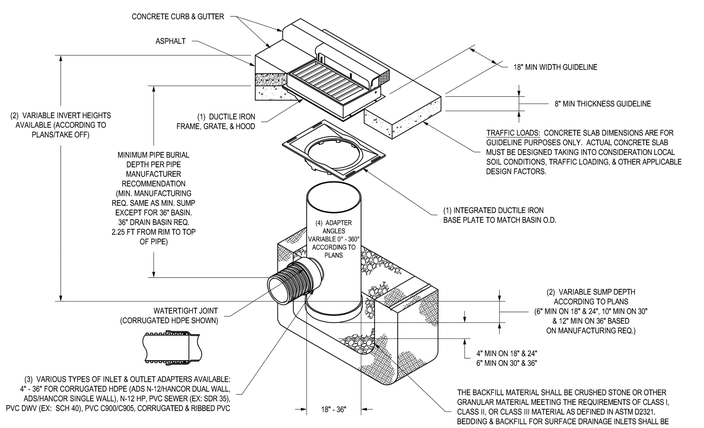
Date: 12/2015
Drawn By: MJf
Checked By: DL

SAN-1



CLEAN-OUT DETAIL
NOT TO SCALE

NYLOPLAST 2 FT X 3FT CURB INLET STRUCTURE: 30 _ _ AGR _ _ X

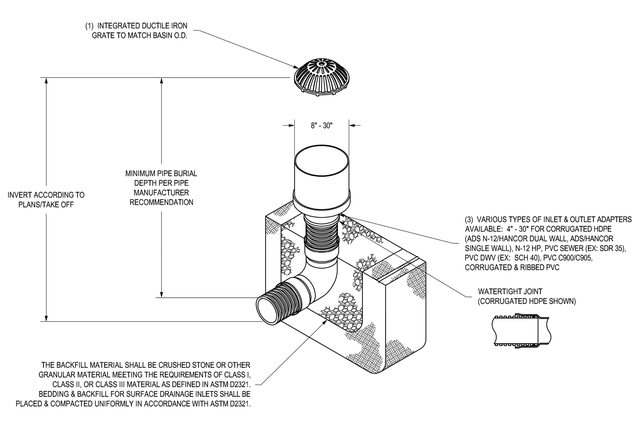


1 - 18" - 30" FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 36").
4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
5 - ALL CURB INLET GRATE OPTIONS (DIAGONAL & HIGH FLOW) SHALL MEET H-20 LOAD RATING

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DATE 03-22-10			
REVISED BY NMH	PROJECT NO./NAME	TITLE	DRAIN BASIN WITH 2 FT X 3 FT CURB INLET QUICK SPEC INSTALLATION DETAIL
DATE 07-22-19			
DWG SIZE A	SCALE 1:40 SHEET 1 OF 1	DWG NO.	7002-110-087 REV D

NYLOPLAST INLINE DRAIN WITH DOME GRATE



1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
3 - 8" - 30" DOME GRATES HAVE NO LOAD RATING

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DATE 03-25-10			
REVISED BY NMH	PROJECT NO./NAME	TITLE	INLINE DRAIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL
DATE 03-15-16			
DWG SIZE A	SCALE 1:40 SHEET 1 OF 1	DWG NO.	7003-110-057 REV D

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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER PE-2009015436
1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

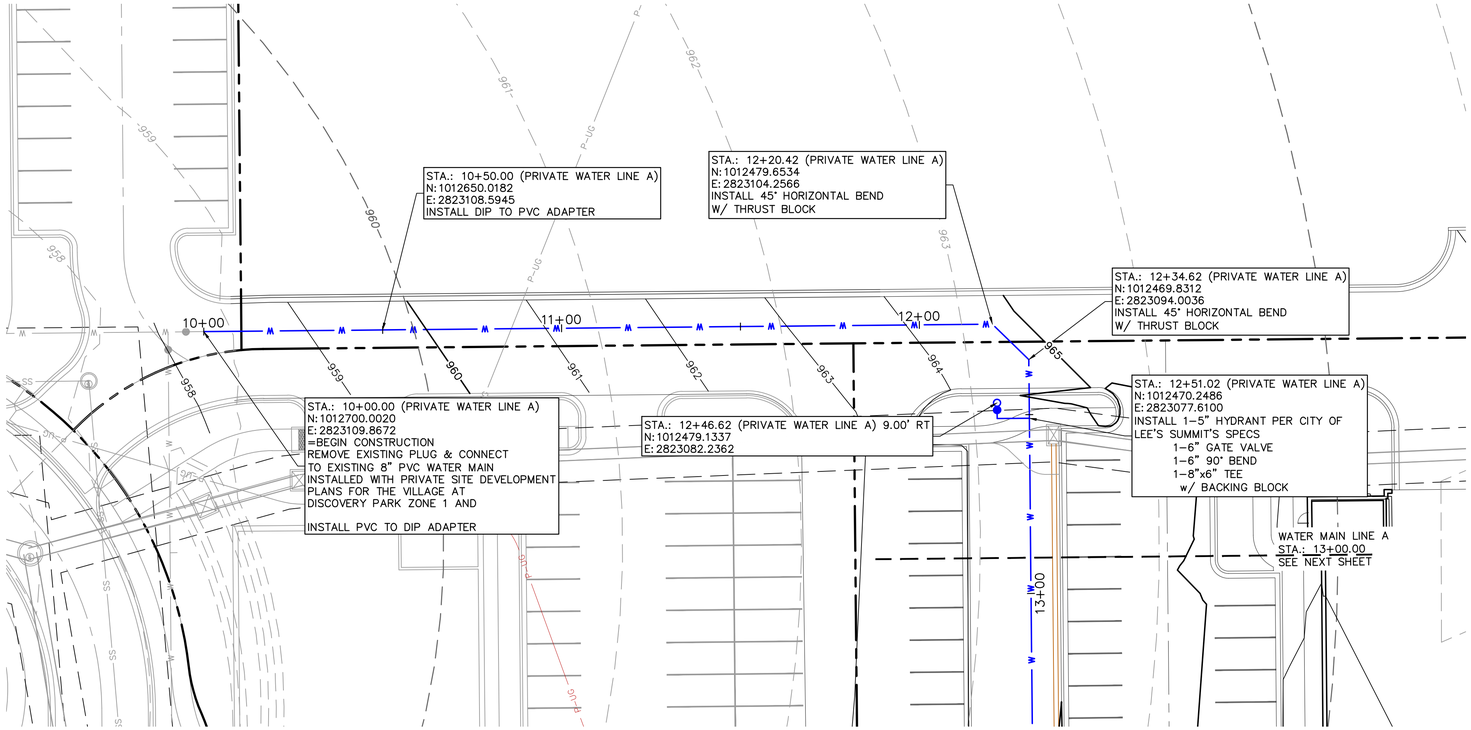
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checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_DTL01_F2104643
date: 01.19.2024

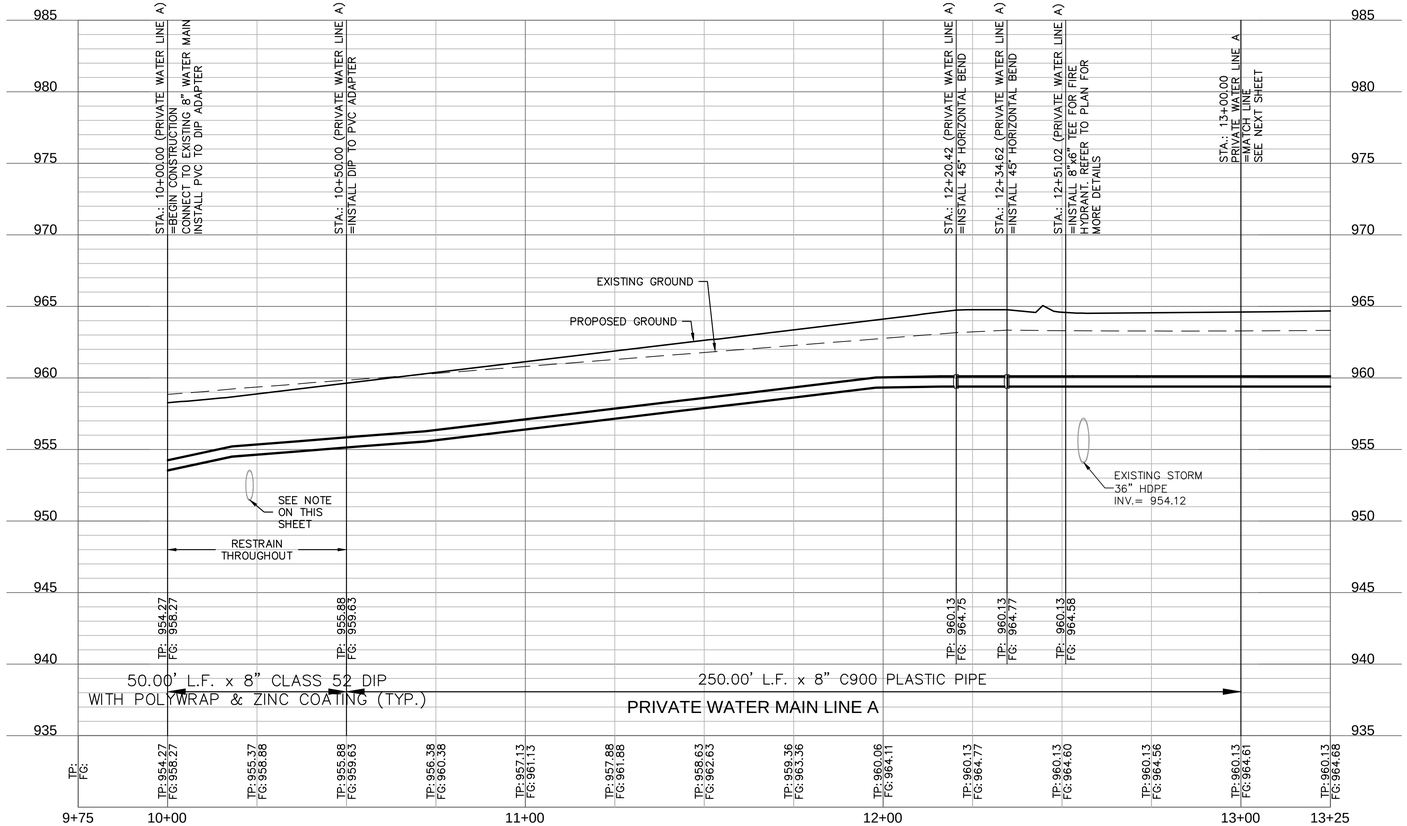
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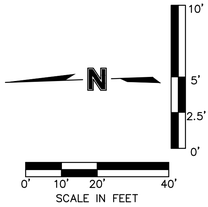
NOTE:
APPROXIMATE LOCATION OF FUTURE STORM SEWER EXTENSION TO SERVE LOT 1 SHOWN ON THE PROFILE FOR REFERENCE ONLY





WATER PLAN LEGEND
SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

- W — W — PROPOSED WATER
- SS — SS — PROPOSED SANITARY
- SD — SD — PROPOSED STORM SEWER
- P-UG — PROPOSED UNDERGROUND POWER



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DAVID L. EICKMAN
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1/19/24
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

WATER MAIN PLAN & PROFILE (LINE A)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: DB/BM/GS/OS/TW
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21.04643
drawing no.: C_WAT01_F2104643
date: 01.19.2024

SHEET
C600

C_XALTA_B2104643 C_PBNDY_D2104643 C_PUTIL_D2104643 C_PBASE_E2104643 C_PUTIL_F2104643 C_PWATR_F2104643

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DATE: Jan 19, 2024 8:33am XREFS: C_PTBLK_F2104643 C_PBASE_F2104643 C_PBASE_D2104643 T_PBASE_D02104643

WATER PLAN LEGEND
SEE SHEET C103 FOR EXISTING CONDITIONS LEGEND
SEE SHEET C300 FOR GENERAL SITE LEGEND

- W — W — PROPOSED WATER
- SS — SS — PROPOSED SANITARY
- SD — SD — PROPOSED STORM SEWER
- P-UG — PROPOSED UNDERGROUND POWER

WATER MAIN LINE A
STA.: 13+25.00
SEE SHEET C600

STA.: 14+68.31 (PRIVATE WATER LINE A)
N: 1012475.7797
E: 2822860.3880
INSTALL 45° HORIZONTAL BEND
W/ THRUST BLOCK

STA.: 14+71.27 (PRIVATE WATER LINE A)
N: 1012477.9059
E: 2822858.3347
INSTALL 8"X6" TEE FOR
FIRE SERVICE LINE. REFER TO
SHEET C500 FOR MORE DETAILS

STA.: 14+75.27 (PRIVATE WATER LINE A)
N: 1012480.7833
E: 2822855.5561
INSTALL 8"x4" TEE FOR FOR
DOMESTIC WATER SERVICE LINE
REFER TO SHEET C500
FOR MORE DETAILS

STA.: 14+94.36 (PRIVATE WATER LINE A) 16.28' RT
N: 1012505.8249
E: 2822854.0005

STA.: 14+89.09 (PRIVATE WATER LINE A)
N: 1012490.7411
E: 2822845.9707
INSTALL 8"X4" TEE FOR
IRRIGATION TAP. REFER TO
IRRIGATION PLANS FOR MORE DETAILS

STA.: 14+81.22 (PRIVATE WATER LINE A)
N: 1012478.6913
E: 2822844.8229
INSTALL 3" WATER METER VAULT
PER SHEET C600 AND STANDARD
DETAIL ON SHEET C603

STA.: 14+89.96 (PRIVATE WATER LINE A)
N: 1012491.3543
E: 2822845.3478
INSTALL 1-5" HYDRANT PER CITY OF
LEE'S SUMMIT'S SPECS
1-6" GATE VALVE
1-6" 90° BEND
1-8"x6" TEE
w/ BACKING BLOCK

STA.: 15+88.75 (PRIVATE WATER LINE A)
N: 1012502.4040
E: 2822750.6273
INSTALL 8" GATE VALVE

STA.: 15+03.25 (PRIVATE WATER LINE A)
N: 1012500.9117
E: 2822836.1183
INSTALL 45° HORIZONTAL BEND
W/ THRUST BLOCK

STA.: 16+04.19 (PRIVATE WATER LINE A)
N: 1012502.6735
E: 2822735.1902
START STEEL CASING

STA.: 16+97.73 (PRIVATE WATER LINE A)
N: 1012504.3059
E: 2822641.6667
INSTALL TEMPORARY STRAIGHT
SET FIRE HYDRANT
=END CONSTRUCTION

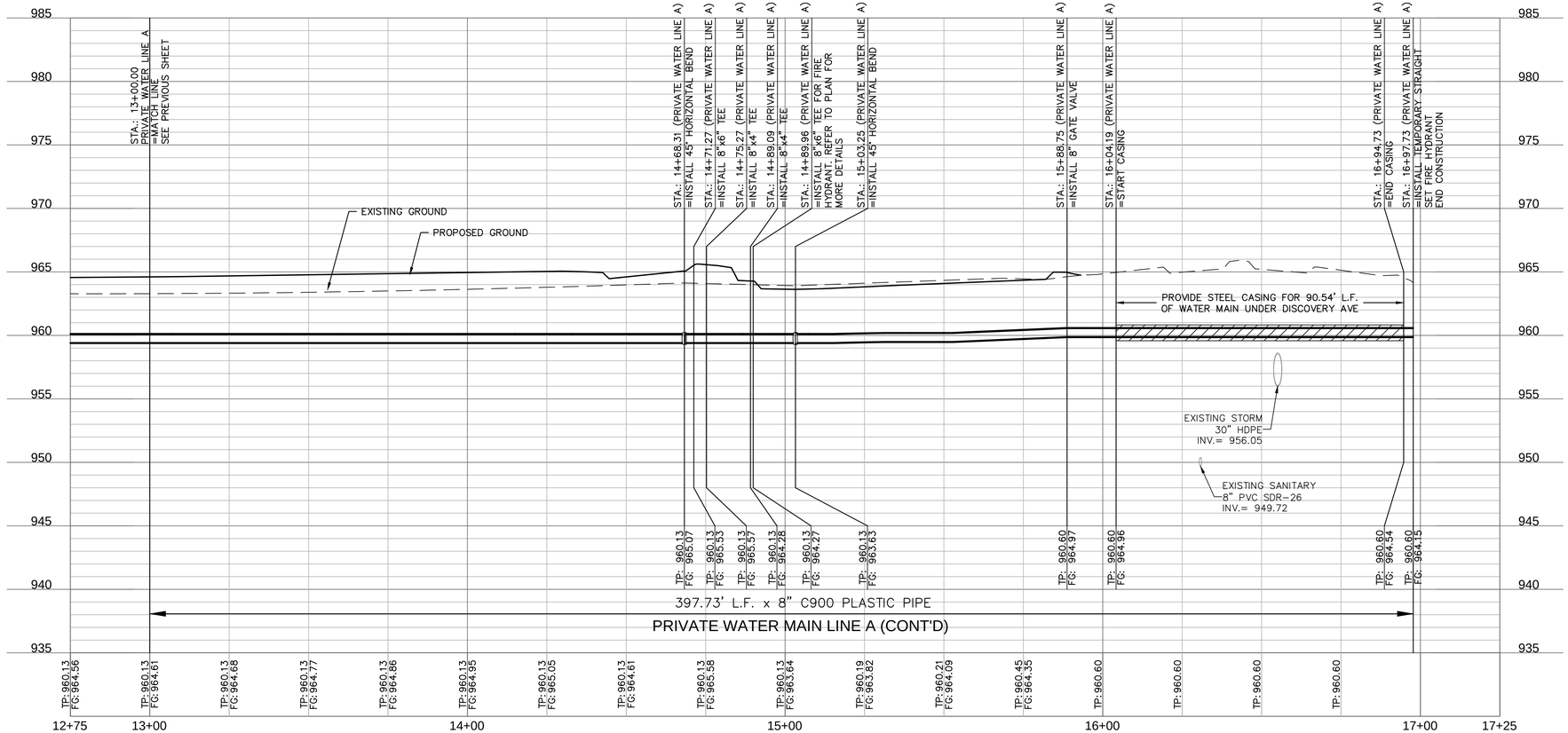
STA.: 16+94.73 (PRIVATE WATER LINE A)
N: 1012504.2536
E: 2822644.6662
END STEEL CASING

13+00 14+00 15+00 16+00 16+97.73

N

0' 10' 20' 40'
SCALE IN FEET

0' 2.5' 5' 10'



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DAVID EICKMAN, P.E.
MO# 2009015436

REVISIONS

REV./ NO:	DATE	REVISIONS DESCRIPTION	BY

WATER MAIN PLAN & PROFILE (LINE A CONT'D)
PRIVATE SITE DEVELOPMENT PLANS

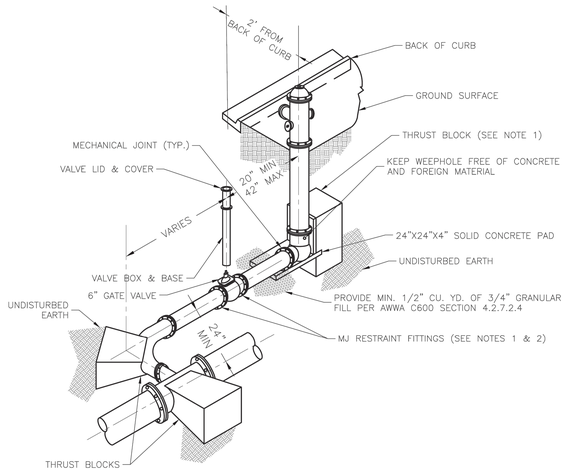
THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by:	DB/BM/GS/OS/TW
checked by:	AR/JN
approved by:	DE
QA/QC by:	JS/NH
project no.:	F21-04643
drawing no.:	C_WAT01_F2104643
date:	01.19.2024

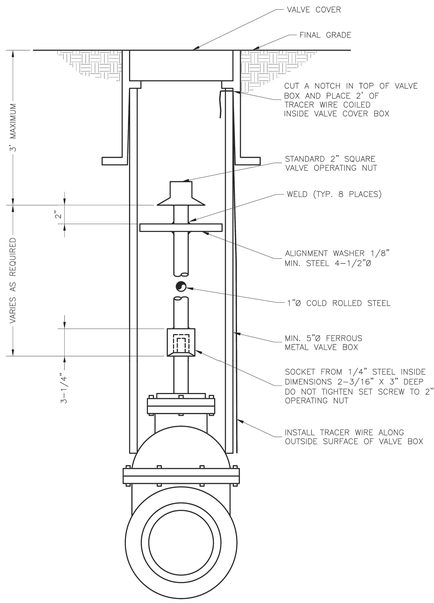
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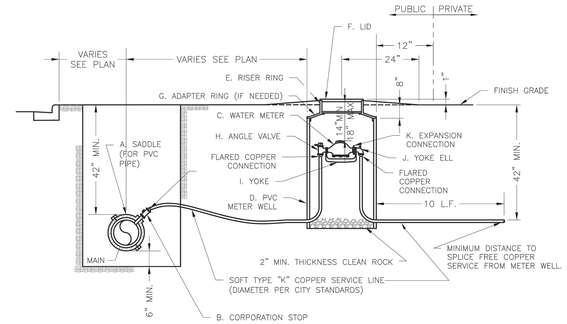
NOTES:

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 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 01/2016 Drawn By: JN Checked By: DL
HYDRANT WITH 90 DEGREE BEND	WAT-8



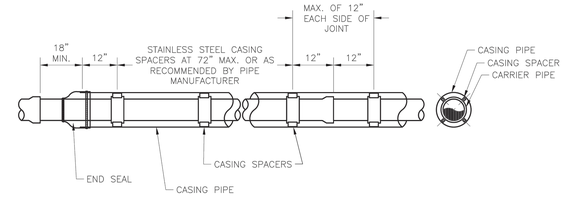
LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 01/2016 Drawn By: JN Checked By: DL
VALVE STEM EXTENSION AND VALVE BOX	WAT-9



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"

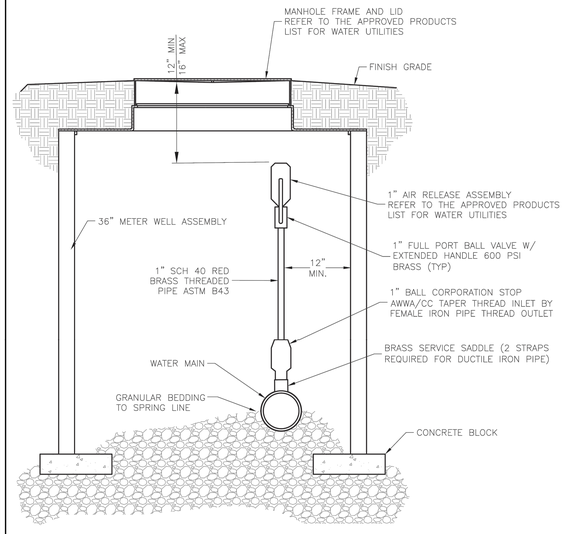
LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 06/2015 Drawn By: JN Checked By: DL
SERVICE CONNECTION WITH METER WELL	WAT-11



NOTES:

1. REFER TO SPECIFICATION SECTION 3900 FOR ADDITIONAL INFORMATION.
2. LENGTH, DIAMETER, AND WALL THICKNESS TO BE SHOWN ON CONSTRUCTION PLANS.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 01/2016 Drawn By: JN Checked By: DL
WATER CASING PIPE DETAIL	WAT-5

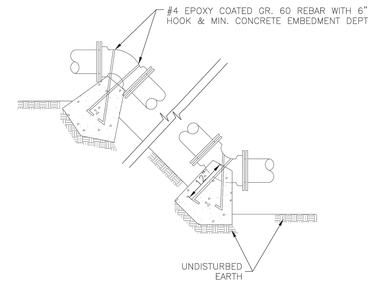


AIR RELEASE ASSEMBLY
NOT TO SCALE

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 01/2014 Drawn By: JN Checked By: DL
AIR RELEASE ASSEMBLY	WAT-10

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	Date: WAT-2 Drawn By: JN Checked By: DL
VERTICAL THRUST BLOCK	WAT-2

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STATE OF MISSOURI
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NUMBER PE-2009015436
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PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MO# 2009015436

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

WATER DETAILS (1 OF 2)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

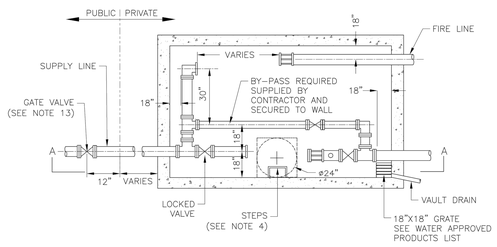
LEE'S SUMMIT, MISSOURI

2023

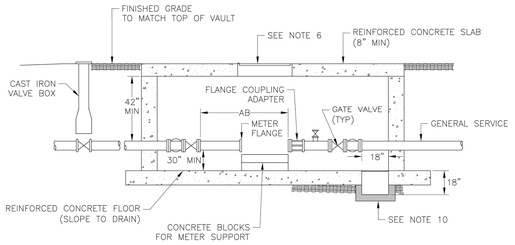
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checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: F21-04643
drawing no.: C_DTL01_F2104643
date: 01.19.2024

SHEET
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USER: aromanov
C_PUTIL_D2104643 C_PBNDY_D2104643



PLAN VIEW
NOT TO SCALE



SECTION A–A
NOT TO SCALE

TYPICAL DIMENSIONS

GENERAL SERVICE			NOTES
SIZE	BY PASS SITE**	AB***	
3"	1–½"	42–¾"	
4"	2"	54–¾"	INCLUDE STRAINER
6"	3"	75–¼"	INCLUDE STRAINER
8"	*	*	*
10"	*	*	*

NOTES:

* Design shall be by a registered professional engineer and calculations shall be submitted to the City Engineer for approval.

** If higher continuous rate of flow is required, a larger By-Pass may be permitted but not larger than primary domestic service size.

*** Contractor to verify dimensions

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. FOR MANHOLE COVERS, SELECT A MANHOLE CASTING FOUND ON THE WATER UTILITIES LIST OF ACCEPTABLE MANUFACTURERS AND MODELS. THE CASTING SHALL HAVE A 1-3/4" ø HOLE DRILLED FOR TOUCH/READ DEVICE. .
7. 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.
8. IF HIGHER CONTINUOUS RATE OF FLOW IS REQUIRED, A LARGER BY-PASS MAY BE PERMITTED, BUT NOT LARGER THAN PRIMARY DOMESTIC SERVICE.
9. ALL VALVES SHALL BE RISING STEM VALVES.
10. 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.
11. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES APPURTENANCES, ETC.
12. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
13. 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

Project: WATER STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

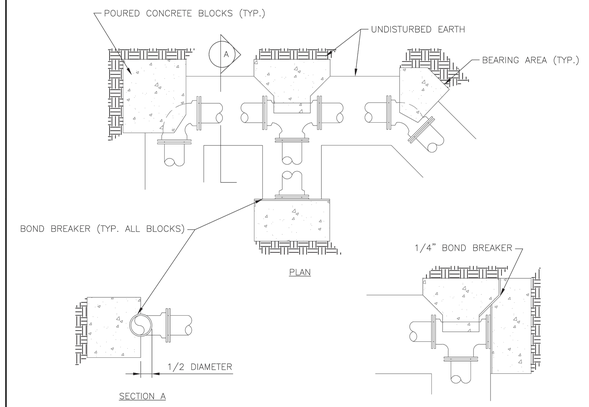
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Drawn By:
Checked By:

WAT-13

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

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

WAT-1

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REVISIONS

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WATER DETAILS (2 OF 2)
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NE COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

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SHEET
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USER: aromancv
C_XALTA_B2104643 T_PBASE_D02104643 C_PBASE_F2104643 C_PUTIL_F2104643 C_PTBLK_F2104643

MATERIAL SCHEDULE:

KEY	MATERIAL NAME	MANUFACTURER/SUPPLIER	COLLECTION	COMMENTS	CONTACT
	LOT 3				
	PAVING				
	CAST-IN-PLACE				
P-100.1	GRAY CONCRETE	N/A	N/A		
P-100.2	STAMPED INTEGRAL COLOR CONCRETE	BOMANITE	N/A	COLORATION SYSTEMS - INTEGRAL COLOR, COLOR: SIERRA ROSE, COLOR RELEASE: PAINTED DESERT, MEDIUM ASHLAR SLATE STAMP PATTERN	DAN KROESEN 816.861.1234
P-100.3	POOL DECK CONCRETE WITH TOPPING	MORTEX MATERIALS	N/A	KOOL DECK CONCRETE TOPPING, 3/16" COLOR: ADOBE BUFF	BOB MILLER 410.610.9401
	MANUFACTURED				
P-200.1	FIRE GLASS	HOUSE OF ROCKS	AMERICAN SPECIALTY GLASS	GRAY FIRE GLASS, SIZE: MEDIUM	ADAM BURKIEWICZ 913.432.5990
	CLADDING				
	VENEER & CAP				
W-100.1	BAR COUNTERTOP	COSENTINO	DEKTON	THICKNESS: 2 CM, COLOR: TRILIUM	MICHAEL VAN OS +34.606.258.452
W-100.2	EXTERIOR CLADDING	COSENTINO	DEKTON	THICKNESS: 12 MM, COLOR: KERANIUM	MICHAEL VAN OS +34.606.258.452
W-100.3	FIRE PIT CAP	COSENTINO	DEKTON	THICKNESS: 12 MM, COLOR: TRILIUM	MICHAEL VAN OS +34.606.258.452
	FENCING/RAILING				
F-100.1	POOL FENCE	C.R. LAURENCE	N/A	MATCH STERLING DULA BASIS OF DESIGN, ALUMINUM TUBING, FINISH: FLUROPOLUMER (PVDF) 70% RESIN, 2 COAT-SYSTEM COMPLYING WITH AAMA 2605, COLOR: DARK BRONZE	CR LAURENCE COMPANY 800.421.6144
F-100.2	GUARDRAIL	C.R. LAURENCE	N/A	MATCH STERLING DULA BASIS OF DESIGN, ALUMINUM TUBING, FINISH: FLUROPOLUMER (PVDF) 70% RESIN, 2 COAT-SYSTEM COMPLYING WITH AAMA 2605, COLOR: DARK BRONZE	CR LAURENCE COMPANY 800.421.6144
	SITE FURNISHINGS				
	PRIVATE				
SF-100.1	DINING CHAIR	BROWN JORDAN	OSCAR	PRODUCT NUMBER: 5490-2200, FABRIC COLOR: BLACK GREY, FRAME COLOR: TEXTURED PEWTER, CORD COLOR: COAL	TAYLOR FORTUNE 636.227.9699
SF-100.2	LOUNGE CHAIR	BROWN JORDAN	OSCAR	PRODUCT NUMBER: 5490-6000, FABRIC COLOR: BLACK GREY, FRAME COLOR: TEXTURED PEWTER, CORD COLOR: COAL	TAYLOR FORTUNE 636.227.9699
SF-100.3	BAR STOOL	BROWN JORDAN	OSCAR	PRODUCT NUMBER: 5490-3600, FABRIC COLOR: BLACK GREY, FRAME COLOR: TEXTURED PEWTER, CORD COLOR: COAL	TAYLOR FORTUNE 636.227.9699
SF-100.4	CHAISE LOUNGE	TROPITONE	SOUTH BEACH	PRODUCT NUMBER: 240532, FABRIC COLOR: PEACOCK, FRAME COLOR: GRAPHITE	GLEN KUOPUS 972.839.3538
SF-100.5	DINING TABLE	TROPITONE	AMICI	PRODUCT NUMBER: 691936-28, 36" ROUND KD DINING TABLE, COLOR: GRAPHITE	GLEN KUOPUS 972.839.3538
SF-100.6	DINING UMBRELLA TABLE	TROPITONE	AMICI	PRODUCT NUMBER: 691936U-28, 36" ROUND KD DINING UMBRELLA TABLE, COLOR: GRAPHITE	GLEN KUOPUS 972.839.3538
SF-100.7	SIDE TABLE	BROWN JORDAN	OSCAR	PRODUCT NUMBER: 5493-1700-KN, FABRIC COLOR: BLACK GREY, FRAME COLOR: TEXTURED PEWTER, CORD COLOR: COAL	TAYLOR FORTUNE 636.227.9699
SF-100.8	TRASH RECEPTACLE - PRIVATE	TROPITONE	RADIUS	PRODUCT NUMBER: 3B2189, 46" X 24.75" X 24.75", COLOR: BRIGHT BLACK, SURFACE MOUNT	GLEN KUOPUS 972.839.3538
SF-100.9	UMBRELLA	TROPITONE	PORTOFINO II	PRODUCT NUMBER: BQH008MS, 8' HEXAGON MANUAL LIFT, FABRIC COLOR: SPECTRUM GRAPHITE, FRAME COLOR: GRAPHITE, BASE: PRODUCT NUMBER: CFA24R2F CEMENT FILLLED ALUMINUM BASE 24" ROUND, 2" POLE FREE STANDING GRAPHITE COLOR	GLEN KUOPUS 972.839.3538
SF-100.10	PLANTER - FRONT ENTRY	LANDSCAPE FORMS / KORNEGAY DESIGNS	ASPECT	ASP-30, SANDSTONE COLOR	STACY ERNST 816.678.2004
SF-100.11	PLANTER - ACCENT	TOURNESOL	WILSHIRE	PRODUCT NUMBER: WR-362430, 36" X 24" X 30", DRAIN HOLE, POWDERCOAT COLOR: TEXTURED PEWTER, CORD COLOR: COAL	HEATHER HUFFER 510.240.6844
SF-100.12	TOWEL BIN	TEXACRAFT	N/A	PRODUCT NUMBER: M1600RTB, FABRIC COLOR: PEWTER MESH 921, FRAME COLOR: BRONZE BRZ	HEATHER PITTMAN 800.313.5052
SF-100.13	TOWEL RACK	TEXACRAFT	NEXUS	PRODUCT NUMBER: M77041, FABRIC COLOR: ROSEWOOD WEAVE	HEATHER PITTMAN 800.313.5052
SF-100.14	CABANA	TROPITONE	N/A	PRODUCT NUMBER: NS008A238, 8' SQUARE WITH FABRIC CURTAINS (NO VENT), FINISH: GRAPHITE, COVER FABRIC COLOR: SPECTRUM GRAPHITE, CURTAIN FABRIC COLOR: CANVAS GRAPHITE	GLEN KUOPUS 972.839.3538
SF-100.15	GRILL ASSEMBLY	WEBER	SUMMIT	S-660 BUILT-IN GAS GRILL, 43" X 31" X 51"	WEBER-STEVEN PRODUCTS LLC 800.446.1071
SF-100.16	FIRE PIT ASSEMBLY	HEARTH PRODUCTS CONTROL CO.	SQUARE FLAT INSERT	PRODUCT NUMBER: 18FSSEI-SQ-NG/24VAC, 18" INSERT, 12" BURNER, ELECTRONIC IGNITION ON OFF, 24 VAC, NATURAL GAS	HPC FIRE INSPIRED 937.436.9800
	STREETSCAPE				
SF-200.1	BENCH - STREETSCAPE	ANOVA	AIRI STIX	6' CONTOUR BENCH, TEXTURED BLACK COLOR, SURFACE MOUNTED	BOB EVANS 314.495.8357
SF-200.2	TRASH RECEPTACLE - STREETSCAPE	ANOVA	AIRI STIX	45-GALLON WITH SIDE DOOR, TEXTURED BLACK COLOR	BOB EVANS 314.495.8357
	LIGHTING				
L-100.1	DECORATIVE BOLLARD	CURRENT / ARCHITECTURAL AREA LIGHTING	PROVIDENCE	POLE MOUNT, 5" DIA. ROUND SHAFT, MATTE BLACK COLOR	AMANDA SCOTT 781.572.7981
L-100.2	STRING LIGHTS	TIVOLI	LITESPHERE ADAPT 2.0	WIRE: BLACK, SPACING: 12" O.C., LED COLOR: 3000K, GLOBE: GINA	DOUG HARWOOD 913.232.6124
L-100.3	STRING LIGHT POLE	KW INDUSTRIES	RSP	RSP-15, 15' HEIGHT, POWDERCOAT COLOR: BLACK	KATE WIMER 913.488.6444
L-100.4	LED CHANNEL LIGHT	KELVIX	DL SERIES	PRODUCT: DIRECT VIEW 200 (OUTDOOR) CHANNEL PRODUCT: CH-607, FROSTED LENS	KATE WIMER 913.488.6444
L-100.5	GFCI ELECTRICAL OUTLET	GRAINGER	TAYMAC	BLACK, SINGLE GANG, WEATHER PROOF OUTDOOR POWER BOX. BLACK ELECTRICAL CONDUIT. WEATHER PROOF OUTLET COVER OR APPROVED EQUAL	

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STATE OF MISSOURI
CODY PRIVATE
NUMBER LA-2012033117
LANDSCAPE ARCHITECT

REVISIONS

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THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

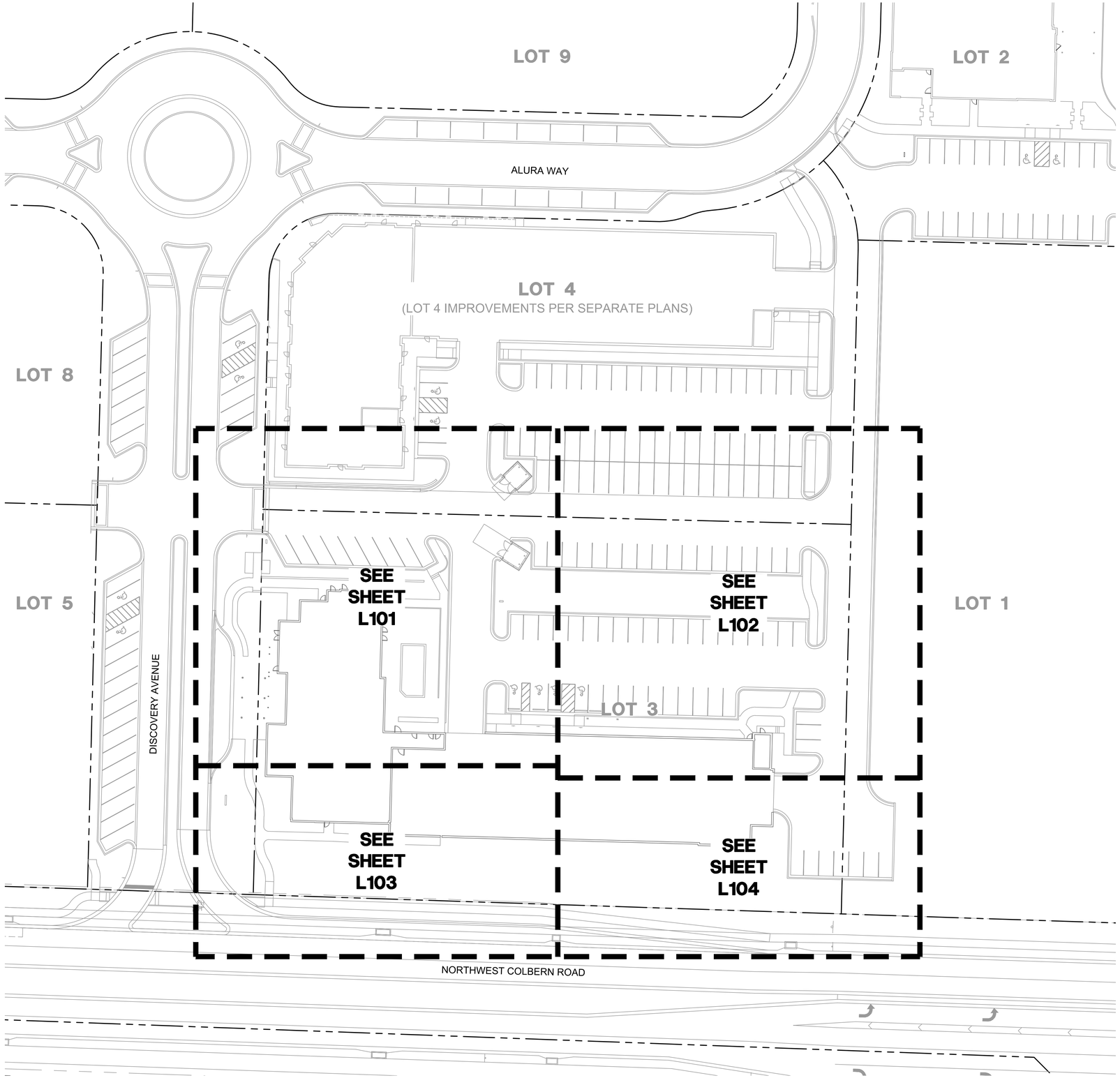
LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F21-04643
drawing no: L_CVR01_F2104643.DWG
date: 01.19.2024

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DATE: Jan 19, 2024 8:34am XREFS: L_PTBLK_F2104643



1 **HARDSCAPE OVERALL PLAN**

HARDSCAPE GENERAL NOTES:

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF LEE'S SUMMIT, MISSOURI IN CURRENT USAGE. ALL STANDARDS NOT COVERED BY THE CITY SHALL BE APWA STANDARDS IN CURRENT USAGE UNLESS OTHERWISE NOTED.
2. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE UTILITY INFORMATION IS NOT MEANT TO BE ALL INCLUSIVE. THE CONTRACTOR SHALL NOTIFY MISSOURI ONE CALL (811) BEFORE THE START OF ANY EXCAVATION WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION TO PROVIDE NON-INTERRUPTION OF SERVICE, TO ENSURE PROPER CLEARANCES, AND TO AVOID DAMAGE THERETO.
3. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL, BY HIS OWN INVESTIGATION, AND PRIOR TO COMMENCING WORK, SATISFY HIMSELF AS TO, AND ACCEPT THE SITE CONDITIONS TO BE ENCOUNTERED.
5. WHERE THE NEW IMPROVEMENTS ABUT EXISTING IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MATCHING THE ELEVATION OF THE EXISTING IMPROVEMENTS UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL PROVIDE A SECURE SITE TO PROTECT VEHICLES AND PEDESTRIANS FROM ACCIDENTAL FALLS AND HARM FROM THE CONSTRUCTION PROCESS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR DE-WATERING CONSTRUCTION AREAS IN ORDER TO PERMIT CONTINUATION OF THE WORK. ANY WATER ACCUMULATION SHALL BE REMOVED BY PUMPING.
8. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES OR MATERIALS AS SHOWN IN THESE PLANS. CONTRACTOR SHALL ACCOMMODATE ALL SLOPE AND GRADE CONDITIONS IN THEIR CALCULATION OF MATERIAL QUANTITIES FOR ALL WORK SHOWN ON THESE PLANS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PEDESTRIAN AND VEHICULAR TRAFFIC CONTROL DURING CONSTRUCTION OPERATIONS. OWNER SHALL APPROVE MEASURES USED TO ALLOW TENANTS AND SHOPPERS PROPER ACCESS DURING CONSTRUCTION.
10. CONTRACTOR SHALL TAKE CARE TO CREATE SMOOTH UNIFORM FINISH GRADES IN ALL AREAS.
11. SLOPES SHALL BE MADE WITH A 4 TO 1 MAXIMUM GRADE FOR MAINTENANCE PURPOSES, UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL MATCH GRADES AT EXISTING IMPROVEMENTS.
13. ALL SPOT ELEVATIONS SHOWN ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
14. CONTRACTOR SHALL ADJUST ALL VALVE BOXES, MANHOLE RING COVERS, AND OTHER UTILITY APPURTENANCES TO MATCH FINISH GRADE ELEVATIONS.
15. TURF & SHRUB BED AREAS SHALL BE GRADED AS NECESSARY TO ALLOW A 2% SLOPE TO INLET LOCATIONS AND SWALES.
16. ALL WORK CONSTRUCTED UNDER THESE PLANS SHALL MEET SLOPE REQUIREMENTS PER THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, THE 2012 TAS STANDARDS FOR ACCESSIBLE DESIGN, AND INTERNATIONAL BUILDING CODE IN CURRENT USAGE. MAXIMUM 5% RUNNING SLOPE AND MAXIMUM 2% CROSS SLOPE FOR SIDEWALKS.
17. ALL WORK CONSTRUCTED UNDER THESE PLANS SHALL HAVE A MINIMUM OF A 1% SLOPE. LANDSCAPE BEDS AND TURF AREAS SHALL HAVE A MINIMUM OF A 2% SLOPE.
18. CHANGES IN LEVEL SHALL NOT BE GREATER THAN 1/4" AND A MAXIMUM OF 1/2" ARE ALLOWED WITH A BEVELED SLOPE NOT STEEPER THAN 1:2.

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HARDSCAPE OVERALL PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
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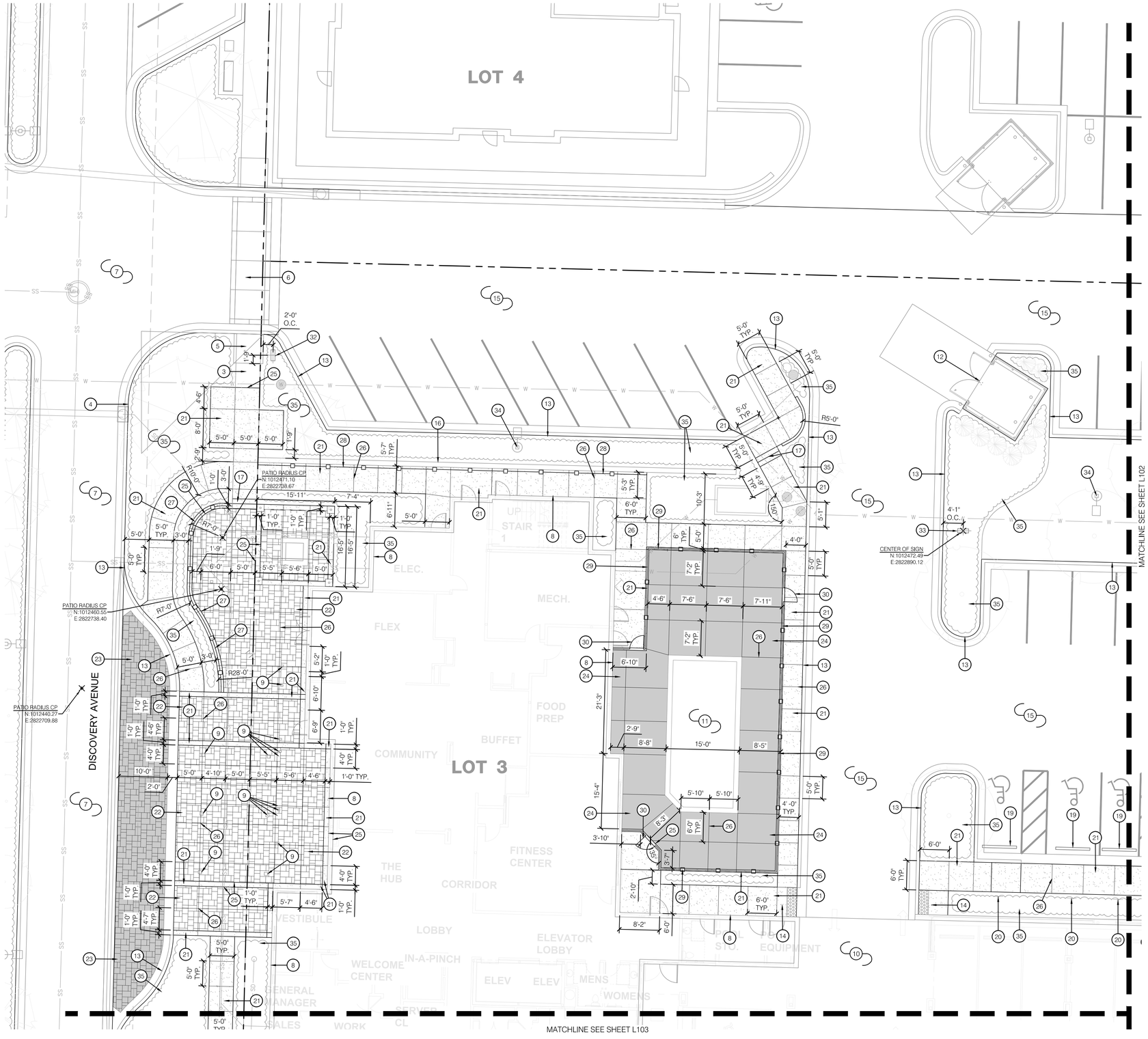
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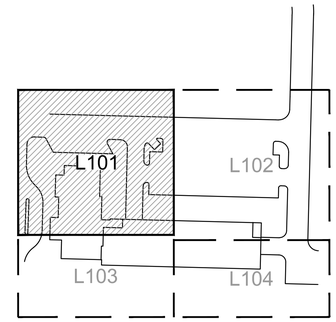
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drawing no.: L_OVR01_F2104643
date: 01.19.2024

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USER: ewilson



1 HARDSCAPE PLAN



KEYMAP

HARDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- GRAY CONCRETE (P-100.1)
- INTEGRAL COLOR STAMPED CONCRETE (P-100.2)
- LIGHT DUTY INTEGRAL COLOR STAMPED CONCRETE (P-100.2)
- POOL DECK CONCRETE WITH TOPPING (P-100.3)
- CP — CENTER POINT

HARDSCAPE PLAN NOTES:

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3. SIDEWALK; REF: PRIVATE DRIVE PLANS
4. CONCRETE CURB; REF: PRIVATE DRIVE PLANS
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6. CROSSWALK; REF: PRIVATE DRIVE PLANS
7. DRIVE; REF: PRIVATE DRIVE PLANS
8. BUILDING FACADE; REF: ARCHITECTURAL PLANS
9. BUILDING COLUMN; REF: ARCHITECTURAL PLANS
10. PARKING GARAGE; REF: ARCHITECTURAL PLANS
11. POOL BY POOL CONTRACTOR
12. TRASH ENCLOSURE; REF: ARCHITECTURAL PLANS
13. CONCRETE CURB; REF: CIVIL PLANS
14. CONCRETE CURB RAMP; REF: CIVIL PLANS
15. DRIVE PAVEMENT; REF: CIVIL PLANS
16. RETAINING WALL; REF: CIVIL PLANS
17. STAIRS; REF: CIVIL PLANS
18. EV STATION; REF: CIVIL PLANS
19. WHEEL STOPS; REF: CIVIL PLANS
20. REGULATORY SIGNAGE; REF: CIVIL PLANS
21. CONSTRUCT GRAY CONCRETE (P-100.1); REF: 1/L200
22. CONSTRUCT INTEGRAL COLOR STAMPED CONCRETE (P-100.2); REF: 2/L200
23. CONSTRUCT LIGHT DUTY INTEGRAL COLOR STAMPED CONCRETE (P-100.2); REF: 4/L200 & CIVIL PLANS FOR JOINTING PATTERN
24. CONSTRUCT POOL DECK CONCRETE WITH TOPPING (P-100.3); REF: 3/L200
25. INSTALL EXPANSION JOINT; REF: 5/L200
26. INSTALL CONTROL JOINT-STRAIGHT CUT; REF: 5/L200
27. CONCRETE PATIO RAILING; REF: 1/L201
28. NORTH RAILING; REF: 3/L201
29. POOL FENCE; REF: 2/L201
30. POOL FENCE GATE; REF: 2/L201
31. MONUMENT SIGN; REF: 1/L202
32. PARKING SIGN; REF: 1/L202
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HARDSCAPE PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2024

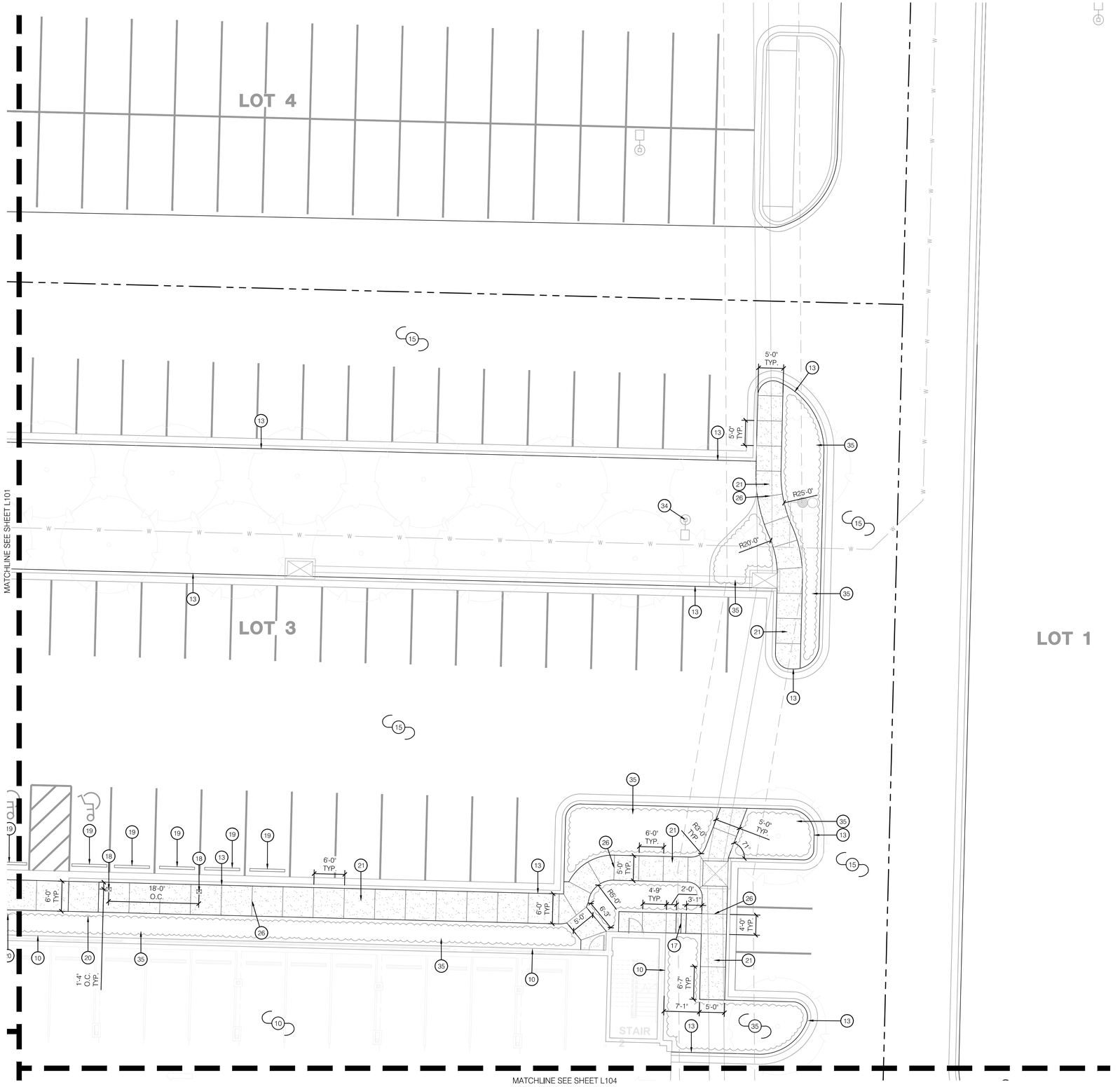
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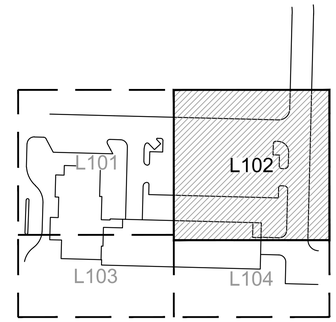
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1 **HARDSCAPE PLAN**



KEYMAP

HARDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- GRAY CONCRETE (P-100.1)
- INTEGRAL COLOR STAMPED CONCRETE (P-100.2)
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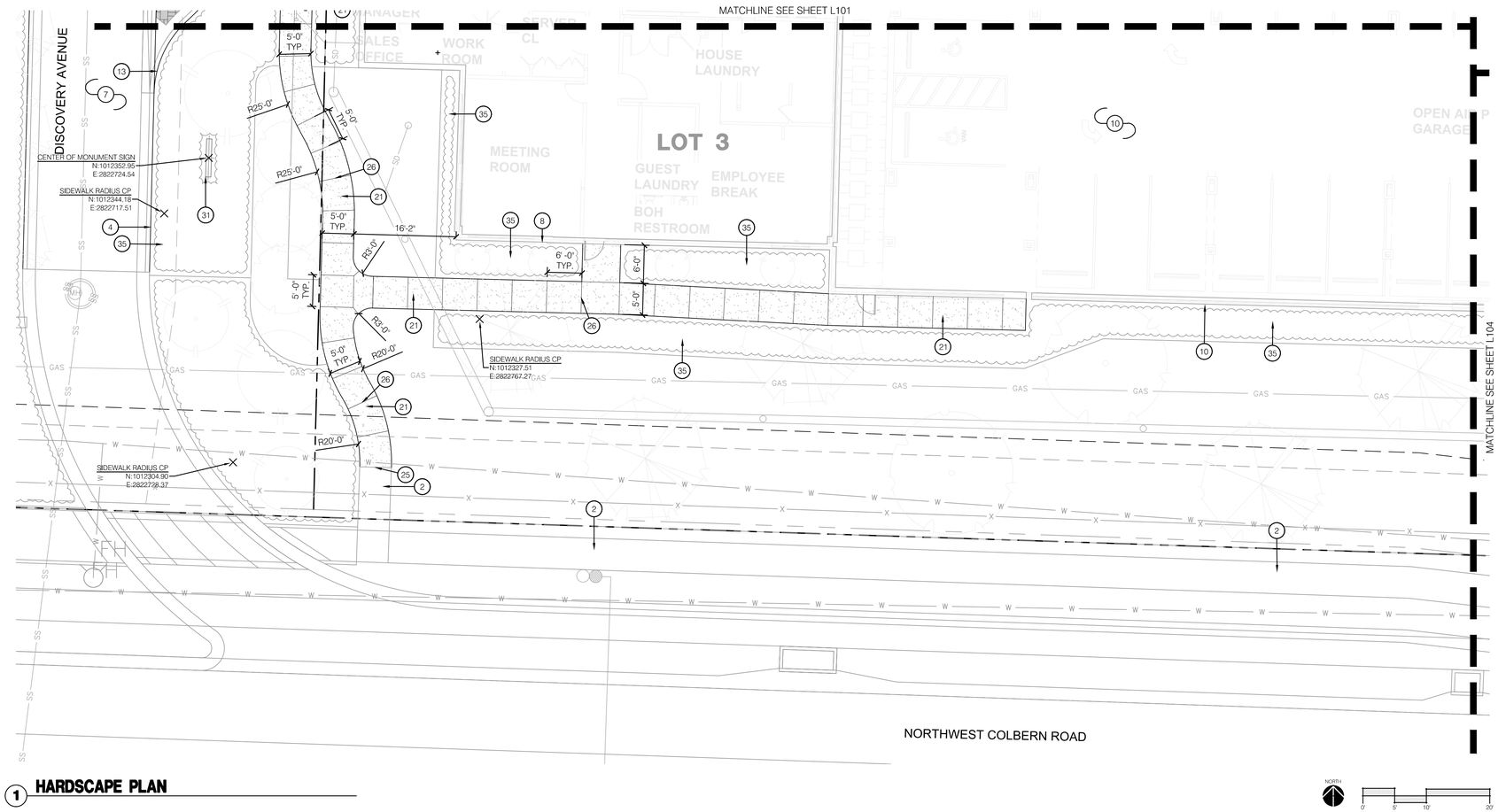
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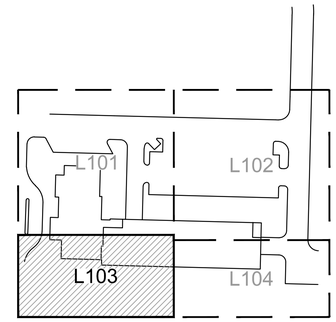
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drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F21-04643
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1 HARDSCAPE PLAN



KEYMAP

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- RIGHT OF WAY / PROPERTY LINE
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6. CROSSWALK; REF: PRIVATE DRIVE PLANS
7. DRIVE; REF: PRIVATE DRIVE PLANS
8. BUILDING FACADE; REF: ARCHITECTURAL PLANS
9. BUILDING COLUMN; REF: ARCHITECTURAL PLANS
10. PARKING GARAGE; REF: ARCHITECTURAL PLANS
11. POOL BY POOL CONTRACTOR
12. TRASH ENCLOSURE; REF: ARCHITECTURAL PLANS
13. CONCRETE CURB; REF: CIVIL PLANS
14. CONCRETE CURB RAMP; REF: CIVIL PLANS
15. DRIVE PAVEMENT; REF: CIVIL PLANS
16. RETAINING WALL; REF: CIVIL PLANS
17. STAIRS; REF: CIVIL PLANS
18. EV STATION; REF: CIVIL PLANS
19. WHEEL STOPS; REF: CIVIL PLANS
20. REGULATORY SIGNAGE; REF: CIVIL PLANS
21. CONSTRUCT GRAY CONCRETE (P-100.1); REF: 1/L200
22. CONSTRUCT INTEGRAL COLOR STAMPED CONCRETE (P-100.2); REF: 2/L200
23. CONSTRUCT LIGHT DUTY INTEGRAL COLOR STAMPED CONCRETE (P-100.2); REF: 4/L200 & CIVIL PLANS FOR JOINTING PATTERN
24. CONSTRUCT POOL DECK CONCRETE WITH TOPPING (P-100.3); REF: 3/L200
25. INSTALL EXPANSION JOINT; REF: 5/L200
26. INSTALL CONTROL JOINT-STRAIGHT CUT; REF: 5/L200
27. CONCRETE PATIO RAILING; REF: 1/L201
28. NORTH RAILING; REF: 3/L201
29. POOL FENCE; REF: 2/L201
30. POOL FENCE GATE; REF: 2/L201
31. MONUMENT SIGN; REF: 1/L202
32. PARKING SIGN; REF: 1/L202
33. ENTRANCE & EXIT SIGN; REF: 1/L202
34. LIGHT POLES; REF: ELECTRICAL PLANS
35. PLANTING BED. CONTRACTOR SHALL LEAVE PLANTING BED CLEAN OF TOPSOIL, GRAVEL, AND OTHER DEBRIS 12" BELOW TOP OF HARDSCAPE ELEVATION; REF LANDSCAPE PLANS

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CODY PRIBYLA
NUMBER LA-2012033117
LANDSCAPE ARCHITECT

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

HARDSCAPE PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

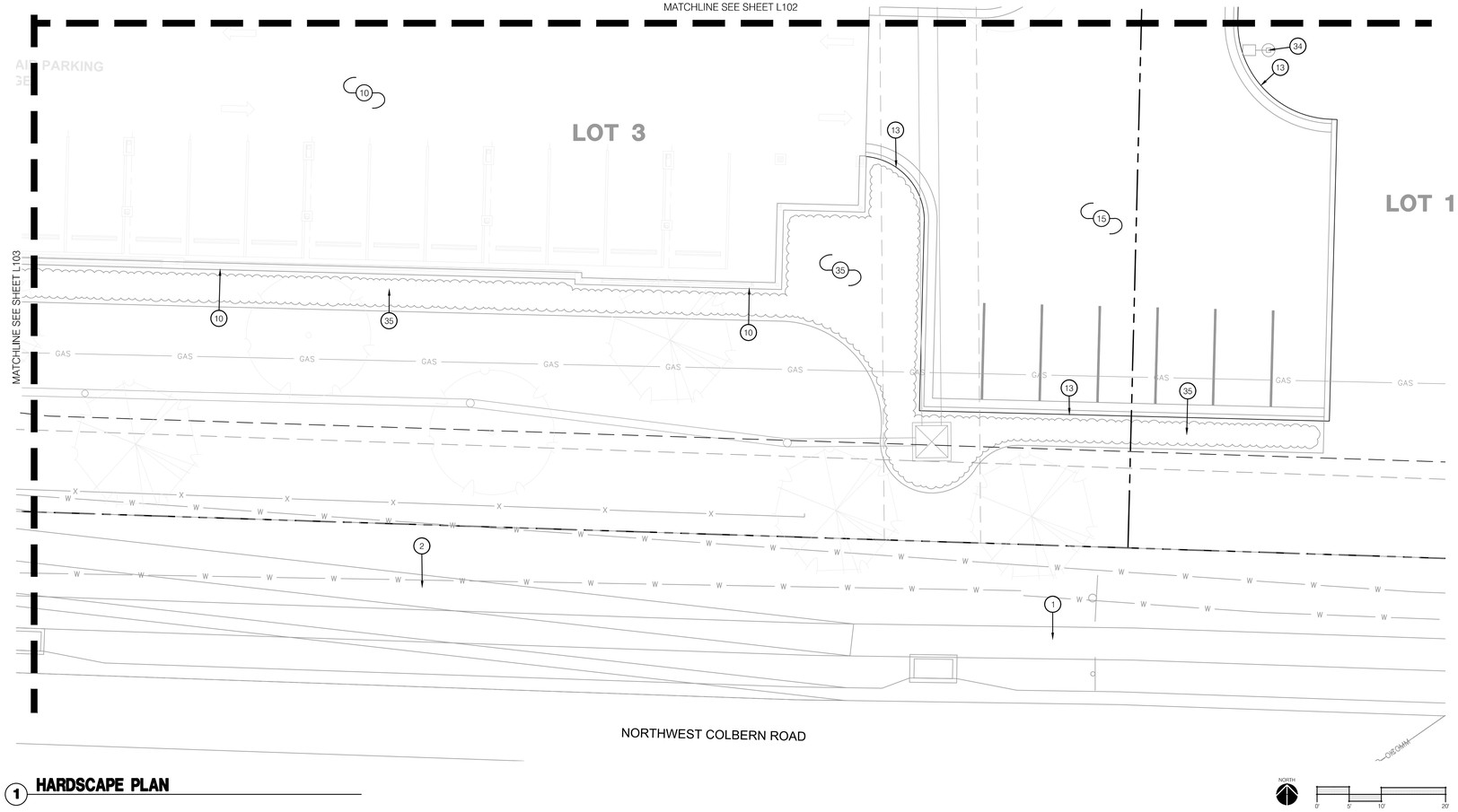
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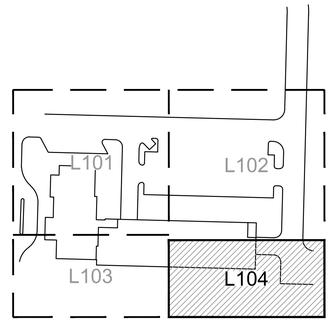
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SHEET
L103

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1 HARDSCAPE PLAN



KEYMAP

HARDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- GRAY CONCRETE (P-100.1)
- INTEGRAL COLOR STAMPED CONCRETE (P-100.2)
- LIGHT DUTY INTEGRAL COLOR STAMPED CONCRETE (P-100.2)
- POOL DECK CONCRETE WITH TOPPING (P-100.3)
- CP — CENTER POINT

HARDSCAPE PLAN NOTES:

1. EXISTING SIDEWALK
2. SIDEWALK; REF: PUBLIC ROAD IMPROVEMENT PLANS
3. SIDEWALK; REF: PRIVATE DRIVE PLANS
4. CONCRETE CURB; REF: PRIVATE DRIVE PLANS
5. CONCRETE CURB RAMP; REF: PRIVATE DRIVE PLANS
6. CROSSWALK; REF: PRIVATE DRIVE PLANS
7. DRIVE; REF: PRIVATE DRIVE PLANS
8. BUILDING FACADE; REF: ARCHITECTURAL PLANS
9. BUILDING COLUMN; REF: ARCHITECTURAL PLANS
10. PARKING GARAGE; REF: ARCHITECTURAL PLANS
11. POOL BY POOL CONTRACTOR
12. TRASH ENCLOSURE; REF: ARCHITECTURAL PLANS
13. CONCRETE CURB; REF: CIVIL PLANS
14. CONCRETE CURB RAMP; REF: CIVIL PLANS
15. DRIVE PAVEMENT; REF: CIVIL PLANS
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17. STAIRS; REF: CIVIL PLANS
18. EV STATION; REF: CIVIL PLANS
19. WHEEL STOPS; REF: CIVIL PLANS
20. REGULATORY SIGNAGE; REF: CIVIL PLANS
21. CONSTRUCT GRAY CONCRETE (P-100.1); REF: 1/L200
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23. CONSTRUCT LIGHT DUTY INTEGRAL COLOR STAMPED CONCRETE (P-100.2); REF: 4/L200 & CIVIL PLANS FOR JOINTING PATTERN
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CODY PRATER
NUMBER LA-2012033117
LANDSCAPE ARCHITECT
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HARDSCAPE PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

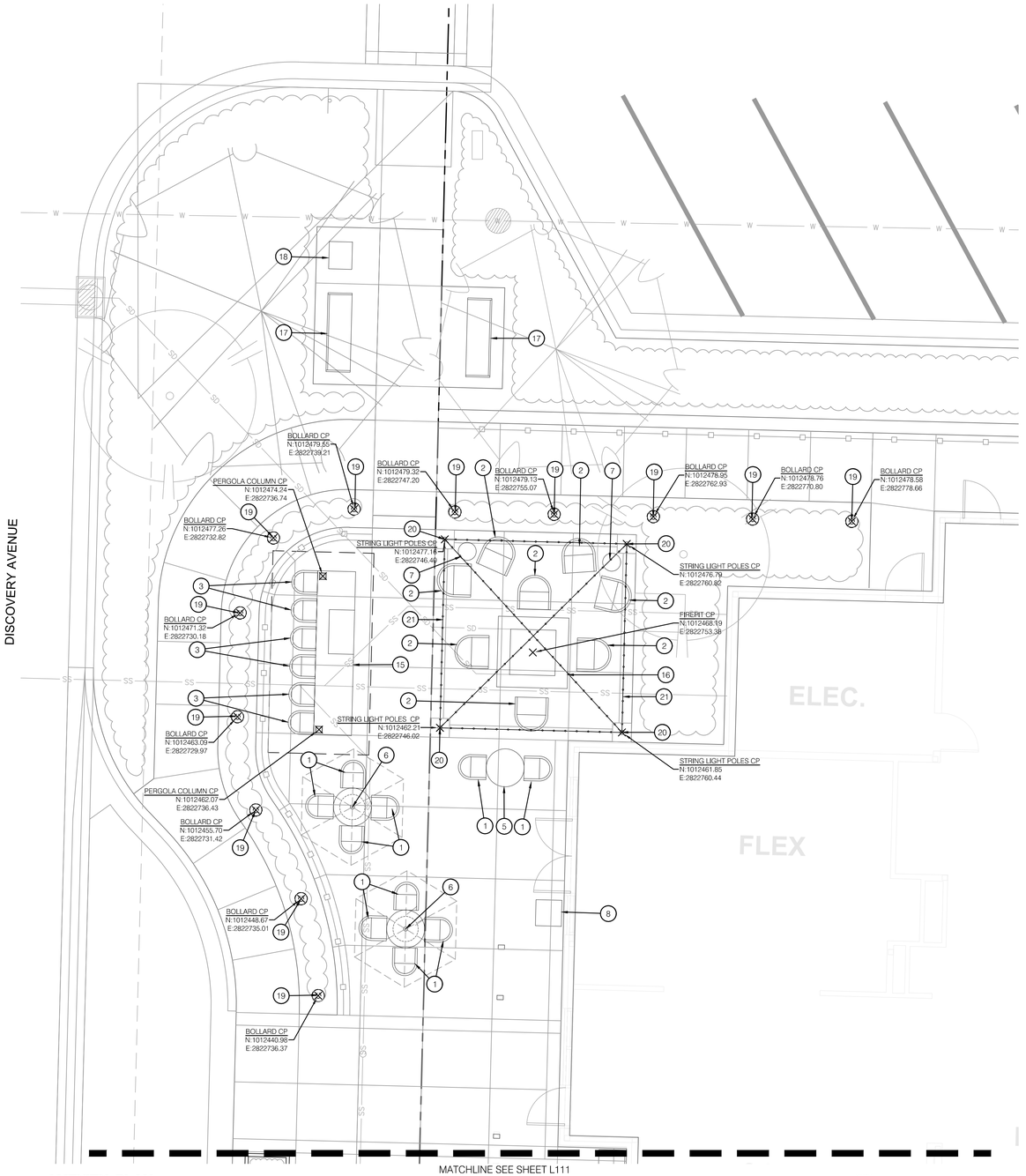
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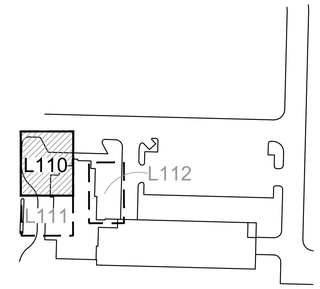
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SHEET
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1 AMENITY PLAN



KEYMAP

AMENITY LEGEND:

RIGHT OF WAY / PROPERTY LINE

SHEET MATCHLINE

CP CENTER POINT

AMENITY PLAN NOTES:

1. INSTALL DINING CHAIR (SF-100.1); REF: 1/L204
2. INSTALL LOUNGE CHAIR (SF-100.2); REF: 2/L204
3. INSTALL BAR STOOL (SF-100.3); REF: 3/L204
4. INSTALL CHAISE LOUNGE (SF-100.4); REF: 4/L204
5. INSTALL DINING TABLE (SF-100.5); REF: 5/L204
6. INSTALL DINING UMBRELLA TABLE (SF-100.6); REF: 6/L204
7. INSTALL SIDE TABLE (SF-100.7); REF: 7/L204
8. INSTALL TRASH RECEPTACLE - PRIVATE (SF-100.8); REF: 8/L204
9. INSTALL UMBRELLA (SF-100.9); REF: 9/L204
10. INSTALL PLANTER - FRONT ENTRY (SF-100.10); REF: 10/L204
11. INSTALL PLANTER - ACCENT (SF-100.11); REF: 11/L204
12. INSTALL TOWEL BIN (SF-100.12); REF: 12/L204
13. INSTALL TOWEL RACK (SF-100.13); REF: 1/L205
14. INSTALL CABANA (SF-100.14); REF: 2/L205
15. INSTALL BAR & GRILL STATION (SF-100.15); REF: 2/L203
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17. INSTALL BENCH - STREETSCAPE (SF-200.1); REF: 3/L205
18. INSTALL TRASH RECEPTACLE (SF-200.2); REF: 4/L205
19. INSTALL DECORATIVE BOLLARD (L-100.1); REF: 5, 6, & 7/L205
20. INSTALL STRING LIGHT POLE (L-100.3); REF: 8/L205
21. INSTALL STRING LIGHTS (L-100.2); REF: LIGHTING PLANS
22. ADA LIFT BY POOL CONTRACTOR

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CODY PERRITT
NUMBER LA-2012033117
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REVISIONS

AMENITY PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

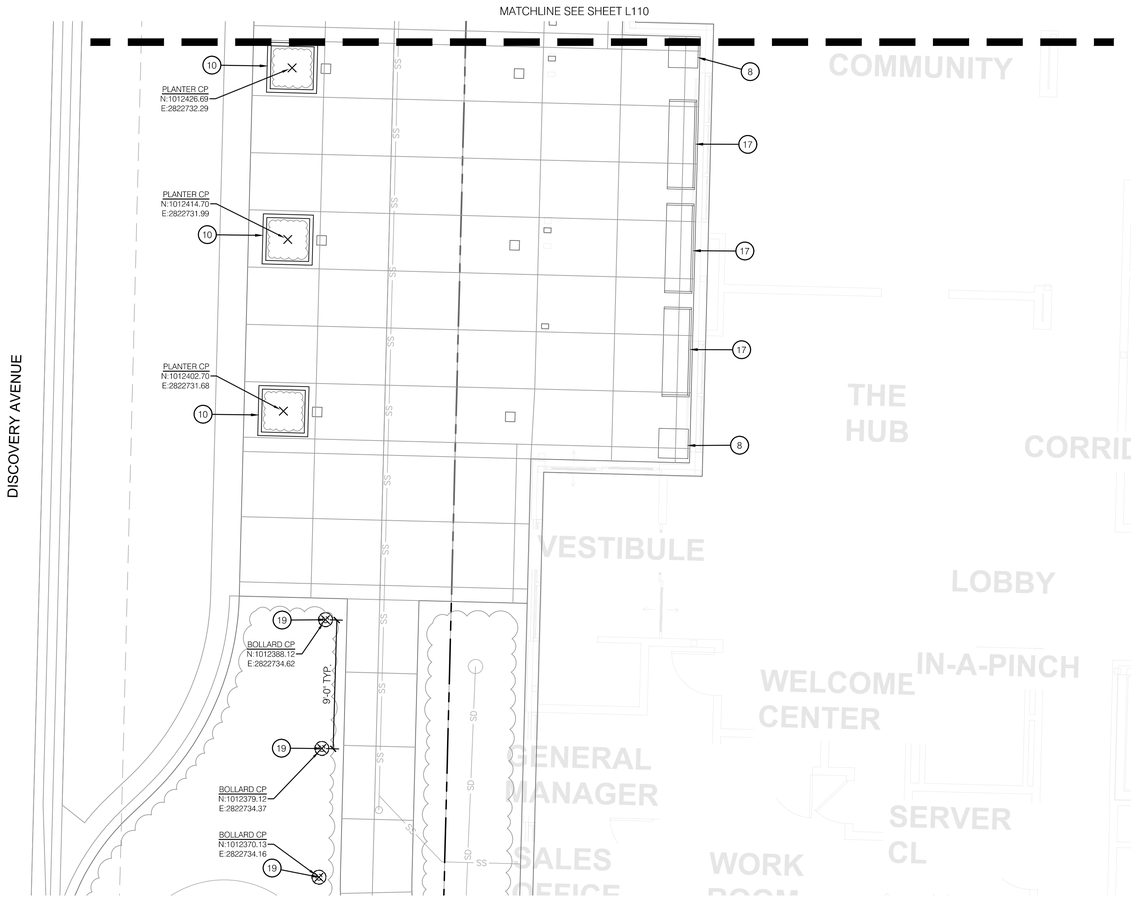
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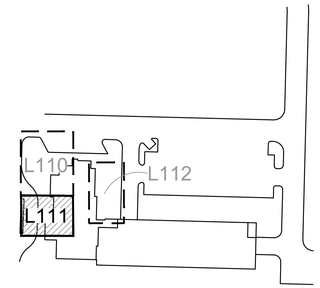
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SHEET
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1 AMENITY PLAN



KEYMAP

AMENITY LEGEND:

RIGHT OF WAY / PROPERTY LINE

SHEET MATCHLINE

CP CENTER POINT

AMENITY PLAN NOTES:

1. INSTALL DINING CHAIR (SF-100.1); REF: 1/L204
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20. INSTALL STRING LIGHT POLE (L-100.3); REF: 8/L205
21. INSTALL STRING LIGHTS (L-100.2); REF: LIGHTING PLANS
22. ADA LIFT BY POOL CONTRACTOR

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LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

AMENITY PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

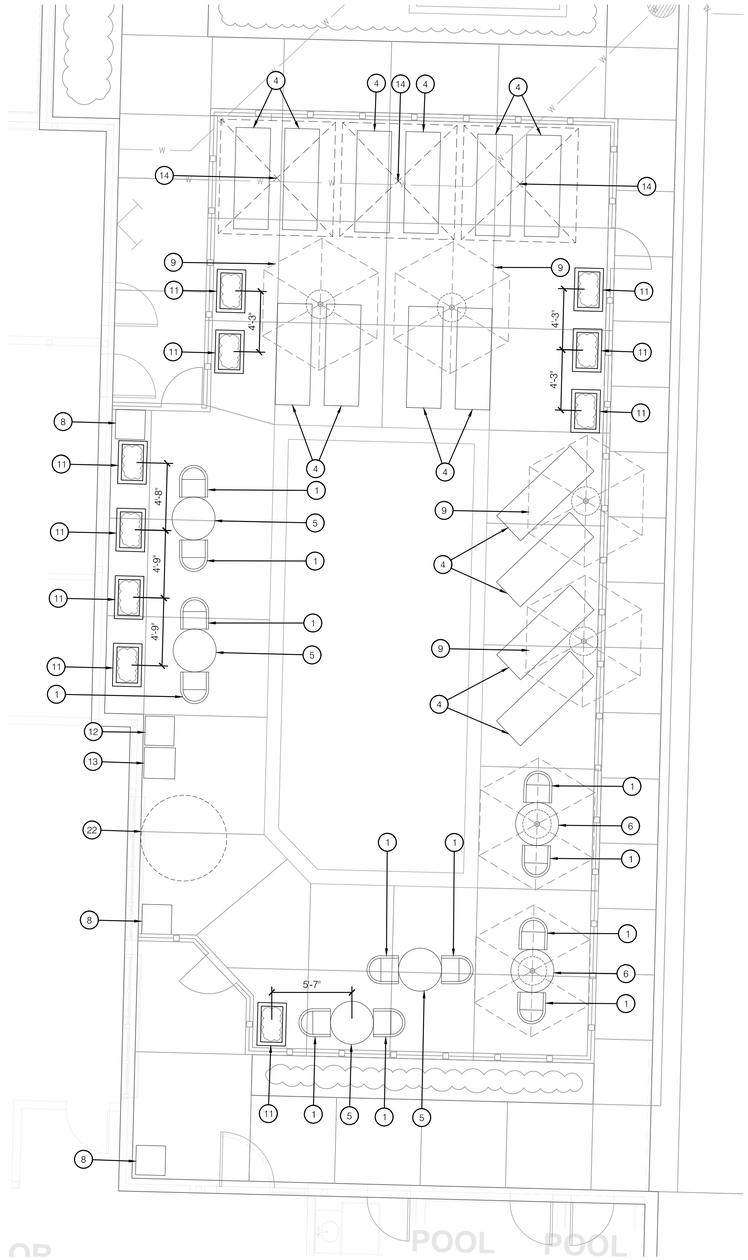
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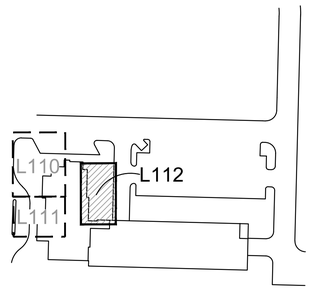
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1 AMENITY PLAN



KEYMAP

AMENITY LEGEND:

RIGHT OF WAY / PROPERTY LINE

SHEET MATCHLINE

CP CENTER POINT

AMENITY PLAN NOTES:

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LANDSCAPE ARCHITECT
L112

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

AMENITY PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

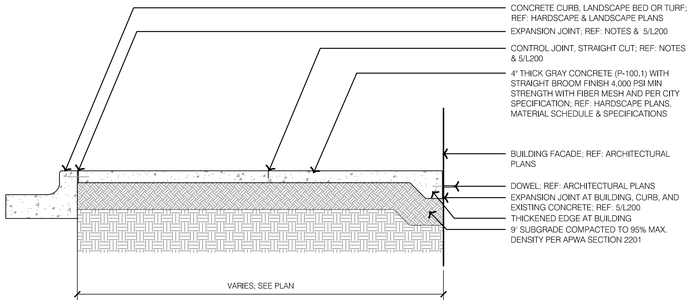
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2024

drawn by: EW/AB
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drawing no.: L_AMN01_F2104643
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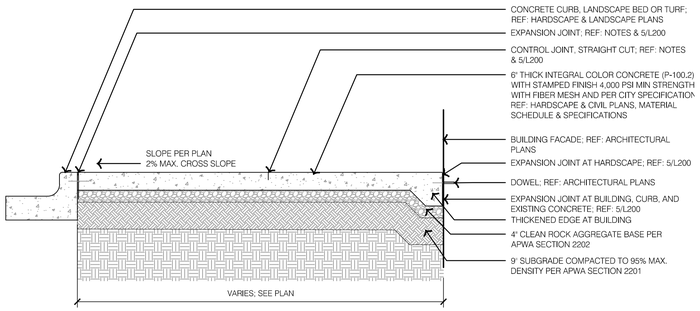
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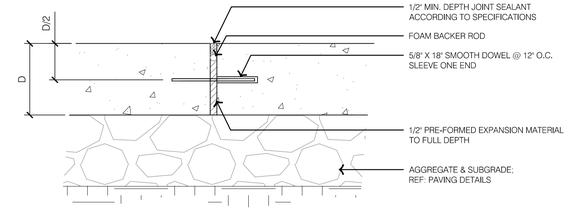
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1. EXPANSION JOINTS SHALL BE PLACED AT RADIAL POINTS AND WHERE SIDEWALKS & PEDESTRIAN CONCRETE PAVING ABUTS CONCRETE CURB, DRIVEWAYS AND SIMILAR STRUCTURES. JOINTS TO BE PLACED AT INTERVALS WITH NOT MORE THAN 100' CENTERS.
2. THE PEDESTRIAN CONCRETE PAVING SURFACE SHALL BE MARKED OFF AS SHOWN ON PLANS BY CONTROL JOINTS.
3. BROOM FINISH SHALL BE PERPENDICULAR TO BUILDING FACADE.
4. GRAY CONCRETE SHALL BE PER SPECIFICATIONS
5. REFER TO GEOTECHNICAL REPORT AND ALL ADDENDA FOR ADDITIONAL INFORMATION.

1 TYPICAL GRAY CONCRETE

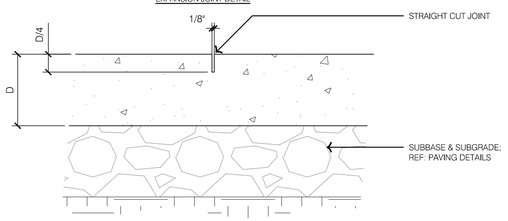


NOTES:
1. EXPANSION JOINTS SHALL BE PLACED AT RADIAL POINTS AND WHERE SIDEWALKS & PEDESTRIAN CONCRETE PAVING ABUTS CONCRETE CURB, DRIVEWAYS AND SIMILAR STRUCTURES. JOINTS TO BE PLACED AT INTERVALS WITH NOT MORE THAN 100' CENTERS.
2. THE PEDESTRIAN CONCRETE PAVING SURFACE SHALL BE MARKED OFF AS SHOWN ON PLANS BY CONTROL JOINTS.
3. REFER TO GEOTECHNICAL REPORT AND ALL ADDENDA FOR ADDITIONAL INFORMATION.

2 TYPICAL STAMPED INTEGRAL COLOR CONCRETE

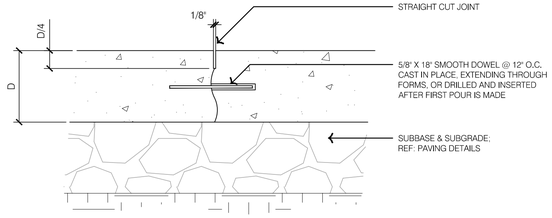


EXPANSION JOINT DETAIL



CONTROL JOINT DETAIL - STRAIGHT CUT

3 TYPICAL POOL DECK CONCRETE WITH TOPPING



CONSTRUCTION JOINT DETAIL (COLD JOINT)

4 TYPICAL LIGHT DUTY STAMPED INTEGRAL COLOR CONCRETE

5 TYPICAL CONCRETE JOINTS

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HARDSCAPE DETAILS - PAVING
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

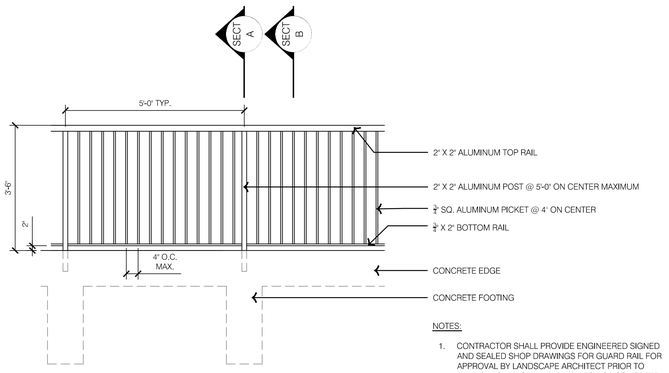
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2024

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QA/QC by: BM
project no.: F21-04643
drawing no.: L_HSC_DTL01_F2104643
date: 01.19.2024

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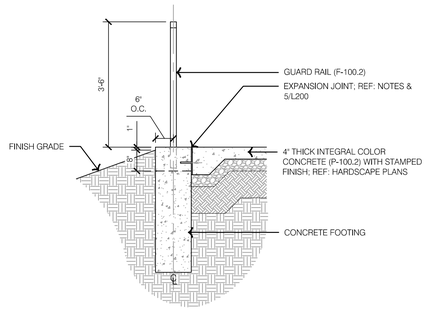
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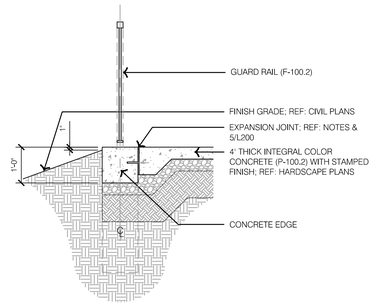
ELEVATION

NOTES:

1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR GUARD RAIL FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION. INSTALLATION ON TOP OF CONCRETE EDGE SHALL BE INCLUDED INTO DESIGN.
2. POST SIZE PER ENGINEERED PLANS.
3. GUARD RAIL SHALL MEET ALL IBC IN CURRENT ISSUE.

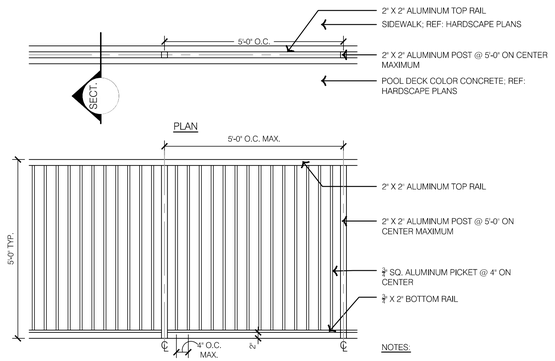


SECTION A - TYPICAL POST FOOTING



SECTION B - TYPICAL TURNDOWN

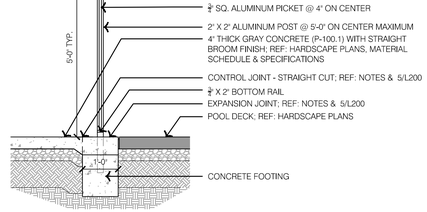
1 TYPICAL GUARD RAIL DETAILS



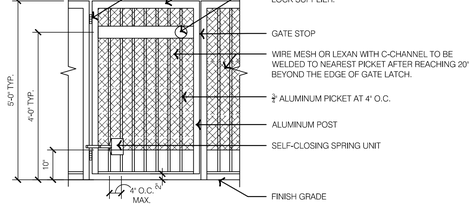
ELEVATION - PANEL

NOTES:

1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR FENCE AND FOOTING FOR APPROVAL BY LANDSCAPE ARCHITECT.
2. CONTRACTOR TO PROVIDE POWDER COAT OPTIONS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO ORDERING.
3. POST SIZE PER ENGINEERED PLANS AND MANUFACTURER RECOMMENDATIONS AND SPECIFICATIONS.
4. FENCE SHALL MEET ALL IBC IN CURRENT ISSUE.

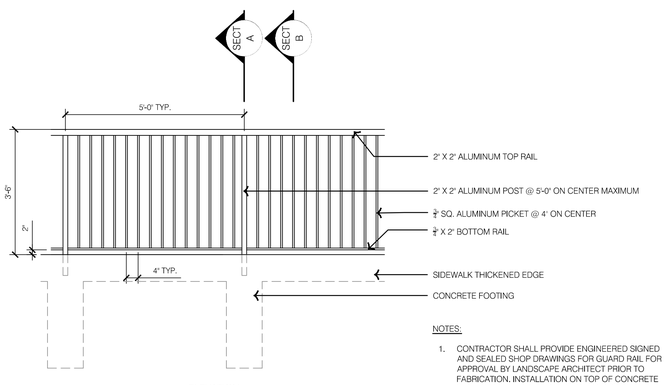


SECTION



ELEVATION - GATE

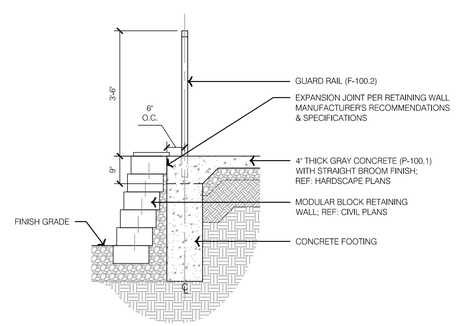
2 TYPICAL POOL FENCE & GATE DETAILS



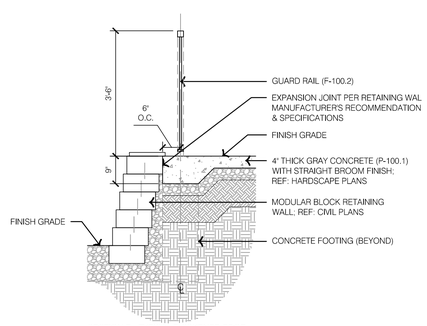
ELEVATION

NOTES:

1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR GUARD RAIL FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION. INSTALLATION ON TOP OF CONCRETE SIDEWALK SHALL BE INCLUDED INTO DESIGN.
2. POST SIZE PER ENGINEERED PLANS.
3. GUARD RAIL SHALL MEET ALL IBC IN CURRENT ISSUE.



SECTION A - TYPICAL POST FOOTING



SECTION B - TYPICAL THICKENED EDGE SIDEWALK

3 NORTH RAILING DETAILS

olsson studio
MISSOURI CERTIFICATE OF AUTHORITY #2005000285
1814 Main St.
Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI
CODY PERRITT
NUMBER LA-2012033117
LANDSCAPE ARCHITECT
12/31/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

HARDSCAPE DETAILS - FENCING
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

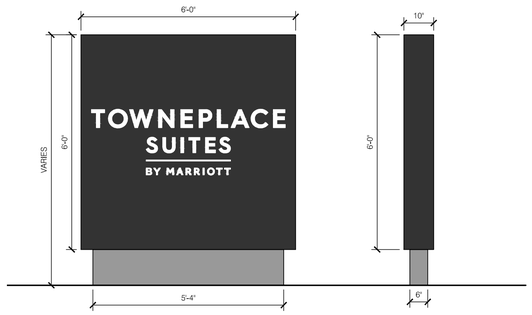
LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F21-04643
drawing no.: HSC_DTL01_F2104643
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SHEET
L201

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DATE: Jan 19, 2024 8:38am XREFS: L_PTBLK_F2104643 DET-TYPICAL-HSC_F2104643 DET-TYPICAL-AMN_F2104643



FRONT ELEVATION SIDE ELEVATION

MONUMENT SIGN

CABINET SPECIFICATIONS:
1. PREFERRED CONSTRUCTION: REVERSE ANGLE IRON FRAME, INTERIOR STEEL COMPONENTS COATED WITH RUST INHIBITING PRIMER.
2. FACE CONSTRUCTION: 3M PANAGRAPHICS III FLEXIBLE FACE
3. RETAINER: BLEED FACE
4. ILLUMINATION: GE 7100K White LED's AS REQUIRED
5. EXTERIOR FINISH: PAINT MATTHEWS MAP-LVS929 CARBON BLACK, SATIN FINISH
6. INTERIOR FINISH: PAIN REFLECTIVE WHITE/POWDER COATING RAL9003, GLOSSY FINISH

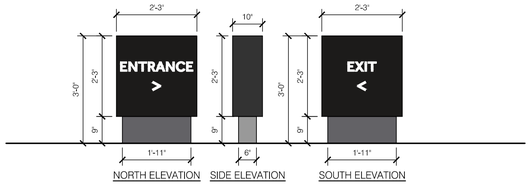
FACE SPECIFICATIONS:
1. FACE CONSTRUCTION: 3M PANAGRAPHICS III FLEXIBLE FACE
2. DECORATION: 3M 7725-22 MATTE BLACK OPAQUE FILM AND WHITE SUBSTRATE

*FACES APPEAR BLACK AND WHITE DURING THE DAY AND COPY ILLUMINATES WHITE AT NIGHT

POLE COVER SPECIFICATIONS:
1. CONSTRUCTION: ALUMINUM ANGLE FRAME WITH 0.080" ALUMINUM SKINS
2. EXTERIOR FINISH: PAINT PANTONE COOL GRAY 11 C, SATIN FINISH

NOTES:

1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR SIGNS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
2. SIGN MATERIALS SHALL ADHERE TO TOWNEPLACE BY MARRIOTT EXTERIOR SIGNAGE STANDARDS.



NORTH ELEVATION SIDE ELEVATION SOUTH ELEVATION

ENTRANCE & EXIT SIGN

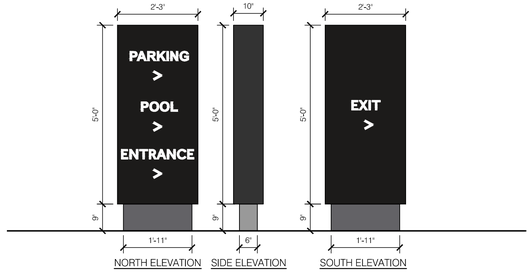
CABINET SPECIFICATIONS:
1. PREFERRED CONSTRUCTION: ALUMINUM FRAME WITH ALUMINUM SKINS
2. FACE CONSTRUCTION: 0.125" ROUTED ALUMINUM WITH BACKER PANEL/ FRET-CUT (ROUTED) LOGO WITH ACRYLIC BACK PANELS
3. ILLUMINATION: GE 7100K WHITE LED'S AS REQUIRED
4. EXTERIOR FINISH: PAINT MATTHEWS MAP-LVS929 CARBON BLACK, SATIN FINISH
5. INTERIOR FINISH: PAIN REFLECTIVE WHITE/POWDER COATING RAL9003, GLOSSY FINISH

FACE SPECIFICATIONS:
1. FACE CONSTRUCTION: 0.125" ROUTED ALUMINUM WITH BACKER PANEL/ FRET-CUT (ROUTED) LOGO WITH ACRYLIC BACK PANEL
2. BACKER PANEL CONSTRUCTION: 0.118" SOLAR GRADE POLYCARBONATE/ 3MM 30% TRANSLUCENT OPAL ACRYLIC
3. DECORATION: ROUTED ALUMINUM FACE PAINTED MATTHEWS MAP-LVS929 CARBON BLACK, SATIN FINISH

POLE COVER SPECIFICATIONS:
1. CONSTRUCTION: BENT UP ALUMINUM SKINS
2. EXTERIOR FINISH: PAINT PANTONE COOL GRAY 11 C, SATIN FINISH

NOTES:

1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR SIGNS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
2. SIGN MATERIALS SHALL ADHERE TO TOWNEPLACE BY MARRIOTT EXTERIOR SIGNAGE STANDARDS.



NORTH ELEVATION SIDE ELEVATION SOUTH ELEVATION

PARKING SIGN

CABINET SPECIFICATIONS:
1. PREFERRED CONSTRUCTION: ALUMINUM FRAME WITH ALUMINUM SKINS
2. FACE CONSTRUCTION: 0.125" ROUTED ALUMINUM WITH BACKER PANEL/ FRET-CUT (ROUTED) LOGO WITH ACRYLIC BACK PANELS
3. ILLUMINATION: GE 7100K WHITE LED'S AS REQUIRED
4. EXTERIOR FINISH: PAINT MATTHEWS MAP-LVS929 CARBON BLACK, SATIN FINISH
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FACE SPECIFICATIONS:
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POLE COVER SPECIFICATIONS:
1. CONSTRUCTION: BENT UP ALUMINUM SKINS
2. EXTERIOR FINISH: PAINT PANTONE COOL GRAY 11 C, SATIN FINISH

NOTES:

1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR SIGNS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
2. SIGN MATERIALS SHALL ADHERE TO TOWNEPLACE BY MARRIOTT EXTERIOR SIGNAGE STANDARDS.

1 SIGNAGE DETAILS

olsson studio
MISSOURI CERTIFICATE OF AUTHORITY #2005000285
1814 Main St. Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI
CODY PRIMATZ
NUMBER LA-2012033117
12/12/24
LANDSCAPE ARCHITECT

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

HARDSCAPE DETAILS - SIGNAGE
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

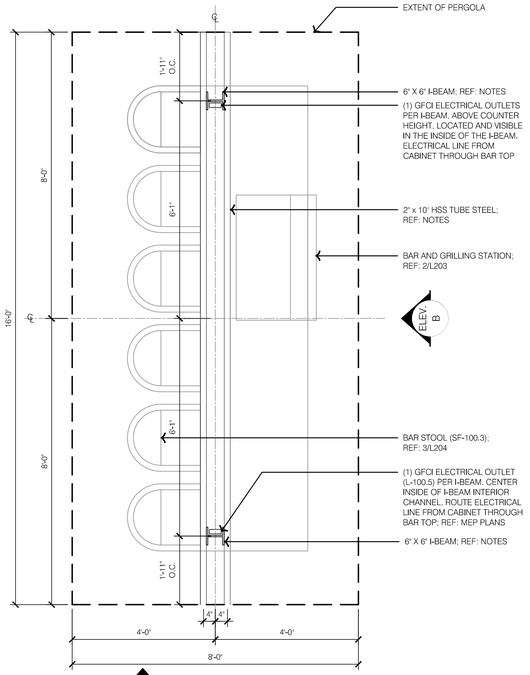
LEE'S SUMMIT, MISSOURI

2024

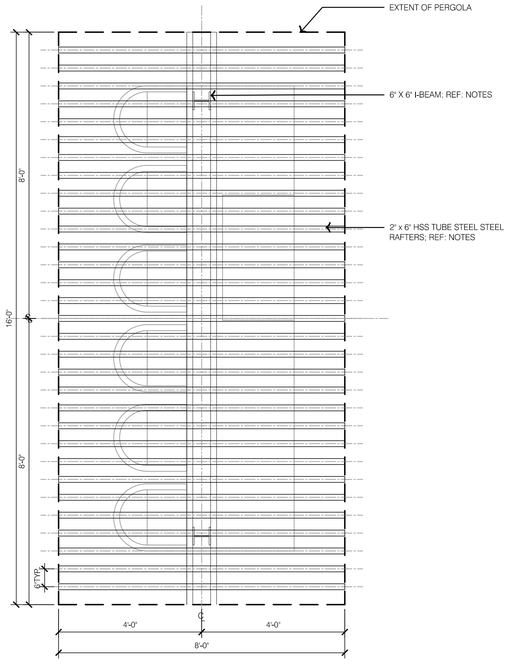
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checked by: CP
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date: 01.19.2024

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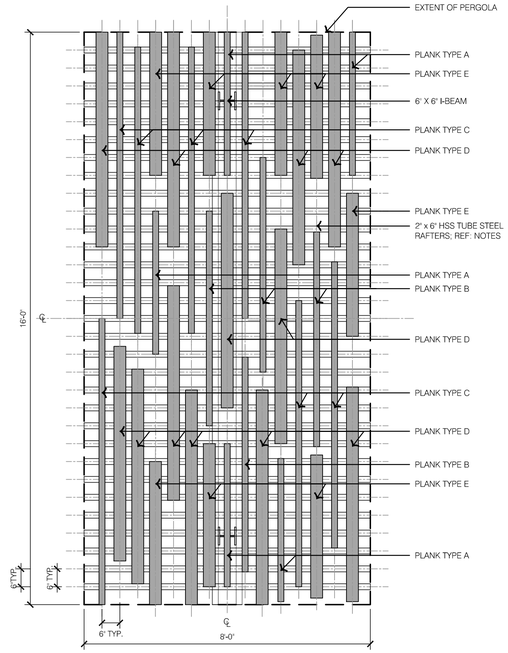
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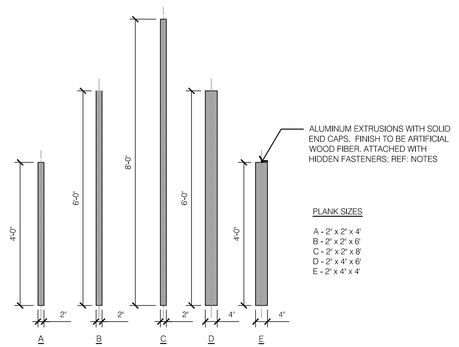
PERGOLA OVERALL LAYOUT



PERGOLA RAFTER LAYOUT



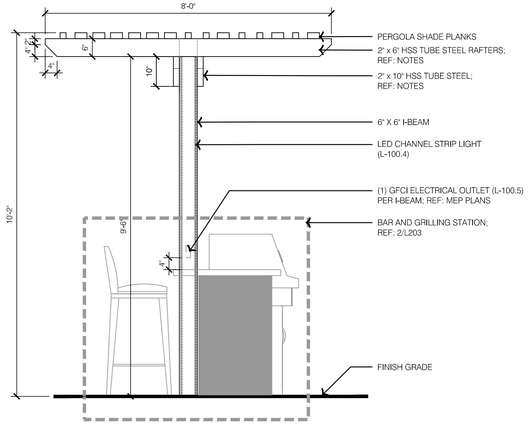
SHADE PLANK LAYOUT



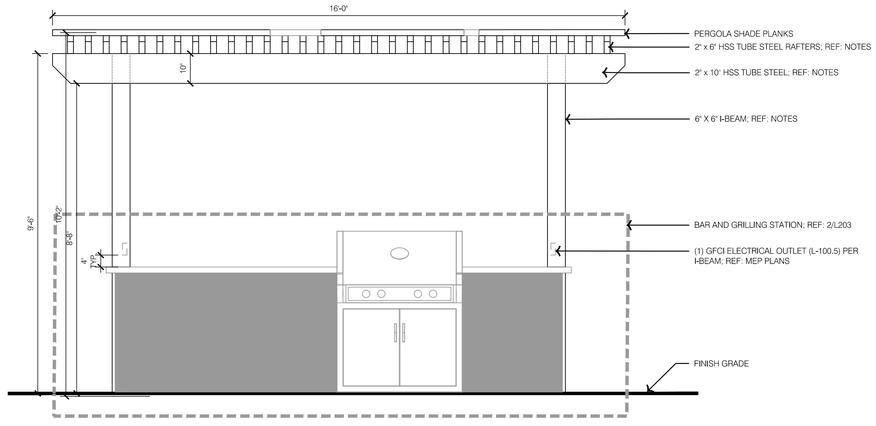
PLANK SIZES

A - 2" x 2" x 4'
B - 2" x 2" x 6'
C - 2" x 2" x 8'
D - 2" x 4" x 6'
E - 2" x 4" x 4'

PERGOLA SHADE PLANKS



ELEVATION - A

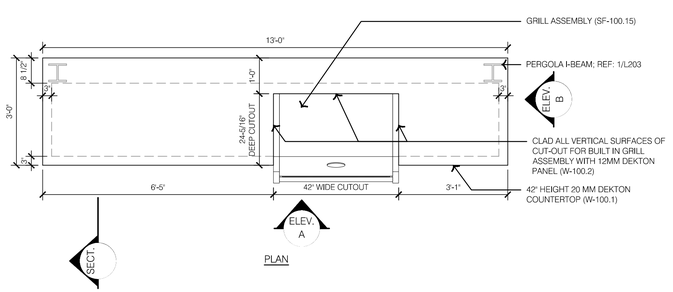


ELEVATION - B

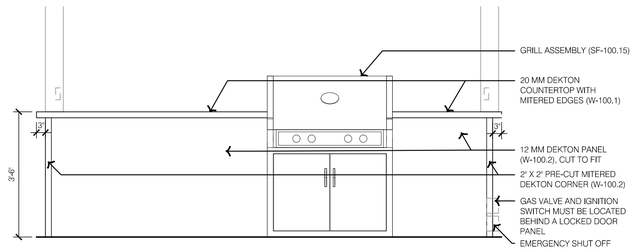
NOTES:

1. ALL STEEL MEMBERS TO WELDED AND ALL WELDS GROUND SMOOTH. POWDER COAT COLOR TO BE BLACK.
2. PERGOLA SHADE PLANKS - CONTRACTOR SHALL SUBMIT SAMPLES FROM MANUFACTURERS FULL RANGE OF FINISH FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
3. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION. INSTALLATION OF BAR & GRILL STATION SHALL BE INCLUDED INTO THE DESIGN.

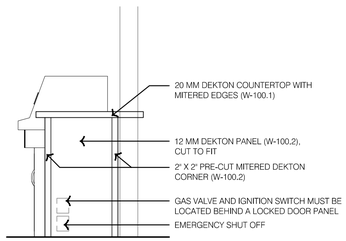
1 PERGOLA STRUCTURE DETAILS



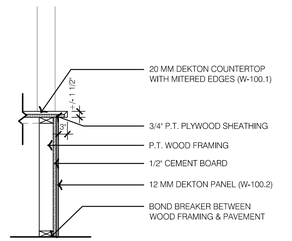
PLAN



ELEVATION 'A'



ELEVATION 'B'



SECTION

NOTES:

1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
2. ENTIRE BAR AND GRILL AREA INCLUDING BACK AND SIDES OF CUT-OUT FOR BUILT-IN GRILL, AND COUNTERTOP SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS AND MUST COMPLY WITH AHJ.
3. CONTRACTOR TO COORDINATE GAS AND ELECTRICAL SUPPLY WITH GENERAL CONTRACTOR.

2 BAR & GRILL STATION

olsson studio
MISSOURI CERTIFICATE OF AUTHORITY #2005000285
1814 Main St. Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI CODY PEBATT NUMBER LA-2012033117 LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

HARDSCAPE DETAILS - STRUCTURES
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F2104643
drawing no.: L_HSC_DTL01_F2104643
date: 01.19.2024

SHEET
L203

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DINING CHAIR (SF-100.1)

NOTES:
1. FURNISH & INSTALL DINING CHAIR (SF-100.1), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

1 TYPICAL DINING CHAIR



LOUNGE CHAIR (SF-100.2)

NOTES:
1. FURNISH & INSTALL LOUNGE CHAIR (SF-100.2), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

2 TYPICAL LOUNGE CHAIR



BAR STOOL (SF-100.3)

NOTES:
1. FURNISH & INSTALL BAR STOOL (SF-100.3), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

3 TYPICAL BAR STOOL



CHAISE LOUNGE (SF-100.4)

NOTES:
1. FURNISH & INSTALL CHAISE LOUNGE (SF-100.4), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

4 TYPICAL CHAISE LOUNGE



DINING TABLE (SF-100.5)

NOTES:
1. FURNISH & INSTALL DINING TABLE (SF-100.5), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

5 TYPICAL DINING TABLE



DINING UMBRELLA TABLE (SF-100.6)

NOTES:
1. FURNISH & INSTALL DINING UMBRELLA TABLE (SF-100.6), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

6 TYPICAL DINING UMBRELLA TABLE



SIDE TABLE (SF-100.7)

NOTES:
1. FURNISH & INSTALL SIDE TABLE (SF-100.7), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

7 TYPICAL SIDE TABLE



TRASH RECEPTACLE (SF-100.8)

NOTES:
1. FURNISH & INSTALL TRASH RECEPTACLE (SF-100.8), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

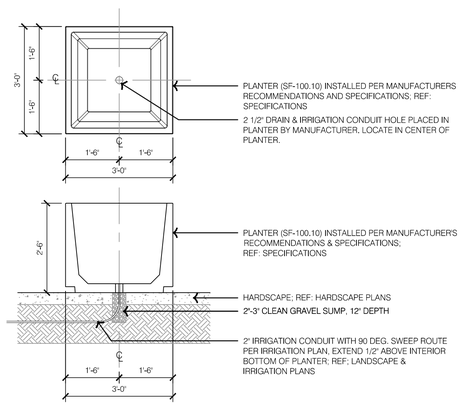
8 TYPICAL TRASH RECEPTACLE - PRIVATE



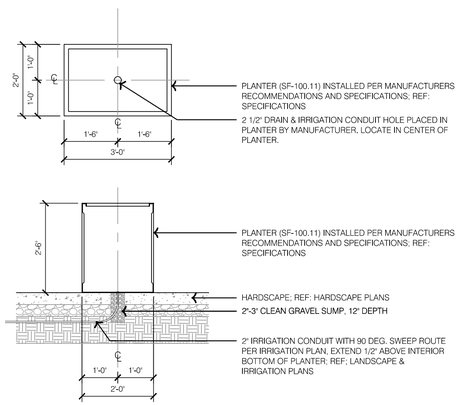
UMBRELLA (SF-100.9)

NOTES:
1. FURNISH & INSTALL UMBRELLA (SF-100.9), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

9 TYPICAL UMBRELLA



10 TYPICAL PLANTER - FRONT ENTRY



11 TYPICAL PLANTER - ACCENT



TOWEL BIN (SF-100.12)

NOTES:
1. FURNISH & INSTALL TOWEL BIN (SF-100.12), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

12 TYPICAL TOWEL BIN

olsson studio
MISSOURI CERTIFICATE OF AUTHORITY #2005000285
1814 Main St.
Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI
CODY PERRITT
NUMBER LA-2012033117
LANDSCAPE ARCHITECT

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

HARDSCAPE DETAILS - SITE AMENITIES
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST
LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
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project no.: F21-04643
drawing no. L04SC_DTL01_F2104643
date: 01.19.2024

SHEET
L204

DWG: F:\2021\04501-05000\021-04643-F\40-Design\AutoCAD\Final Plans\Sheets\05TU\L_HSC_DTL01_F2104643.dwg USER: ewilson
DATE: Jan 19, 2024 8:38am XREFS: L_PTBLK_F2104643 DET-TYPICAL-HSC_F2104643 DET-TYPICAL-AMN_F2104643



TOWEL RACK (SF-100.13)

NOTES:
1. FURNISH & INSTALL TOWEL RACK (SF-100.13), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

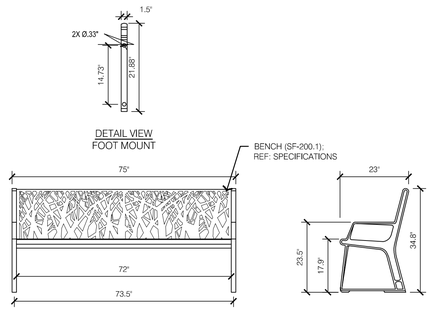
1 TYPICAL TOWEL RACK



CABANA (SF-100.14)

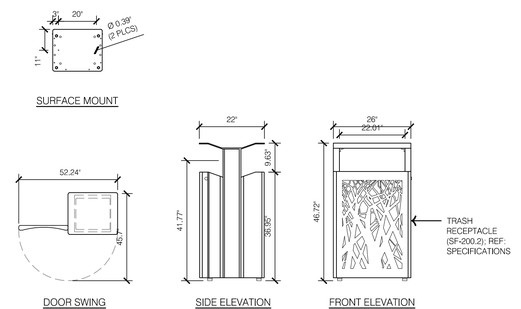
NOTES:
1. FURNISH & INSTALL CABANA (SF-100.14), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

2 TYPICAL CABANA



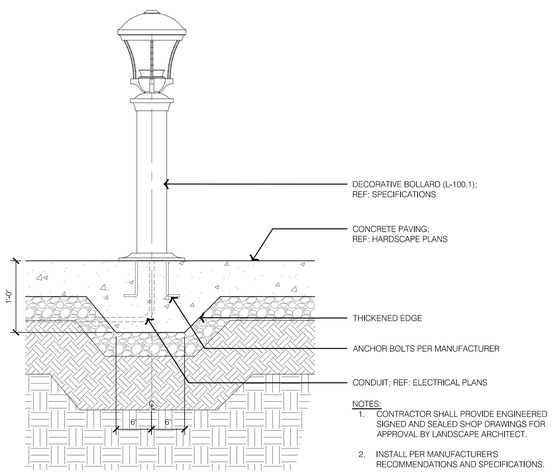
NOTES:
1. FURNISH & INSTALL BENCH (SF-200.1), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS & SPECIFICATIONS.

3 TYPICAL BENCH



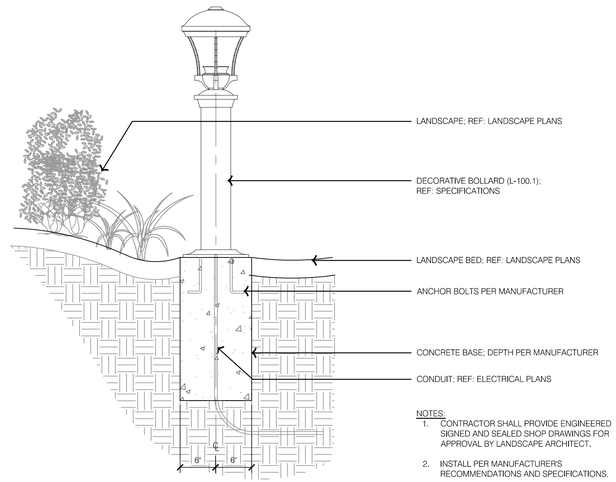
NOTES:
1. FURNISH & INSTALL TRASH RECEPTACLE (SF-200.2), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.
2. SURFACE MOUNT INSTALLATION PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.

4 TYPICAL TRASH RECEPTACLE



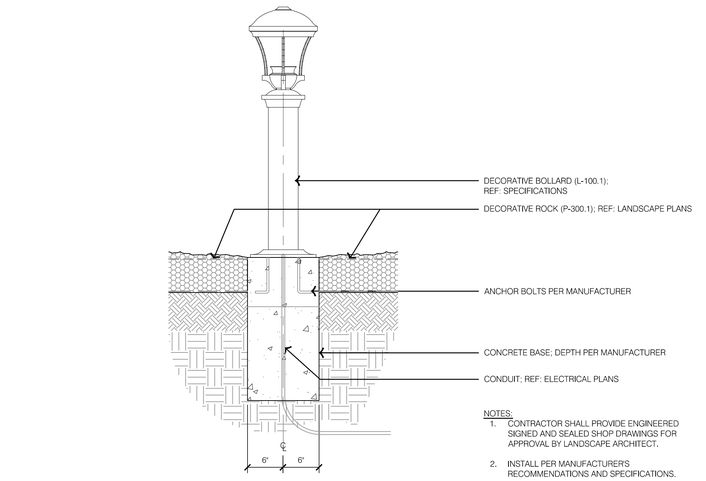
NOTES:
1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

5 TYPICAL DECORATIVE BOLLARD IN HARDSCAPE



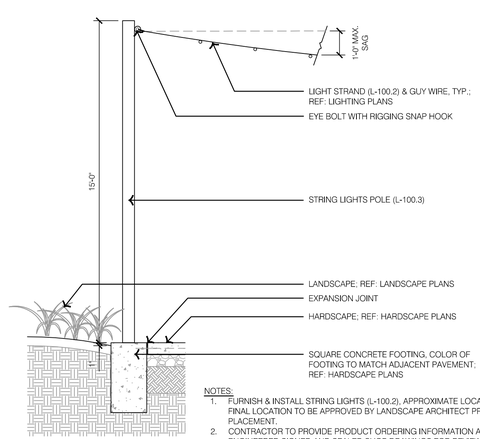
NOTES:
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2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

6 TYPICAL DECORATIVE BOLLARD IN LANDSCAPE



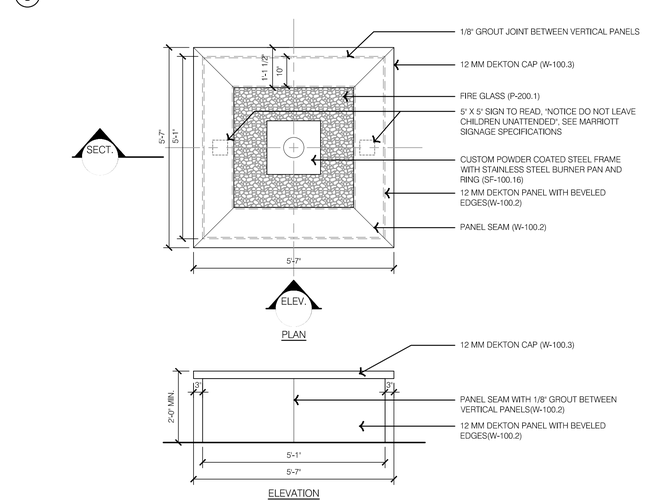
NOTES:
1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

7 TYPICAL DECORATIVE BOLLARD IN DECORATIVE ROCK

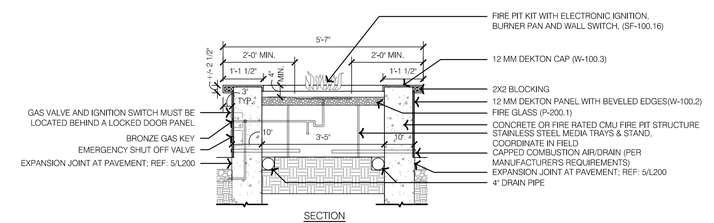


NOTES:
1. FURNISH & INSTALL STRING LIGHTS (L-100.2), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.
2. CONTRACTOR TO PROVIDE PRODUCT ORDERING INFORMATION AND ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR REVIEW & APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
3. INSTALL POLE AND STRING LIGHTS PER MANUFACTURERS RECOMMENDATIONS & SPECIFICATIONS.

8 TYPICAL STRING LIGHT POLE



9 FIRE PIT



NOTES:
1. CONTRACTOR SHALL PROVIDE ENGINEERED SIGNED AND SEALED SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
2. CONTRACTOR SHALL PROVIDE FIRE GLASS SAMPLES FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO ORDERING.
3. GAS SHUTOFF LOCATION PER LOCAL CODE. ELECTRONIC IGNITION WITH 1 HOUR TIMER, LOCATION PER LOCAL CODE. INSTALL PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. SEE MARRIOTT SIGNAGE SPECIFICATIONS.
4. CONTRACTOR TO COORDINATE GAS AND ELECTRICAL SUPPLY WITH GENERAL CONTRACTOR.

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STATE OF MISSOURI
CODY PERRITT
NUMBER LA-2012033117
LANDSCAPE ARCHITECT
12/31/25

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

HARDSCAPE DETAILS - SITE AMENITIES
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

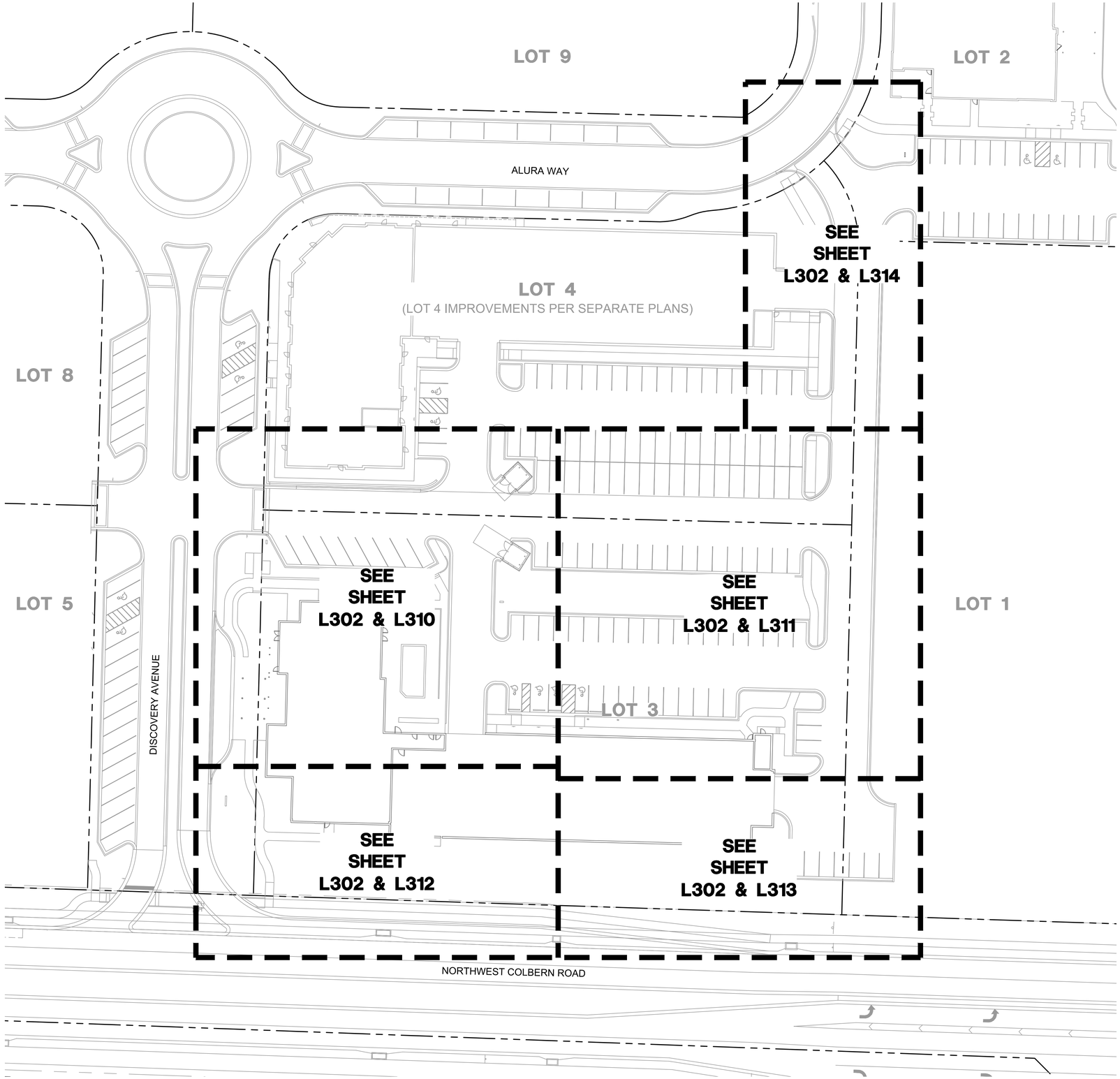
LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F21-04643
drawing no.: L_HSC_DTL01_F2104643
date: 01.19.2024

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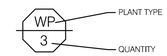
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1 **LANDSCAPE OVERALL PLAN**

LANDSCAPE GENERAL NOTES:

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF LEE'S SUMMIT, MISSOURI IN CURRENT USAGE. ALL STANDARDS NOT COVERED BY THE CITY SHALL BE APWA STANDARDS IN CURRENT USAGE UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES, DRAIN LINES AND IRRIGATION PIPING PRIOR TO COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, DRAIN LINES AND IRRIGATION PIPING.
3. CONTRACTOR SHALL VERIFY AND COORDINATE ALL FINAL GRADES WITH LANDSCAPE ARCHITECT PRIOR TO COMPLETION.
4. DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE AND SHALL BE REMOVED AT FREQUENT INTERVALS. AT COMPLETION OF WORK IN EACH AREA, THE CONTRACTOR SHALL GATHER AND REMOVE ALL DEBRIS, EQUIPMENT, AND EXCESS MATERIAL FROM THAT AREA. AT FINAL COMPLETION OF ALL WORK HE SHALL REMOVE ALL SUCH ITEMS FROM THE PREMISES.
5. LOCATION AND PLACEMENT OF ALL PLANT MATERIAL SHALL BE COORDINATED WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. THE LANDSCAPE PLANTING PLAN GRAPHICALLY ILLUSTRATES OVERALL PLANT MASSINGS. EACH PLANT SPECIES SHALL BE PLACED IN THE FIELD TO UTILIZE THE GREATEST COVERAGE OF THE GROUND PLANE. THE FOLLOWING APPLIES FOR INDIVIDUAL PLANTINGS:
   -ALL EVERGREEN SHRUBS AND CREEPING GROUNDCOVERS SHALL BE MINIMUM OF 2' FROM ANY PAVING EDGE.
   -ALL PLANTS OF THE SAME SPECIES SHALL BE EQUALLY SPACED AND SITED FOR THE BEST AESTHETIC VIEWING.
   -ALL TREES, EVERGREEN OR DECIDUOUS, SHALL BE A MINIMUM OF 4' FROM ANY PAVING EDGE.
7. ANY SUBSTITUTION OF SPECIFIED PLANT MATERIAL WILL NOT BE ALLOWED WITHOUT WRITTEN AUTHORIZATION FROM LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
8. MULCH ALL PLANTING AREAS TO A DEPTH OF 3" DEPTH ACCORDING TO PLANS AND SPECIFICATIONS. SAMPLES SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
9. ALL PLANT MATERIAL WILL BE HEALTHY, VIGOROUS AND FREE OF DISEASE AND INSECTS PER AAN STANDARDS. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY INFERIOR OR OTHERWISE UNSUITABLE PLANT MATERIAL PROPOSED FOR USE ON THE PROJECT.
10. ALL PLANTING BEDS NOT FULLY CONTAINED BY CONCRETE CURBS OR WALKS SHALL BE EDGED ACCORDING TO PLANS AND SPECIFICATIONS.
11. PLANTS AND LANDSCAPE MATERIALS SHALL BE INSTALLED AS DETAILED ON PLANS.
12. PLANT BACKFILL FOR TREES AND SHRUBS SHALL BE PER SPECIFICATIONS.
13. ALL PLANTING BEDS SHALL BE TREATED WITH DACTHAL PRE-EMERGENT HERBICIDE AT MANUFACTURER RECOMMENDED RATES AND SHALL BE COVERED WITH SPECIFIED MULCH APPLICATION. APPLY LIGHTER APPLICATION OF DACTHAL HERBICIDE TO TOP OF MULCH LAYER.
14. ALL AREAS DISTURBED DURING CONSTRUCTION THAT ARE NOT DESIGNATED AS PLANTING BEDS OR PAVEMENT AREAS SHALL BE SEEDED WITH A TURF TYPE TALL FESCUE PER SPECIFICATIONS.
15. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER OWNER'S FINAL ACCEPTANCE OF FINISHED JOB. ALL DEAD AND DAMAGED PLANT MATERIAL SHALL BE REPLACED BY LANDSCAPE CONTRACTOR AT THEIR EXPENSE. LANDSCAPE CONTRACTOR SHALL MAINTAIN PLANT MATERIAL UNTIL FINAL ACCEPTANCE.
16. ALL LANDSCAPE BEDS SHALL BE MOUNDED AS SHOWN ON PLANS AND DETAILS.
17. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ACTUAL PLANT QUANTITIES REQUIRED TO COMPLETE THE PROJECT AS SHOWN ON THE PLANS, AND BASE THEIR BID ACCORDINGLY.
18. PLANT KEY DESCRIPTION.



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STATE OF MISSOURI
CODY PEBLEY
NUMBER LA-2012033117
LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

LANDSCAPE OVERALL PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F2104643
drawing no.: L_OVR01_F2104643
date: 01.19.2024

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LANDSCAPE REQUIREMENTS

LANDSCAPING AND SCREENING REQUIREMENTS - ZONE 1, LOT 3		REQUIRED PLANTS	SHOWN PLANTS
CODE OF ORDINANCES: DIVISION III - LANDSCAPING, BUFFERS AND TREE PROTECTION			
SITE ZONED: CP-2, PROPOSED: PMIX			
TOTAL PROPERTY: 1.76 ACRES (76,795 SQ FT)			
STREET FRONTAGE TREES:			
SEC. 8.790	ONE TREE PER 30 FEET OF STREET FRONTAGE, PUBLIC OR PRIVATE		
	TREES MAY BE CLUSTERED OR ARRANGED WITHIN THE SETBACK. A MIN. 20' LANDSCAPE STRIP SHALL BE PROVIDED ALONG THE FULL LENGTH OF THE STREET FRONTAGE, EXCEPT WHERE THE BUILDING SETBACK IS LESS THAN 20'.		
	NORTHWEST COLBERN ROAD		
	TOTAL STREET FRONTAGE = 353 LF		
	(353 / 30 = 11.7)	12 TREES	13 TREES
	DISCOVERY AVENUE		
	TOTAL STREET FRONTAGE = 200 LF		
	(200 / 30 = 6.67)	7 TREES	7 TREES
OPEN YARD TREES:			
SEC. 8.790	ONE TREE PER 5,000 SQUARE FEET OF TOTAL LOT AREA EXCLUDING BUILDING FOOTPRINT		
	TOTAL LOT AREA = 76,795.1 SQ FT		
	BUILDING FOOTPRINT = 23,119 SQ FT		
	76,795.1 - 23,119 SQ FT = 53,676.1 SQ FT		
	53,676.1 / 5,000 = 10.73 TREES	11 TREES	30 TREES
	LANDSCAPE TOTALS	**30 TREES**	**50 TREES**
STREET FRONTAGE SHRUBS:			
SEC. 8.790	ONE SHRUB PER 20 FEET OF STREET FRONTAGE		
	A MINIMUM 20 FEET WIDE LANDSCAPE STRIP SHALL BE PROVIDED ALONG THE FULL LENGTH OF ANY STREET FRONTAGE, EXCEPT WHERE THE BUILDING SETBACK IS LESS THAN 20 FEET.		
	NORTHWEST COLBERN ROAD		
	TOTAL STREET FRONTAGE = 353 LF		
	(353/ 20 = 17.65)	18 SHRUBS	COVERED BY PRIVATE DRIVE PLANS
	DISCOVERY AVENUE		
	TOTAL STREET FRONTAGE = 200 LF		
	(200/ 20 = 10)	10 SHRUBS	30 SHRUBS
OPEN YARD SHRUBS:			
SEC. 8.790	TWO SHRUBS PER 5,000 SQUARE FEET OF TOTAL LOT AREA EXCLUDING BUILDING FOOTPRINT		
	TOTAL LOT AREA = 76,795.1 SQ FT		
	BUILDING FOOTPRINT = 23,119 SQ FT		
	76,795.1 - 23,119 SQ FT = 53,676.1 SQ FT		
	53,676.1 / 5,000 = 10.73 X 2 = 21.46 SHRUBS	21 SHRUBS	233 SHRUBS
	LANDSCAPE TOTALS	**49 SHRUBS**	**263 SHRUBS**
PARKING LOT LANDSCAPING:			
SEC. 8.810	LANDSCAPE ISLANDS, STRIPS, OR OTHER PLANTING AREA SHALL BE AT LEAST FIVE PERCENT OF THE ENTIRE PARKING AREA		
	TOTAL PARKING LOT AREA: 27,471.07 SQ FT		
	TOTAL LANDSCAPE ISLAND AREA: 7,093.65 SQ FT		
	7,093.65 / 27,471.07 = .2582	25.82%	
	LANDSCAPE STRIP BETWEEN PARKING/LOADING AREA & R/W	20' WIDE	
	OPEN AREAS NOT COVERED WITH OTHER MATERIALS SHALL BE COVERED WITH SOD. GROUND COVER SHALL BE UTILIZED ON ALL SLOPES IN EXCESS OF 3:1 SLOPE.		

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STATE OF MISSOURI
CODY PRATT
NUMBER LA-2012033117
LANDSCAPE ARCHITECT

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

LANDSCAPE REQUIREMENTS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

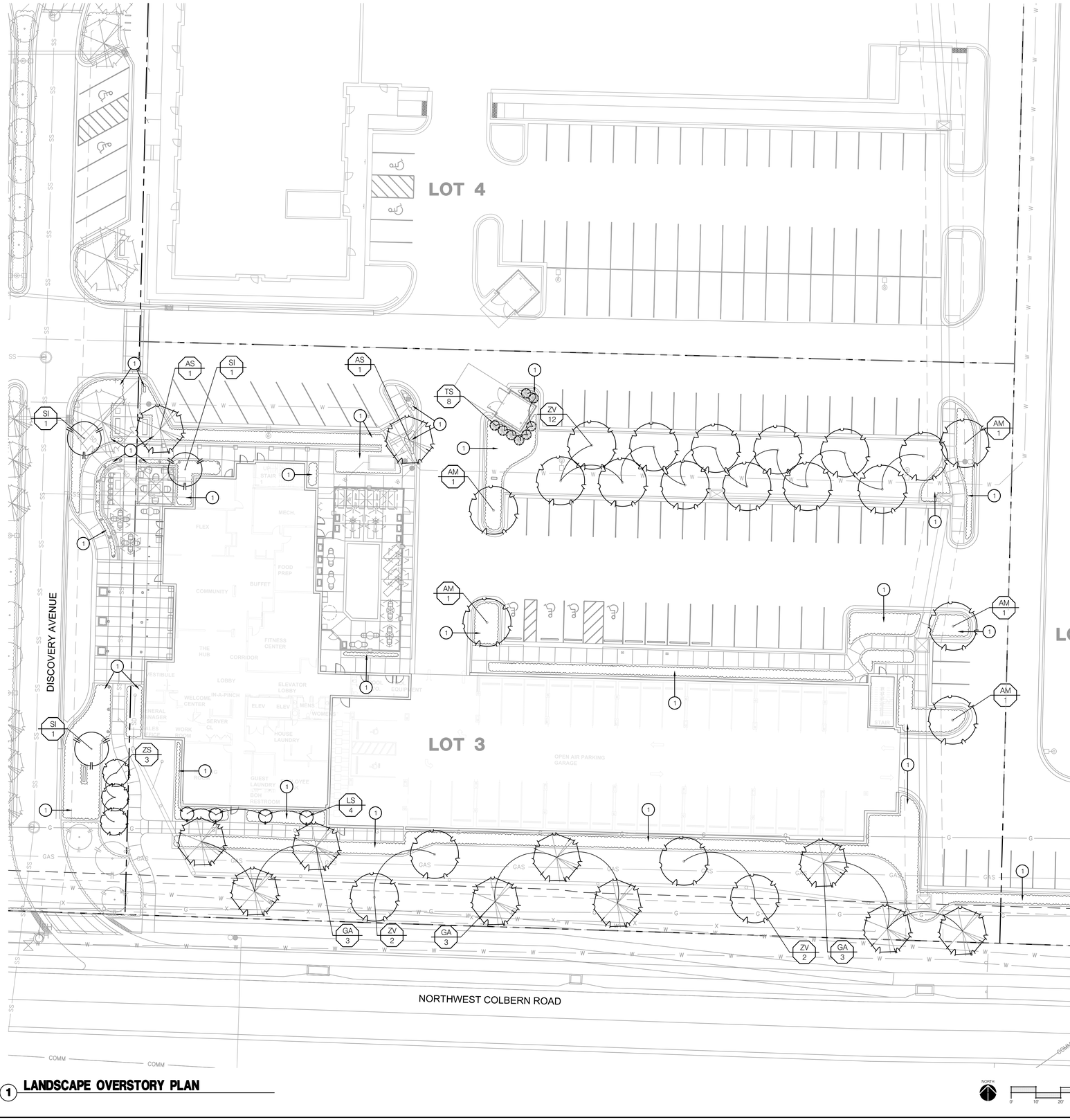
LEE'S SUMMIT, MISSOURI

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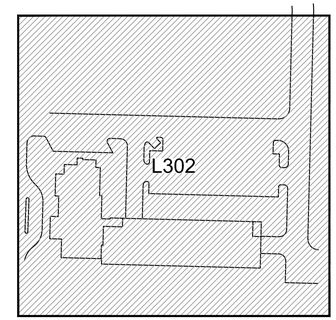
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drawing no.: L_OVR01_F2104643
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1 LANDSCAPE OVERSTORY PLAN



KEYMAP

LANDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- STREETSCAPE TREE
- OVERSTORY TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- PERENNIALS & GRASSES

LANDSCAPE PLAN NOTES:

1. PLANTING BED; REF: LANDSCAPE GENERAL NOTES, LANDSCAPE DETAILS

OVERSTORY PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
DECIDUOUS TREES				
AM	ACER MIYABEI 'MORTON'	STATE STREET™ MIYABE MAPLE	3" CAL	B&B
AS	ACER SACCHARUM 'CADDO'	CADDO SUGAR MAPLE	3" CAL	B&B
GA	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE	3" CAL	B&B
LS	LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	SLENDER SILHOUETTE SWEET GUM	3" CAL	B&B
ZS	ZELKOVA SERRATA 'MUSASHINO'	MUSASHINO JAPANESE ZELKOVA	3" CAL	B&B
ZV	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN JAPANESE ZELKOVA	3" CAL	B&B
EVERGREEN TREES				
TS	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	8` HT.	B&B
ORNAMENTAL TREES				
SI	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE LILAC	3" CAL	B&B

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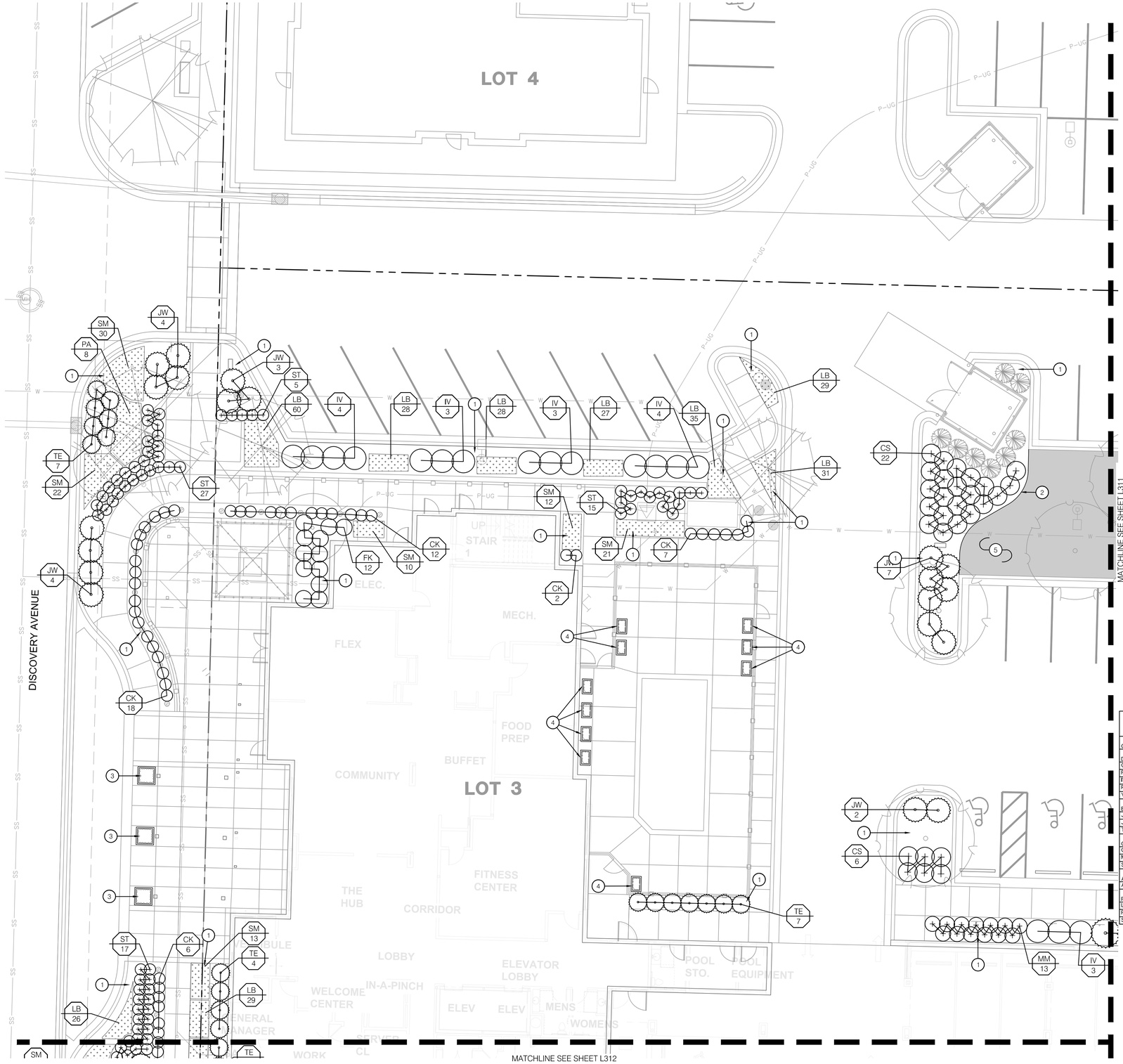
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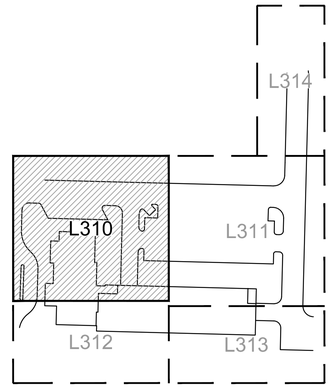
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1 LANDSCAPE UNDERSTORY PLAN



KEYMAP

LANDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- OVERSTORY TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- ANNUALS MIX
- PERENNIAL MIX
- TURF TYPE FESCUE SOD
- TURF TYPE FESCUE SEED

LANDSCAPE PLAN NOTES:

1. PLANTING BED WITH HARDWOOD MULCH; REF: LANDSCAPE GENERAL NOTES, DETAILS & SPECIFICATIONS
2. INSTALL METAL BED EDGE; REF: 5/L390 AND SPECIFICATIONS
3. TYPICAL PLANTER - FRONT ENTRY (SF-100.10); REF: 6/L390
4. TYPICAL PLANTER - ACCENT (SF-100.11); REF: 7/L390
5. AREA TO BE SODDED WITH TURF-TYPE FESCUE; REF: SPECIFICATIONS
6. AREA TO BE SEEDED WITH TURF-TYPE FESCUE; REF: SPECIFICATIONS
7. PRIVATE DRIVE PLANTING BED; REF: PRIVATE DRIVE PLANS

UNDERSTORY PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING
DECIDUOUS SHRUBS					
CS	CORNUS SERICEA 'FARROW'	ARCTIC FIRE® RED TWIG DOGWOOD	5 GAL	CONT.	45" o.c.
FK	FORSYTHIA X INTERMEDIA 'KOLGOLD'	MAGICAL® GOLD FORSYTHIA	5 GAL	CONT.	39" o.c.
IV	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	5 GAL	CONT.	54" o.c.
PD	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY'	LITTLE DEVIL™ DWARF NINEBARK	5 GAL	CONT.	48" o.c.
VS	VIBURNUM DENTATUM 'SMVDE'	SPARKLER® ARROWWOOD VIBURNUM	5 GAL	CONT.	135" o.c.
EVERGREEN SHRUBS					
JF	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	5 GAL	CONT.	72" o.c.
JW	JUNIPERUS HORIZONTALIS 'WILTONII'	BLUE RUG JUNIPER	5 GAL	CONT.	60" o.c.
TE	TAXUS X MEDIA 'EVERLOW'	EVERLOW ANGLO-JAPANESE YEW	5 GAL	CONT.	45" o.c.
ORNAMENTAL GRASSES					
CK	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	5 GAL	CONT.	27" o.c.
MM	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT EULALIA GRASS	5 GAL	CONT.	36" o.c.
ST	SPOROBOLUS HETEROLEPIS 'TARA'	TARA PRAIRIE DROPSEED	1 GAL	CONT.	27" o.c.
ANNUALS					
ANN	ANNUALS		4" POT		12" o.c.
PERENNIALS					
LB	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	1 GAL	CONT.	12" o.c.
PA	PEROVSKIA ATRIPLICIFOLIA 'DENIM 'N LACE'	DENIM 'N LACE RUSSIAN SAGE	3 GAL	CONT.	36" o.c.
SM	SALVIA NEMOROSA 'CARADONNA'	CARADONNA SAGE	1 GAL	CONT.	18" o.c.

NORTH
0' 5' 10' 20'

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STATE OF MISSOURI
CODY PERRITT
NUMBER LA-2012033117
LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

LANDSCAPE UNDERSTORY PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

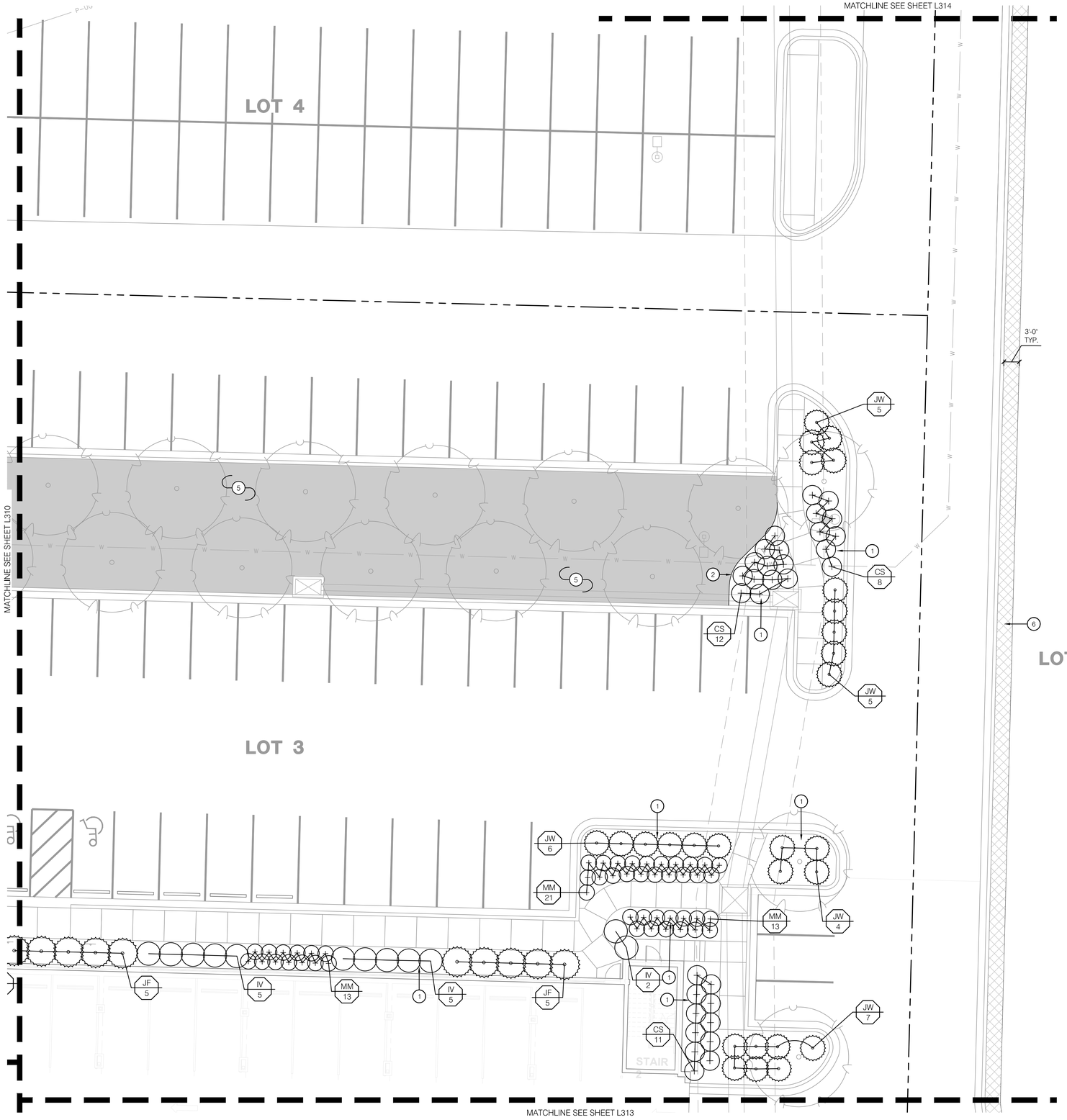
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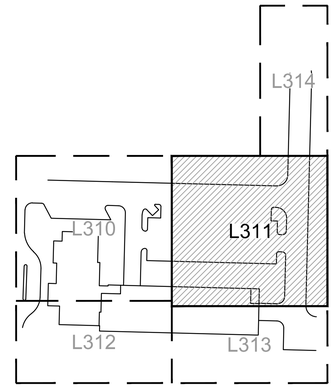
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SHEET
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1 LANDSCAPE UNDERSTORY PLAN



KEYMAP

LANDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- OVERSTORY TREE
- ORNAMENTAL TREE
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7. PRIVATE DRIVE PLANTING BED; REF: PRIVATE DRIVE PLANS

UNDERSTORY PLANT SCHEDULE

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FK	FORSYTHIA X INTERMEDIA 'KOLGOLD'	MAGICAL® GOLD FORSYTHIA	5 GAL	CONT.	39" o.c.
IV	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	5 GAL	CONT.	54" o.c.
PD	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY'	LITTLE DEVIL™ DWARF NINEBARK	5 GAL	CONT.	48" o.c.
VS	VIBURNUM DENTATUM 'SMVDE'	SPARKLER® ARROWWOOD VIBURNUM	5 GAL	CONT.	135" o.c.
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CODY PRIBYLA
NUMBER LA-2012003117
LANDSCAPE ARCHITECT
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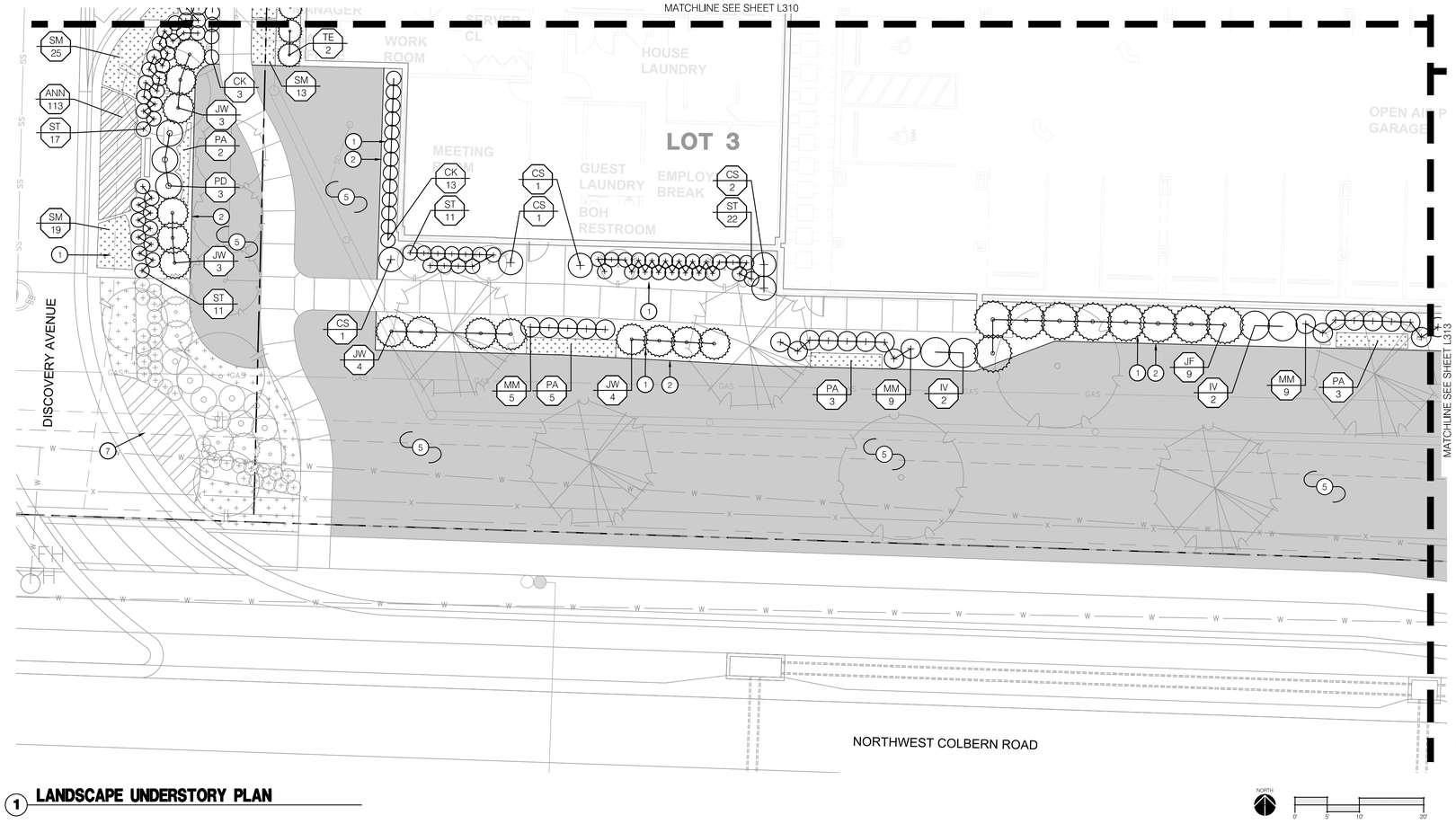
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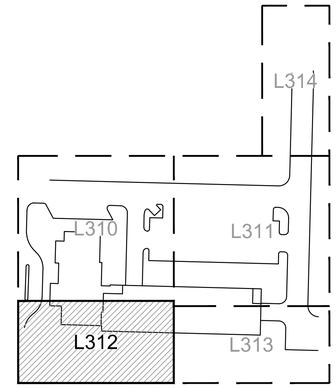
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QA/QC by: BM
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drawing no.: L_SC_UND01_F2104643
date: 01.19.2024

SHEET
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1 LANDSCAPE UNDERSTORY PLAN



KEYMAP

LANDSCAPE LEGEND:

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- SHEET MATCHLINE
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CODY PRIVATE
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LANDSCAPE ARCHITECT

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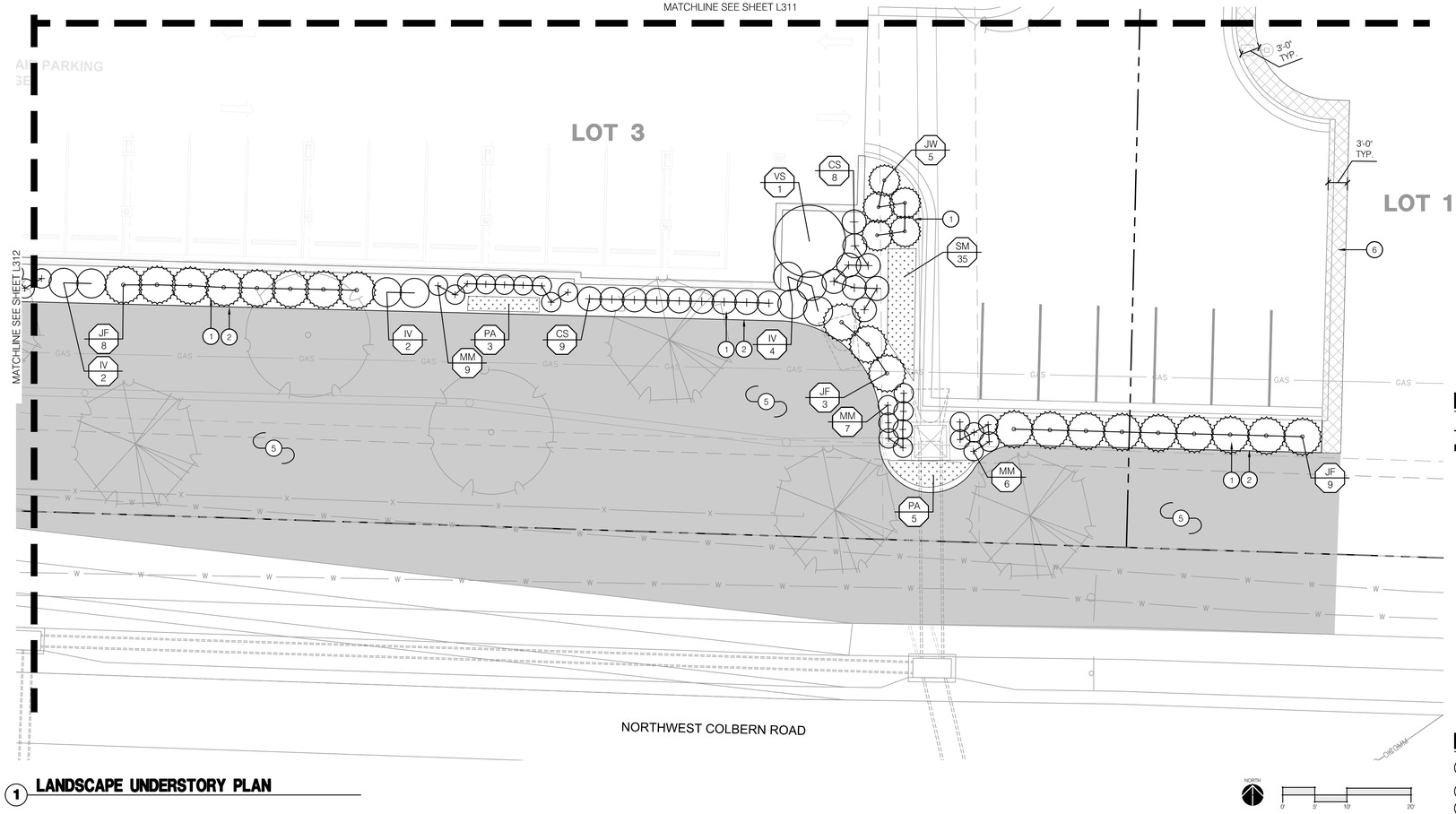
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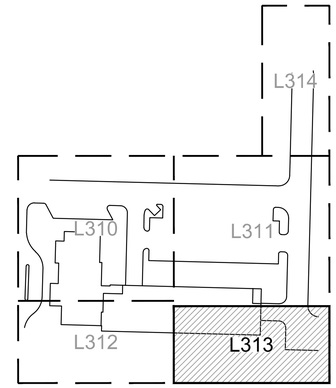
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1 LANDSCAPE UNDERSTORY PLAN



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LANDSCAPE ARCHITECT

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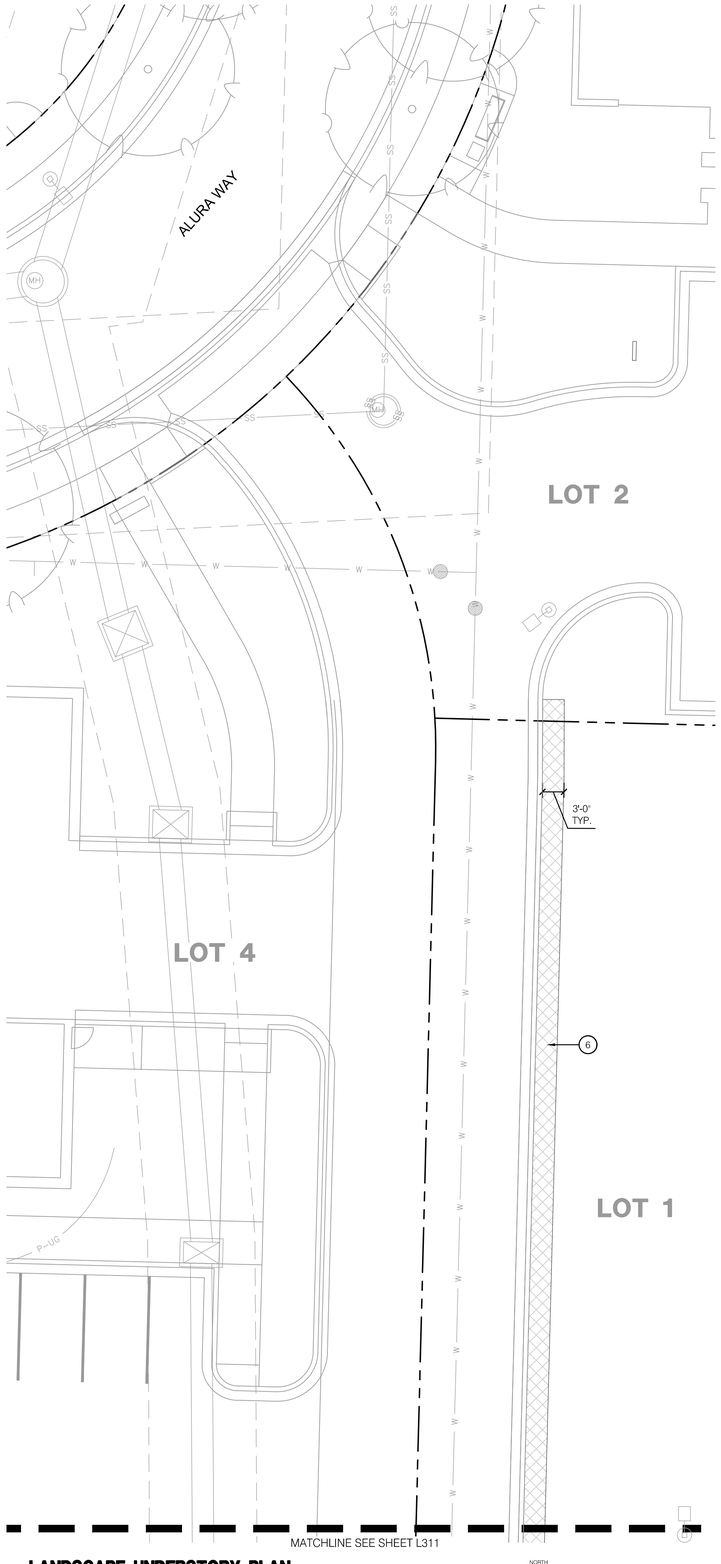
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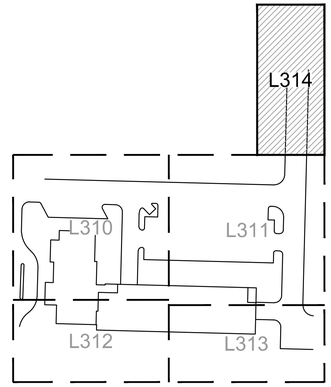
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1 **LANDSCAPE UNDERSTORY PLAN**



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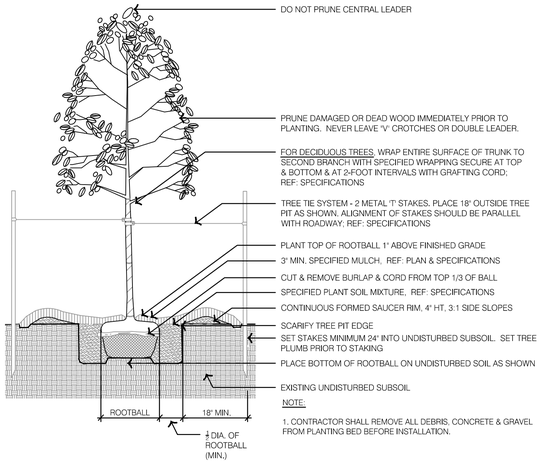
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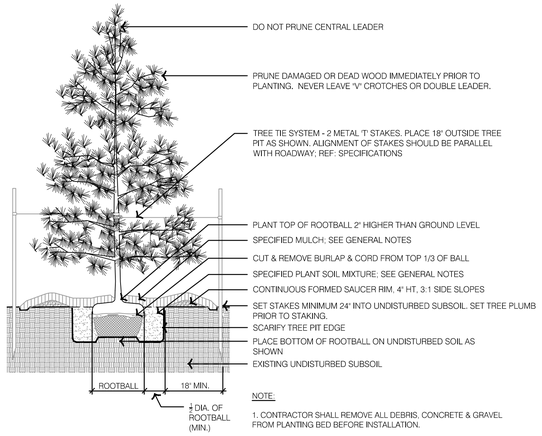
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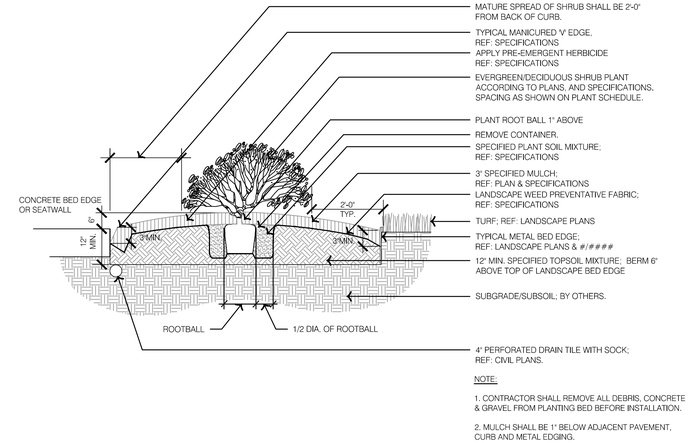
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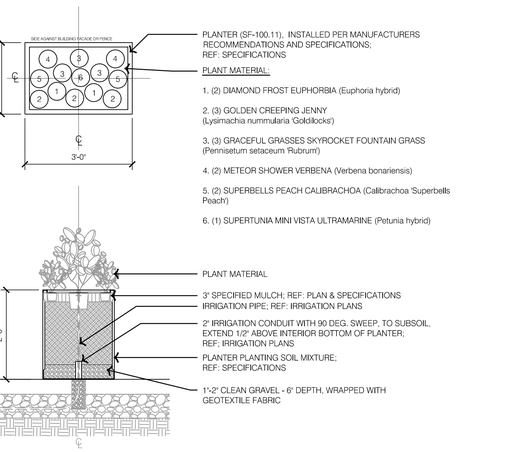
1 TYPICAL DECIDUOUS TREE PLANTING



2 TYPICAL EVERGREEN TREE PLANTING



3 TYPICAL SHRUB PLANTING



4 TYPICAL GROUNDCOVER & PERENNIAL PLANTING



5 TYPICAL METAL BED EDGE

EXAMPLE LAYOUT

6 TYPICAL PLANTER - FRONT ENTRY PLANTING DETAIL

7 TYPICAL PLANTER - ACCENT PLANTING DETAIL

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STATE OF MISSOURI CODY PEBLEY NUMBER LA-2012033117 LANDSCAPE ARCHITECT

REV.: NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

LANDSCAPE DETAILS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

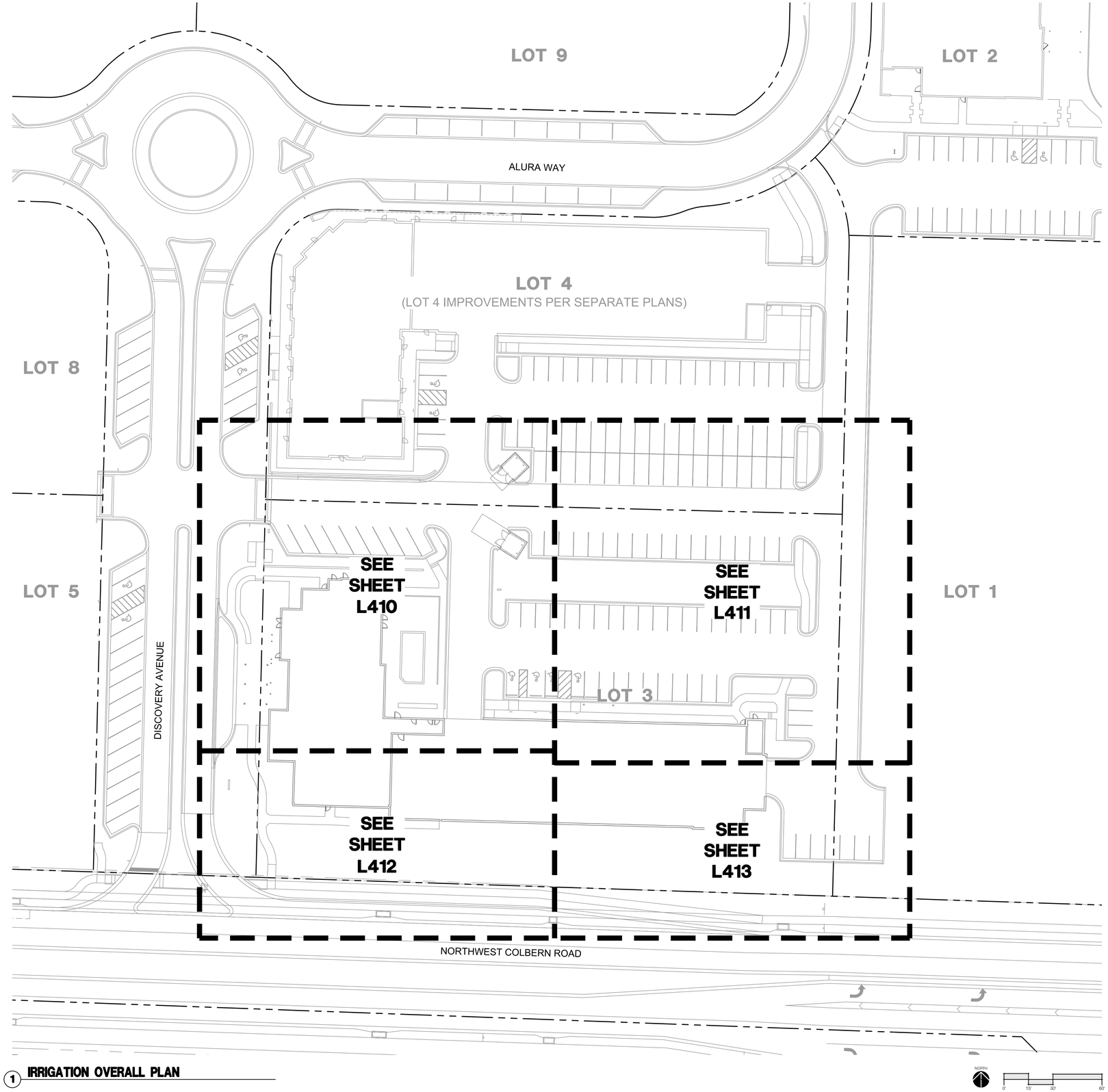
LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F21-04643
drawing no.: LSC_DTL01_F2104643
date: 01.19.2024

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1 **IRRIGATION OVERALL PLAN**

IRRIGATION GENERAL NOTES:

1. THIS DESIGN IS SHOWN IN A DIAGRAMMATIC FORM. ALL COMPONENTS ARE SHOWN FOR THE PURPOSE OF CLARIFICATION AND LEGIBILITY. ALL WORK SHALL CONFORM TO SPECIFICATIONS AND DETAILS INCLUDED IN THIS PACKAGE. IRRIGATION MAINLINE, LATERALS, CONTROL VALVES, SUB-METER, BACKFLOW PREVENTER AND OTHER IRRIGATION CONTROL EQUIPMENT SHALL BE INSTALLED IN LANDSCAPE BEDS OR TURF AREAS UNLESS CONTAINED IN PVC SLEEVING UNDER PAVEMENT OR OTHER HARDSCAPE AS INDICATED ON PLANS.
2. VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON THE PLANS AT THE SITE PRIOR TO COMMENCEMENT OF WORK.
3. CONTACT LANDSCAPE ARCHITECT AND COORDINATE ALL REVIEWS PRIOR TO COMMENCEMENT OF WORK.
4. IRRIGATION CONTRACTOR SHALL VERIFY PRESSURE AT ALL TAP LOCATIONS PRIOR TO THE INSTALLATION OF ANY COMPONENTS OF THE IRRIGATION SYSTEM. NOTIFY LANDSCAPE ARCHITECT IF THE MINIMUM REQUIREMENTS FOR FLOW AND PRESSURE NOTED IN THE IRRIGATION SCHEDULES CAN NOT BE MEET.
5. CONTRACTOR SHALL INSTALL ALL IRRIGATION EQUIPMENT IN THE TURF AREAS AND PLANTING BEDS IN A MANNER SO AS TO CONFORM WITH THE VARIOUS DETAILS, PLAN NOTES AND SPECIFICATIONS FROM LANDSCAPE ARCHITECT AND MANUFACTURER.
6. EXERCISE EXTREME CARE IN EXCAVATING AND WORKING NEAR EXISTING TREES AND UTILITIES. THE CONTRACTOR SHALL VERIFY LOCATION AND CONDITION OF ALL UTILITIES AND BE RESPONSIBLE FOR DAMAGE TO TREES OR UTILITIES. FIELD ADJUST SPRINKLER LOCATIONS SO AS TO AVOID CONFLICTS WITH UTILITIES (FIRE HYDRANTS, TRANSFORMERS, ETC.).
7. PROTECT AT ALL TIMES THE WORK FROM DAMAGE AND THEFT. REPLACE ALL DAMAGED OR STOLEN PARTS AT CONTRACTORS EXPENSE UNTIL THE WORK IS ACCEPTED IN WRITING BY THE OWNER.
8. THE FINAL LOCATION AND EXACT POSITIONING OF THE AUTOMATIC CONTROLLER SHALL BE APPROVED BY THE OWNERS AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION.
9. IRRIGATION CONTRACTOR RESPONSIBLE TO COORDINATE 110 ELECTRICAL SERVICE FOR CONTROLLER WITH BUILDING GENERAL CONTRACTOR. POWER SUPPLY CONNECTION BY IRRIGATION CONTRACTOR.
10. FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE. INSTALL PRS-DIAL PRESSURE REGULATING MODULES ON ALL VALVES OPERATING AT PRESSURES HIGHER THAN 5 PSI FROM OPERATION PSI AS STATED IN THE CONTROLLER SCHEDULES FOR EACH ZONE.
11. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWING WHEN IT IS OBVIOUS IN THE FIELD THAT WIND CONDITIONS, OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREAS DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED DURING DESIGN BRING SUCH OBSTRUCTIONS OR DIFFERENCE TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND COSTS FOR ALL NECESSARY REVISIONS.
12. CONTRACTOR SHALL PLACE ALL ZONE CONTROL VALVES AND QUICK COUPLER VALVES IN LANDSCAPE BEDS, AS POSSIBLE. PLACE VALVE BOXES A MINIMUM OF 1'-0" FROM ANY PAVEMENT AND PARALLEL TO PAVEMENT EDGE. GROUPED VALVES TO BE EQUALLY SPACED.
13. ADJUST HEAD LOCATION IF SPRAY IS DETRIMENTAL TO OR BLOCKED BY TREE, SHRUB OR STRUCTURE, MAINTAINING EVEN COVERAGE OF PLANTED AREAS.
14. INSTALL ALL MAINLINES TO SLOPE AT 1% MINIMUM TO MANUAL DRAIN VALVES LOCATED AT LOW POINTS OF MAIN SYSTEM.
15. ALL SPRINKLER HEADS AND TURF ROTORS SHALL BE ADJUSTED SO THEY DO NOT SPRAY ONTO WALKS, RETAINING WALLS, BUILDINGS OR THE PLAZA AREAS.
16. THE IRRIGATION SYSTEM IS DESIGNED TO BE DRAINED AND BLOWN OUT WITH PRESSURIZED AIR PRIOR TO FREEZING TEMPERATURES IN FALL/WINTER. THE CONTRACTOR SHALL DRAIN AND BLOW OUT THE SYSTEM AS NECESSARY UNTIL SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL BLOW OUT THE SYSTEM AND INSTRUCT THE OWNER ON THE PROCEDURES FOR THE FIRST FALL/WINTER FOLLOWING THE NOTICE OF SUBSTANTIAL COMPLETION.
17. THE CONTRACTOR SHALL PRESSURIZE AND MAKE OPERATIONAL THE SYSTEM IN THE SPRING, AFTER ALL CHANCES OF FREEZING TEMPERATURES PASSES, UNTIL NOTICE OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL ALSO PRESSURIZE AND MAKE THE SYSTEM OPERATIONAL AND INSTRUCT THE OWNER ON PROCEDURES FOR THE FIRST SPRING FOLLOWING THE NOTICE OF SUBSTANTIAL COMPLETION.
18. CONTRACTOR SHALL INSTALL SLEEVES UNDER HARDSCAPE AT ALL POINTS WHERE IRRIGATION MAIN LINE AND LATERALS ARE LOCATED.
19. ALL IRRIGATION EQUIPMENT INCLUDING VALVES, MAINLINES AND LATERALS SHALL BE LOCATED ON THE OWNERS PROPERTY.

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NUMBER LA-2012033117
LANDSCAPE ARCHITECT

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REVISIONS

IRRIGATION OVERALL PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

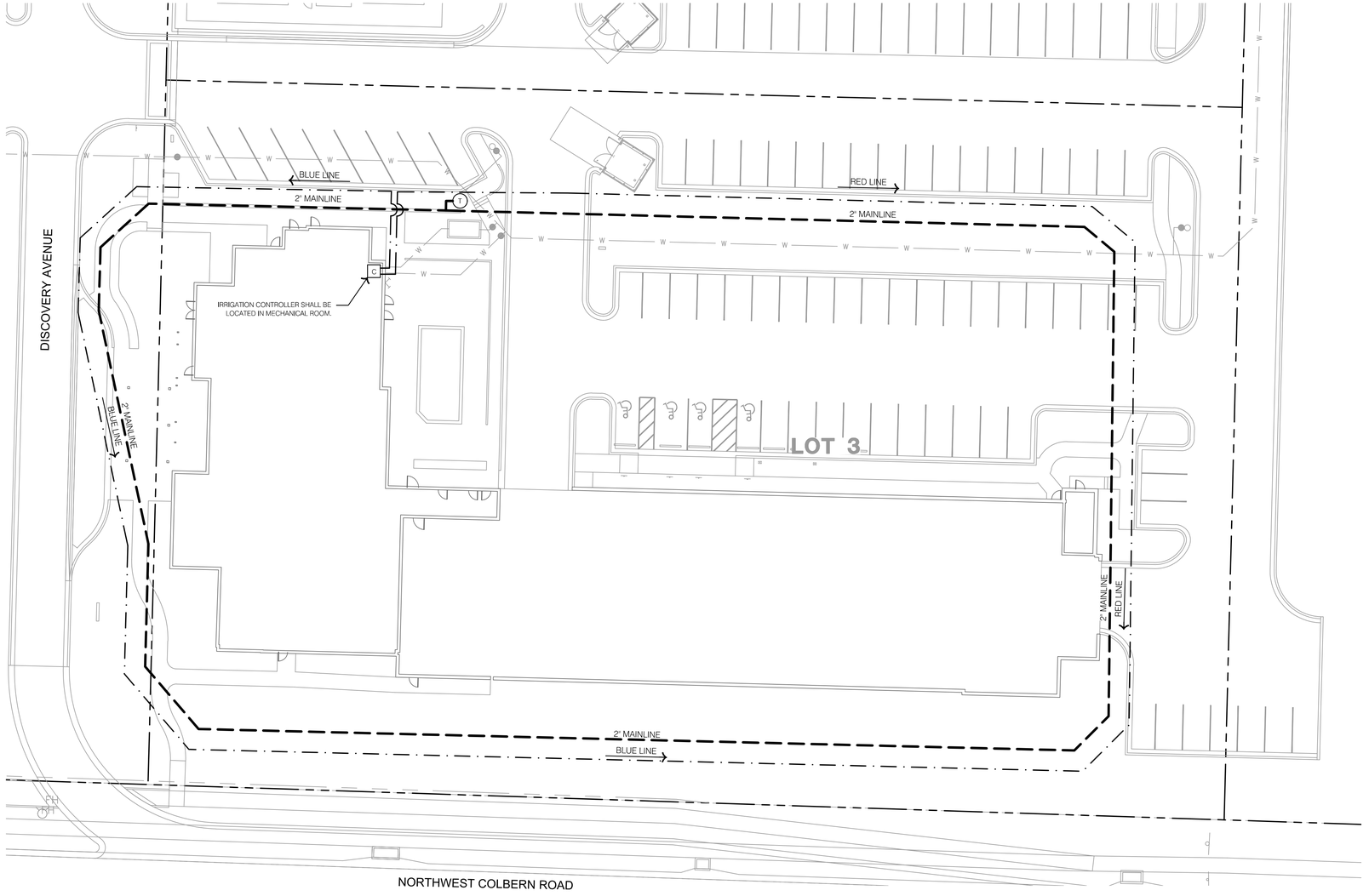
LEE'S SUMMIT, MISSOURI

2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F2104643
drawing no.: L_OVR01_F2104643
date: 01.19.2024

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L400

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USER: ewilson



1 IRRIGATION MAINLINE & CONTROL WIRE PLAN

IRRIGATION OVERALL PLAN LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- W — POTABLE WATER SERVICE LINE
- MAINLINE, SIZE AS SHOWN
- TWO-WIRE PATH LINE
- (T) IRRIGATION POINT OF CONNECTION
- (C) IRRIGATION CONTROLLER

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NW COLBERN RD & NE DOUGLAS ST

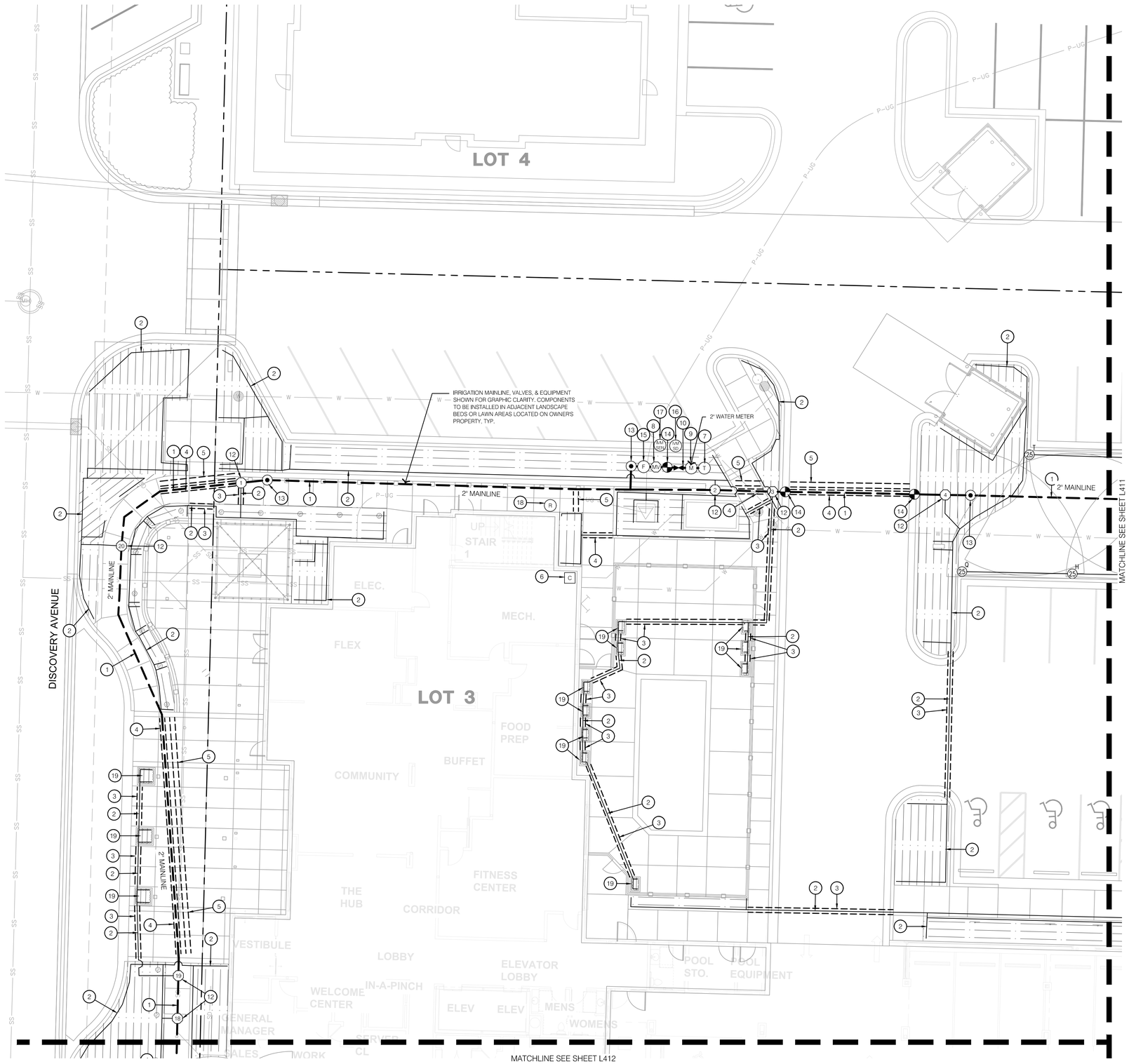
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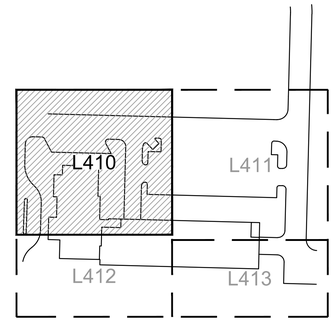
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1 IRRIGATION PLAN



KEYMAP

IRRIGATION LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- HALF CIRCLE SPRAY HEAD; REF: 2/L490
- QUARTER CIRCLE SPRAY HEAD; REF: 2/L490
- ROTOR HEAD; REF: 1/L490
- POTABLE WATER SERVICE LINE
- MAINLINE, SIZE AS SHOWN; REF: 5/L491
- LATERAL PIPE, SIZE AS SHOWN; REF: 5/L491
- LANDSCAPE DRIPLINE; REF: 3, 4, 5, 6, 7 & 9/L490
- SCHEDULE 40 PVC SLEEVE
- IRRIGATION WATER METER
- BACKFLOW PREVENTER
- IRRIGATION POINT OF CONNECTION
- MASTER CONTROL VALVE
- ZONE CONTROL VALVE
- MANUAL GATE VALVE
- QUICK COUPLER VALVE
- FLOW SENSOR
- AUTOMATIC CONTROLLER
- RAIN/FREEZE SENSOR
- SURGE PROTECTOR
- IVM SENSOR DEVICE

IRRIGATION PLAN NOTES:

1. POTABLE WATER IRRIGATION MAINLINES TO BE 2 1/2" PVC PIPE OR AS SHOWN ON PLANS; REF:5/L491
2. POTABLE WATER IRRIGATION LATERALS TO BE 1" PVC PIPE OR AS SHOWN ON PLANS; REF: 5/L491
3. POTABLE WATER IRRIGATION LATERAL SLEEVES SHALL BE 4" PVC SCHEDULE 40 PIPE OR AS SHOWN ON THE PLANS.
4. POTABLE WATER IRRIGATION MAINLINE SLEEVES SHALL BE 6" PVC SCHEDULE 40 PIPE OR AS SHOWN ON THE PLANS.
5. IRRIGATION CONTROL WIRE SLEEVES SHALL BE 4" PVC SCHEDULE 40 PIPE OR AS SHOWN ON THE PLANS.
6. IRRIGATION CONTROLLER SHALL BE RAIN BIRD ESP-LXIVM MODULAR SERIES WALL MOUNTED CONTROLLER. FINAL CONTROLLER LOCATION SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ELECTRICAL SERVICE TO THE CONTROLLER LOCATION IS TO BE COORDINATED BY THE GENERAL CONTRACTOR AND PROVIDED BY ELECTRICAL CONTRACTOR. POWER HOOK-UP TO THE CONTROLLER BY IRRIGATION CONTRACTOR. INSTALL CONTROLLER PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.; REF: 8/L491
7. IRRIGATION POINT OF CONNECTION. IRRIGATION CONTRACTOR SHALL CONNECT IRRIGATION MAINLINE TO WATER SUPPLY AS REQUIRED BY ALL CITY, COUNTY, OR STATE REGULATIONS. IRRIGATION TAP SHALL OCCUR AFTER METER AND BACKFLOW PREVENTER PROVIDED BY BUILDING MEP. REF: BUILDING MEP PLANS
8. 2" RAIN BIRD MODEL MASTER VALVE CONNECTED TO POTABLE IRRIGATION MAINLINE AFTER IRRIGATION POINT OF CONNECTION, METER, AND BACKFLOW PREVENTER.; REF: 9/L490
9. 2" IRRIGATION WATER METER; REF: SPECIFICATIONS
10. BACKFLOW PREVENTER; REF: SPECIFICATIONS
11. RAIN BIRD PE-IVM MODEL CONTROL VALVE TO BE USED ON ALL POTABLE WATER IRRIGATION MAINLINES. REFERENCE IRRIGATION SCHEDULE FOR SIZE, FLOW, AND PRESSURE REQUIREMENTS; REF: 8/L490
12. RAIN BIRD XCZ-100-IVM-Q DRIP CONTROL VALVE TO BE USED ON ALL POTABLE WATER IRRIGATION MAINLINES.; REF: 9/L490
13. QUICK COUPLER VALVE LOCATED ON POTABLE WATER SHALL BE RAIN BIRD 44RC WITH YELLOW CAP LOCATED IN 10" ROUND VALVE BOX.; REF: 2/L491
14. INSTALL MANUAL GATE VALVE IN LOCATIONS INDICATED ON IRRIGATION MAINLINES. MANUAL GATE VALVE TO MATCH SIZE OF MAINLINE PIPE.; REF: 4/L491
15. RAIN BIRD SERIES FLOW SENSOR, PER SPECIFICATIONS; REF: 12/L490 & 6/L491
16. SURGE PROTECTOR. RAIN BIRD IVM-SD LINE SURGE PROTECTION, PER SPECIFICATIONS; REF:11/L490
17. IVM SENSOR DEVICE; REF: 6/L491
18. RAIN BIRD WIRED RAIN/FREEZE SENSOR. INSTALLED PER SPECIFICATIONS. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT.; REF: 6/L491.
19. PLANTER IRRIGATION; REF: 9/L491

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STATE OF MISSOURI
CODY PRATER
NUMBER LA-2012033117
LANDSCAPE ARCHITECT
12/31/2024

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

IRRIGATION PLAN
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST
LEE'S SUMMIT, MISSOURI

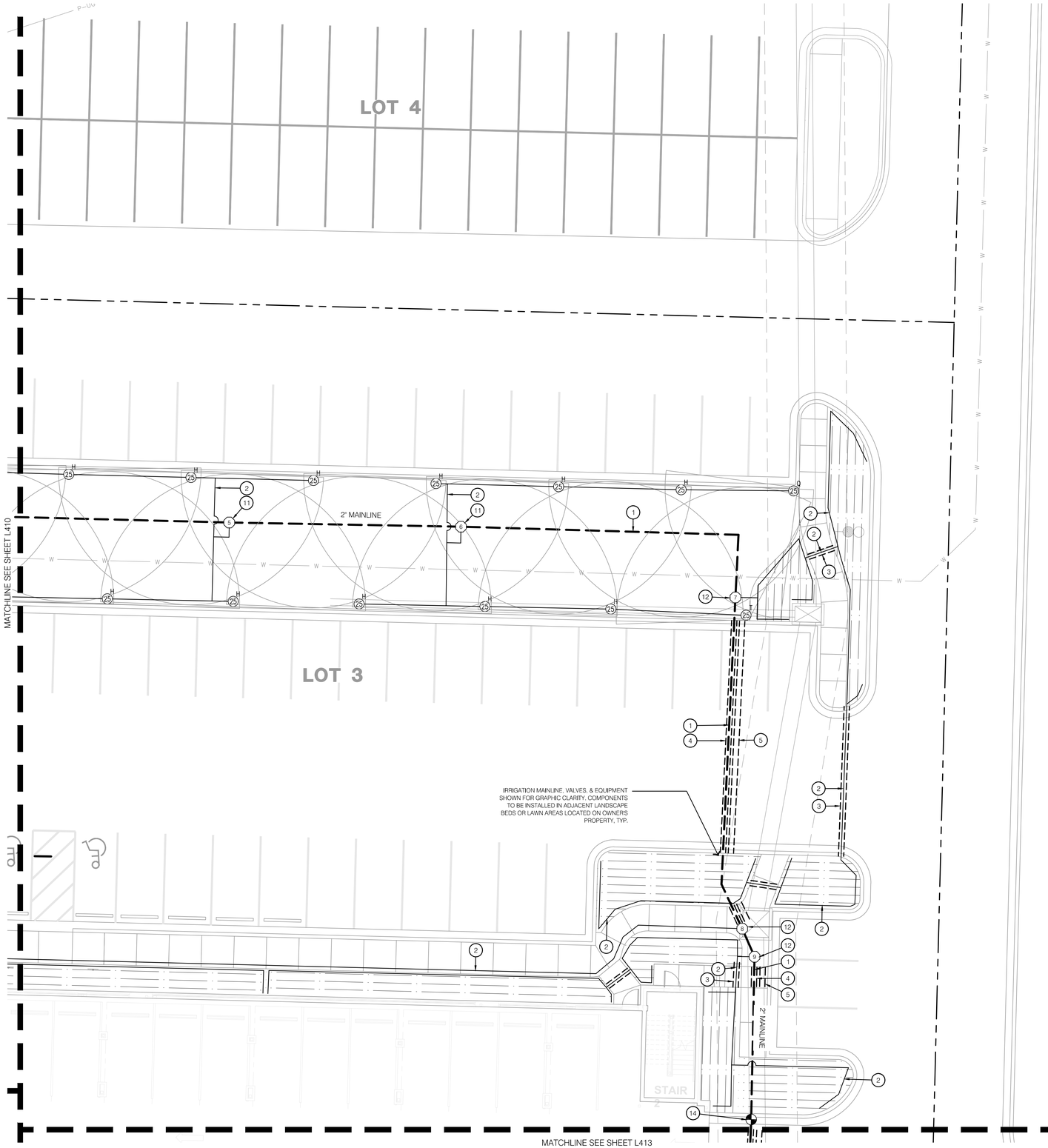
2024

drawn by:	EW/AB
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project no.:	F21-04643
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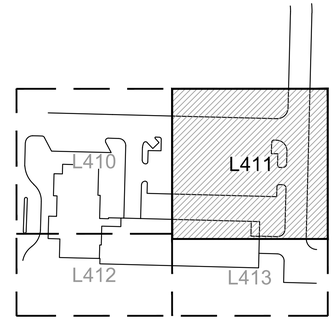
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1 **IRRIGATION PLAN**



KEYMAP

IRRIGATION LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- HALF CIRCLE SPRAY HEAD; REF: 2/L490
- QUARTER CIRCLE SPRAY HEAD; REF: 2/L490
- ROTOR HEAD; REF: 1/L490
- POTABLE WATER SERVICE LINE
- MAINLINE, SIZE AS SHOWN; REF: 5/L491
- LATERAL PIPE, SIZE AS SHOWN; REF: 5/L491
- LANDSCAPE DRIPLINE; REF: 3, 4, 5, 6, 7 & 9/L490
- SCHEDULE 40 PVC SLEEVE
- IRRIGATION WATER METER
- BACKFLOW PREVENTER
- IRRIGATION POINT OF CONNECTION
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- MANUAL GATE VALVE
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- FLOW SENSOR
- AUTOMATIC CONTROLLER
- RAIN/FREEZE SENSOR
- SURGE PROTECTOR
- IVM SENSOR DEVICE

IRRIGATION PLAN NOTES:

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15. RAIN BIRD SERIES FLOW SENSOR, PER SPECIFICATIONS; REF: 12/L490 & 6/L491
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17. IVM SENSOR DEVICE; REF: 6/L491
18. RAIN BIRD WIRED RAIN/FREEZE SENSOR. INSTALLED PER SPECIFICATIONS. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT.; REF: 6/L491.
19. PLANTER IRRIGATION; REF: 9/L491

NORTH
0' 5' 10' 20'

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Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI
CODY PRIDDY
NUMBER
LA-2012033117
LANDSCAPE ARCHITECT
01.19.24

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REVISIONS

IRRIGATION PLAN
PRIVATE SITE DEVELOPMENT PLANS

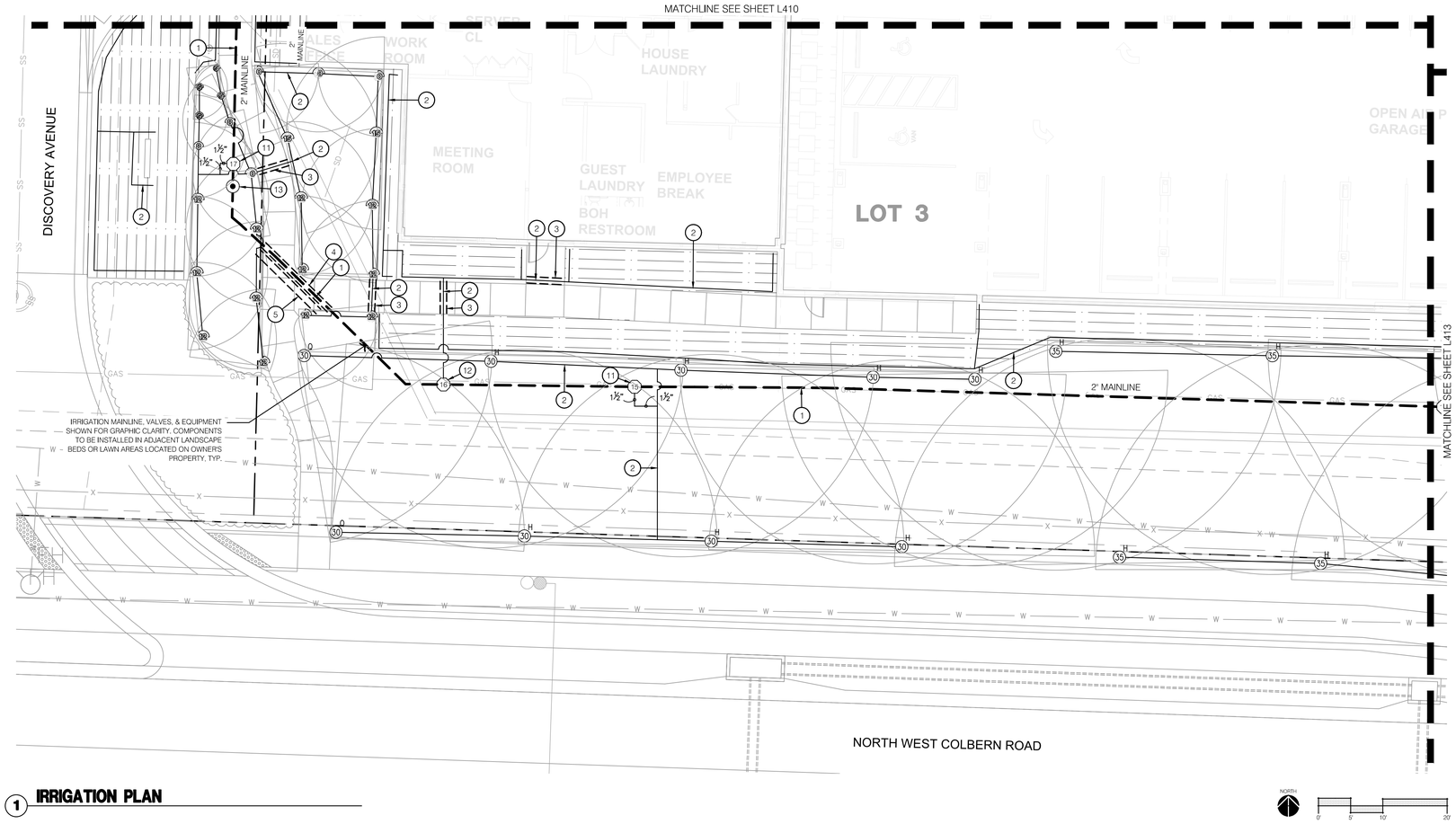
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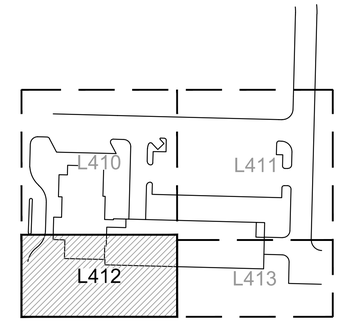
2024

drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F21-04643
drawing no.: L_IRR01_F2104643
date: 01.19.2024

SHEET
L411



1 IRRIGATION PLAN



KEYMAP

IRRIGATION LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- HALF CIRCLE SPRAY HEAD; REF: 2/L490
- QUARTER CIRCLE SPRAY HEAD; REF: 2/L490
- ROTOR HEAD; REF: 1/L490
- POTABLE WATER SERVICE LINE
- MAINLINE, SIZE AS SHOWN; REF: 5/L491
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- SCHEDULE 40 PVC SLEEVE
- M — IRRIGATION WATER METER
- BACKFLOW PREVENTER
- T — IRRIGATION POINT OF CONNECTION
- MV — MASTER CONTROL VALVE
- 12 — ZONE CONTROL VALVE
- MANUAL GATE VALVE
- QUICK COUPLER VALVE
- F — FLOW SENSOR
- C — AUTOMATIC CONTROLLER
- R — RAIN/FREEZE SENSOR
- SM (GE) — SURGE PROTECTOR
- IVM (CYA) — IVM SENSOR DEVICE

IRRIGATION PLAN NOTES:

1. POTABLE WATER IRRIGATION MAINLINES TO BE 2 1/2" PVC PIPE OR AS SHOWN ON PLANS; REF:5/L491
2. POTABLE WATER IRRIGATION LATERALS TO BE 1" PVC PIPE OR AS SHOWN ON PLANS; REF: 5/L491
3. POTABLE WATER IRRIGATION LATERAL SLEEVES SHALL BE 4" PVC SCHEDULE 40 PIPE OR AS SHOWN ON THE PLANS.
4. POTABLE WATER IRRIGATION MAINLINE SLEEVES SHALL BE 6" PVC SCHEDULE 40 PIPE OR AS SHOWN ON THE PLANS.
5. IRRIGATION CONTROL WIRE SLEEVES SHALL BE 4" PVC SCHEDULE 40 PIPE OR AS SHOWN ON THE PLANS.
6. IRRIGATION CONTROLLER SHALL BE RAIN BIRD ESP-LXIVM MODULAR SERIES WALL MOUNTED CONTROLLER. FINAL CONTROLLER LOCATION SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ELECTRICAL SERVICE TO THE CONTROLLER LOCATION IS TO BE COORDINATED BY THE GENERAL CONTRACTOR AND PROVIDED BY ELECTRICAL CONTRACTOR. POWER HOOK-UP TO THE CONTROLLER BY IRRIGATION CONTRACTOR. INSTALL CONTROLLER PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.; REF: 8/L491
7. IRRIGATION POINT OF CONNECTION. IRRIGATION CONTRACTOR SHALL CONNECT IRRIGATION MAINLINE TO WATER SUPPLY AS REQUIRED BY ALL CITY, COUNTY, OR STATE REGULATIONS. IRRIGATION TAP SHALL OCCUR AFTER METER AND BACKFLOW PREVENTER PROVIDED BY BUILDING MEP. REF: BUILDING MEP PLANS
8. 2" RAIN BIRD MODEL MASTER VALVE CONNECTED TO POTABLE IRRIGATION MAINLINE AFTER IRRIGATION POINT OF CONNECTION, METER, AND BACKFLOW PREVENTER.; REF: 9/L490
9. 2" IRRIGATION WATER METER; REF: SPECIFICATIONS
10. BACKFLOW PREVENTER; REF: SPECIFICATIONS
11. RAIN BIRD PE-IVM MODEL CONTROL VALVE TO BE USED ON ALL POTABLE WATER IRRIGATION MAINLINES. REFERENCE IRRIGATION SCHEDULE FOR SIZE, FLOW, AND PRESSURE REQUIREMENTS; REF: 8/L490
12. RAIN BIRD XCZ-100-IVM-Q DRIP CONTROL VALVE TO BE USED ON ALL POTABLE WATER IRRIGATION MAINLINES.; REF: 9/L490
13. QUICK COUPLER VALVE LOCATED ON POTABLE WATER SHALL BE RAIN BIRD 44RC WITH YELLOW CAP LOCATED IN 10" ROUND VALVE BOX.; REF: 2/L491
14. INSTALL MANUAL GATE VALVE IN LOCATIONS INDICATED ON IRRIGATION MAINLINES. MANUAL GATE VALVE TO MATCH SIZE OF MAINLINE PIPE.; REF: 4/L491
15. RAIN BIRD SERIES FLOW SENSOR, PER SPECIFICATIONS; REF: 12/L490 & 6/L491
16. SURGE PROTECTOR. RAIN BIRD IVM-SD LINE SURGE PROTECTION, PER SPECIFICATIONS; REF:11/L490
17. IVM SENSOR DEVICE; REF: 6/L491
18. RAIN BIRD WIRED RAIN/FREEZE SENSOR. INSTALLED PER SPECIFICATIONS. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT.; REF: 6/L491.
19. PLANTER IRRIGATION; REF: 9/L491

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CODY PRIVETT
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PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

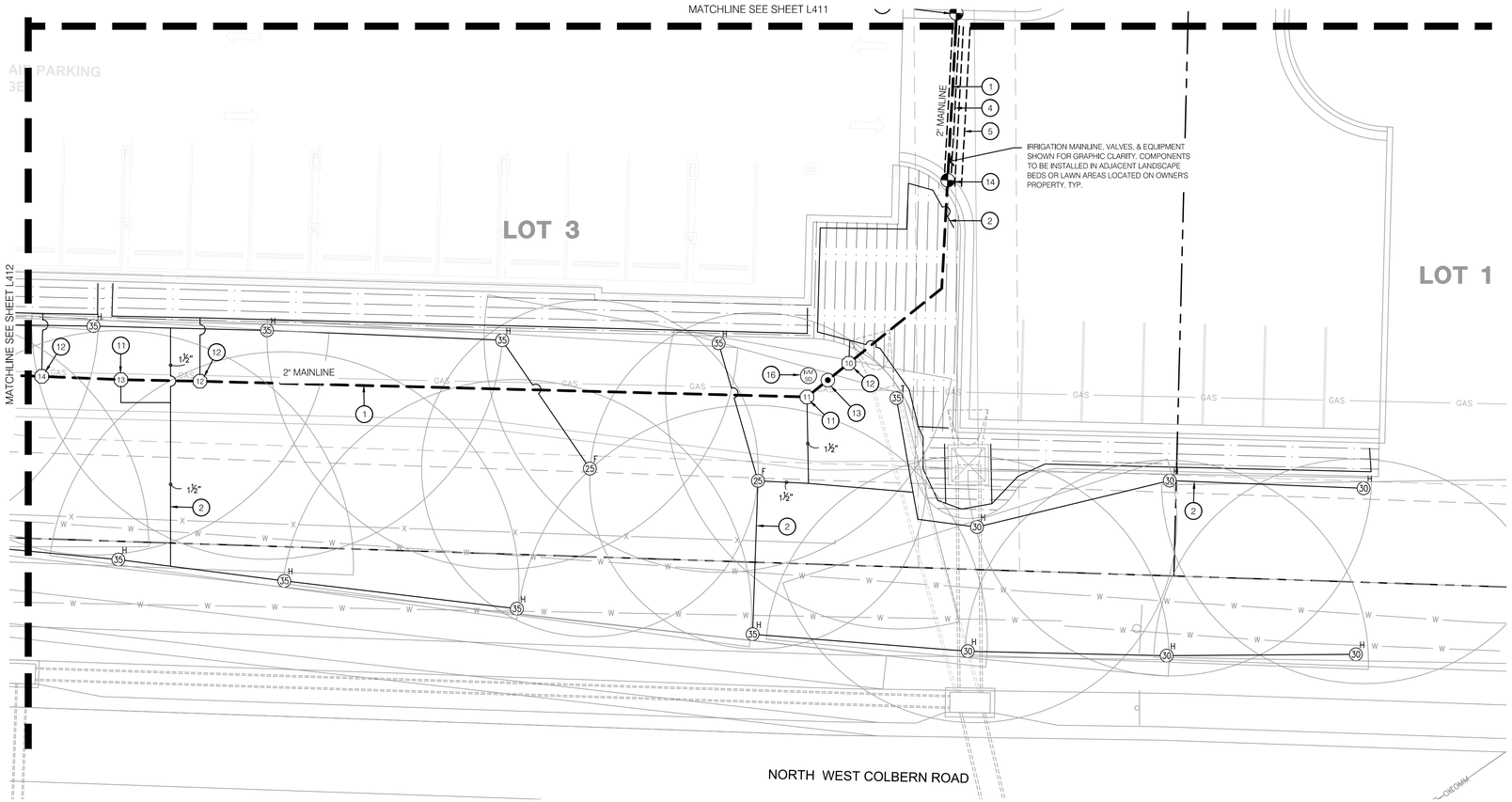
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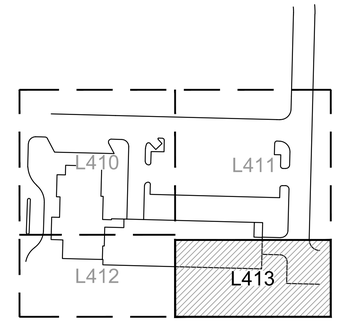
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1 IRRIGATION PLAN



KEYMAP

IRRIGATION LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- SHEET MATCHLINE
- HALF CIRCLE SPRAY HEAD; REF: 2/L490
- QUARTER CIRCLE SPRAY HEAD; REF: 2/L490
- ROTOR HEAD; REF: 1/L490
- POTABLE WATER SERVICE LINE
- MAINLINE, SIZE AS SHOWN; REF: 5/L491
- LATERAL PIPE, SIZE AS SHOWN; REF: 5/L491
- LANDSCAPE DRIPLINE; REF: 3, 4, 5, 6, 7 & 9/L490
- SCHEDULE 40 PVC SLEEVE
- IRRIGATION WATER METER
- BACKFLOW PREVENTER
- IRRIGATION POINT OF CONNECTION
- MASTER CONTROL VALVE
- ZONE CONTROL VALVE
- MANUAL GATE VALVE
- QUICK COUPLER VALVE
- FLOW SENSOR
- AUTOMATIC CONTROLLER
- RAIN/FREEZE SENSOR
- SURGE PROTECTOR
- IVM SENSOR DEVICE

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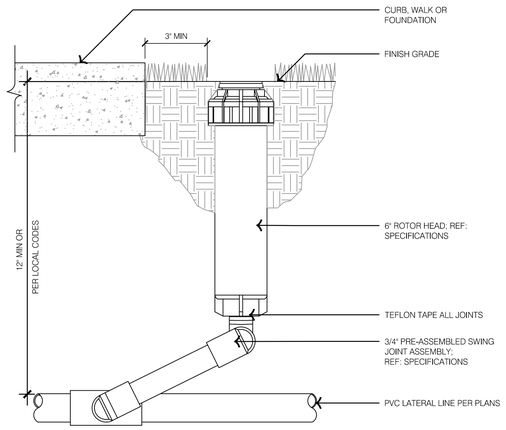
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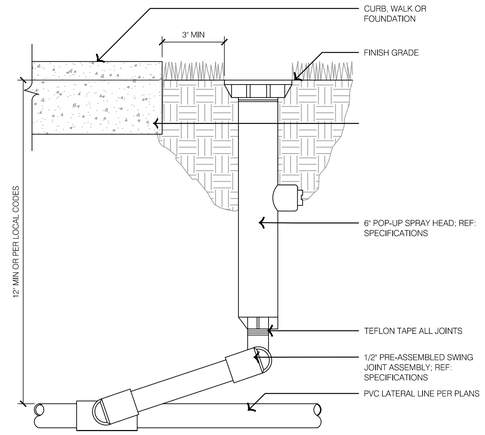
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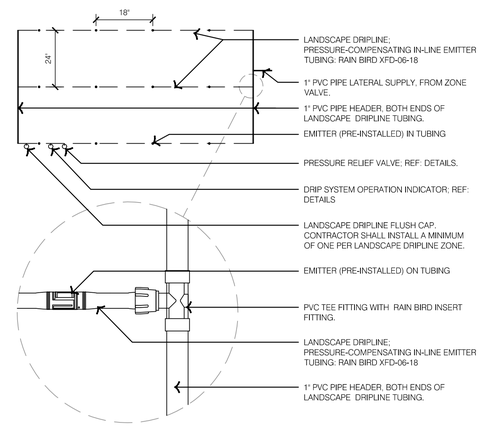
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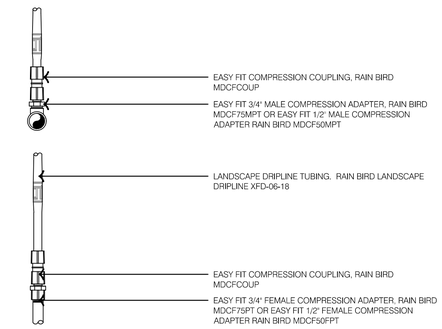
1 6" POP-UP ROTOR HEAD - POTABLE WATER



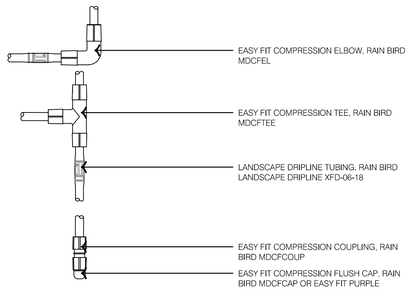
2 6" POP-UP SPRAY HEAD - POTABLE WATER



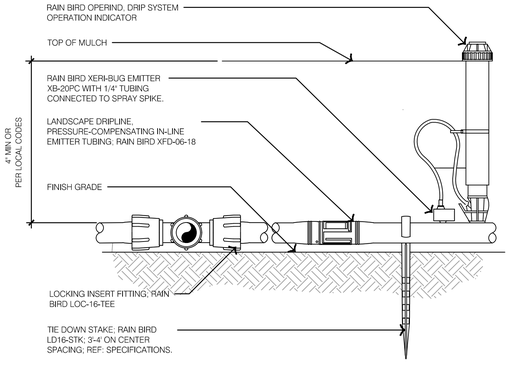
3 LANDSCAPE DRIPLINE LAYOUT TYPICAL - POTABLE WATER



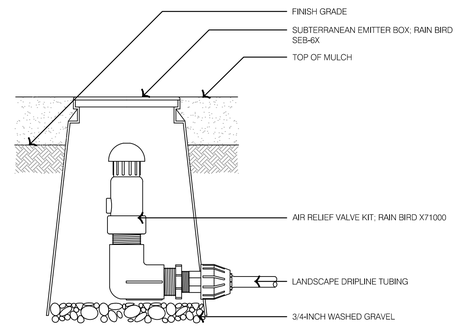
4 LANDSCAPE DRIPLINE EASY FIT COMPRESSION ADAPTERS POTABLE WATER



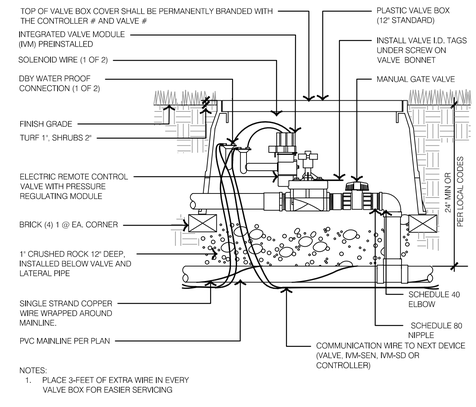
5 LANDSCAPE DRIPLINE EASY FIT COMPRESSION FITTINGS POTABLE WATER



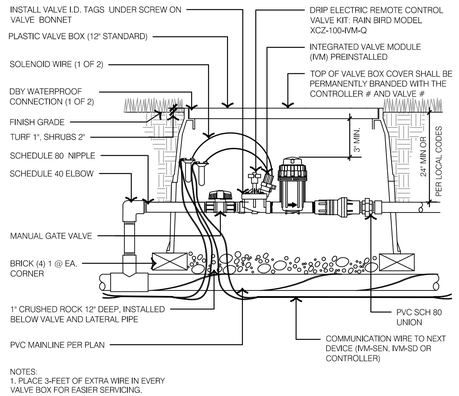
6 LANDSCAPE DRIPLINE CONNECTION - POTABLE WATER



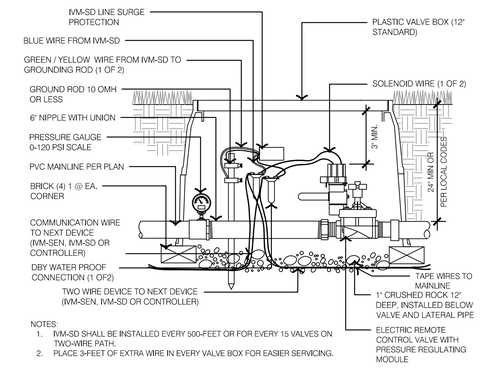
7 LANDSCAPE DRIPLINE AIR VALVE KIT - POTABLE WATER



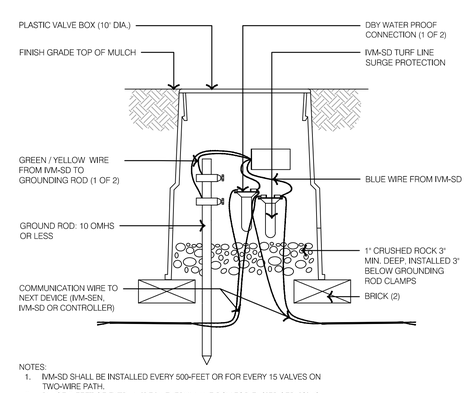
8 REMOTE CONTROL VALVE - POTABLE WATER



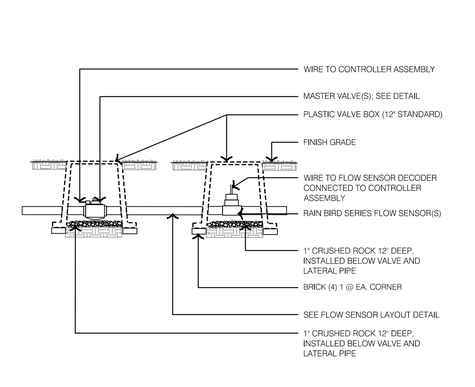
9 DRIP REMOTE CONTROL VALVE - POTABLE WATER



10 MASTER VALVE - POTABLE WATER



11 LINE SURGE PROTECTION



12 MASTER VALVE & FLOW SENSOR TYPICAL - POTABLE WATER

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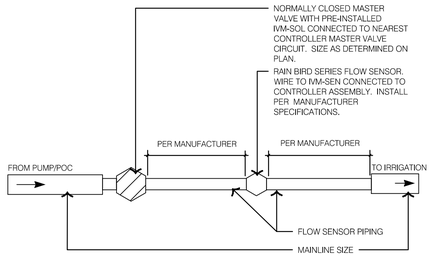
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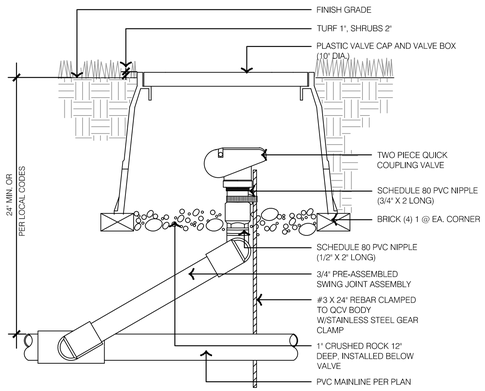
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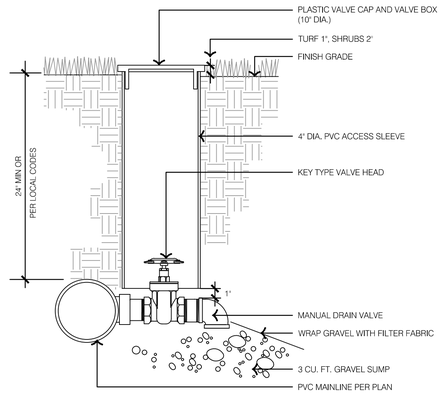


FLOW SENSOR	SIZE	FLOW SENSOR PIPING SIZE
RAIN BIRD FS100P	1"	1" PIPE
RAIN BIRD FS150P	1 1/2"	1 1/2" PIPE
RAIN BIRD FS200P	2"	2" PIPE
RAIN BIRD FS300P	3"	3" PIPE
RAIN BIRD FS400P	4"	4" PIPE

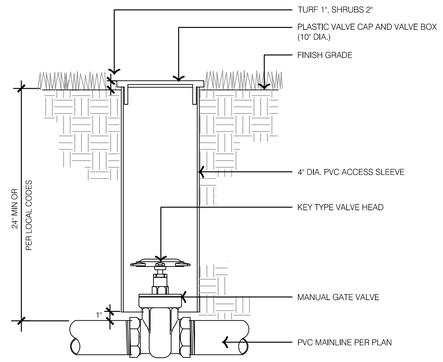
1 FLOW SENSOR TYPICAL LAYOUT - POTABLE WATER



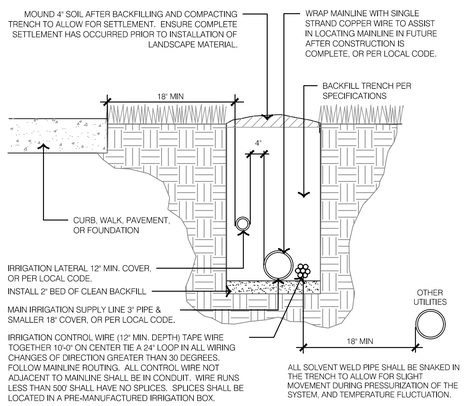
2 QUICK COUPLER VALVE - POTABLE WATER



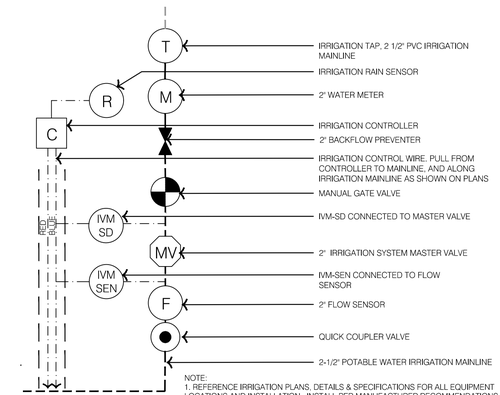
3 MANUAL DRAIN VALVE - POTABLE WATER



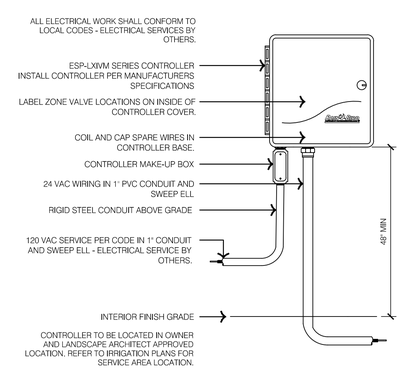
4 MANUAL GATE VALVE - POTABLE WATER



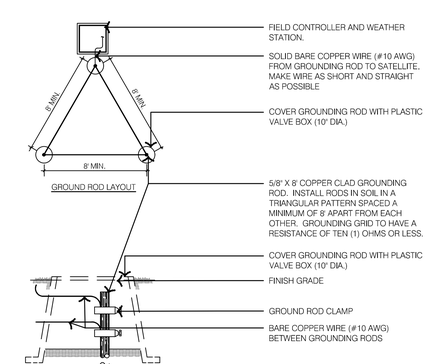
5 TRENCHING DETAIL - POTABLE WATER



6 TAP LAYOUT - POTABLE WATER



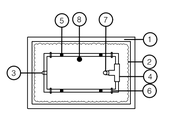
7 WALL MOUNTED AUTOMATIC CONTROLLER



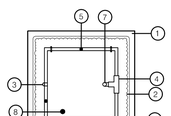
8 CONTROLLER GROUNDING GRID

PLANTER IRRIGATION NOTES:

1. PLANTER; REF: HARDSCAPE PLANS
2. ANNUAL PLANTINGS; REF: LANDSCAPE PLANS
3. LANDSCAPE DRIPLINE FLUSH CAP. CONTRACTOR SHALL INSTALL A MINIMUM OF ONE PER PLANTER.
4. EASY FIT COMPRESSION TEE RAIN BIRD MDCFTEE (QTY AS REQUIRED)
5. LANDSCAPE DRIPLINE; PRESSURE-COMPENSATING IN-LINE EMITTER TUBING; RAIN BIRD XFD-09-12
6. TIE DOWN STAKE RAIN BIRD TDS-050 W/BEND (QTY. AS REQUIRED)
7. IRRIGATION LATERAL
8. MICRO SPRAY WITH SPIKE



PLANTER SF-200.11 DRIPLINE LAYOUT



PLANTER SF-200.10 DRIPLINE LAYOUT

9 TYPICAL PLANTER IRRIGATION

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	TWO-WIRE PATH
1	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	1.77	266.9 L.F.	40	BLUE
2	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	4.71	707.5 L.F.	40	RED
3	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	0.4	37.5 L.F.	40	RED
4	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	3.55	533.6 L.F.	40	RED
5	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	14.26	8	45	RED
6	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	14.26	8	45	RED
7	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	5.35	596.6 L.F.	40	RED
8	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	2.15	323.4 L.F.	40	RED
9	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	3.76	564.5 L.F.	40	RED
10	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	4.36	654.7 L.F.	40	RED
11	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	31.66	10	45	BLUE
12	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	2.58	386.4 L.F.	40	BLUE
13	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	41.92	11	45	BLUE
14	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	4.76	714.7 L.F.	40	BLUE
15	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	23.52	9	45	BLUE
16	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	1.91	286.2 L.F.	40	BLUE
17	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	19.72	24	30	BLUE
18	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	4.29	643.8 L.F.	40	BLUE
19	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	0.27	27.0 L.F.	40	BLUE
20	RAIN BIRD XCZ-100-IVMQ	1"	AREA FOR DRIPLINE	2.89	433.9 L.F.	40	BLUE

CRITICAL ANALYSIS

Generated:	2023-12-18 17:38
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	2"
Flow Available	120 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	70 PSI
Elevation Change:	0.00 ft
Service Line Size:	8"
Length of Service Line:	0 ft
Pressure Available:	70 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	38.13 GPM
Flow Available at POC:	120 GPM
Residual Flow Available:	61.87 GPM
Critical Station:	15
Design Pressure:	45 PSI
Friction Loss:	0.47 PSI
Fittings Loss:	0.05 PSI
Elevation Loss:	0 PSI
Loss through Valve:	3.79 PSI
Pressure Req. at Critical Station:	49.9 PSI
Loss for Fittings:	0 PSI
Loss for Main Line:	1.52 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	11.8 PSI
Loss for Master Valve:	2.17 PSI
Loss for Water Meter:	1.19 PSI
Critical Station Pressure at POC:	66.6 PSI
Pressure Available:	70 PSI
Residual Pressure Available:	3.4 PSI

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1814 Main St.
Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI
CODY PRIVETT
NUMBER LA-2012033117
LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

IRRIGATION DETAILS
PRIVATE SITE DEVELOPMENT PLANS

THE VILLAGE AT DISCOVERY PARK LOT 3
NW COLBERN RD & NE DOUGLAS ST

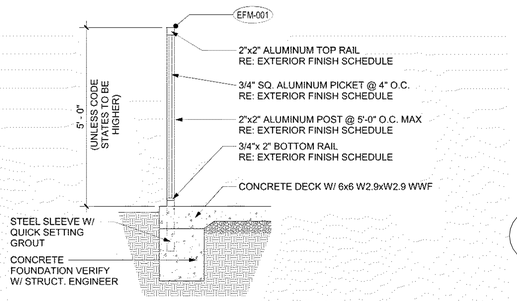
LEE'S SUMMIT, MISSOURI

2024

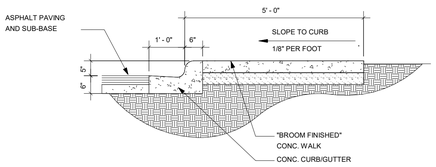
drawn by: EW/AB
checked by: CP
approved by: CP
QA/QC by: BM
project no.: F21-04643
drawing no.: L_IRR_DTL01_F2104643
date: 01.19.2024

SHEET
L491

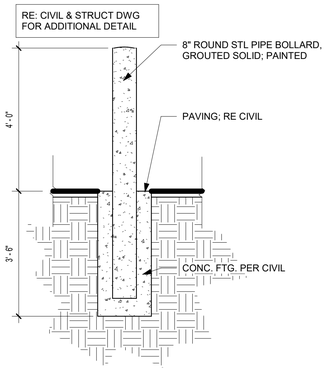
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DATE: Jan 19, 2024 8:45am XREFS: L_PTBLK_F2104643 L_PIRRG_F2104643
DET-TYPICAL-IRR_F2104643



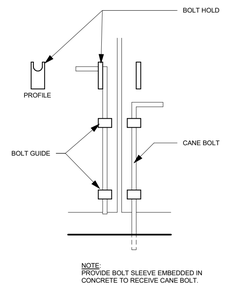
D3 POOL FENCE SECTION
1/2" = 1'-0"



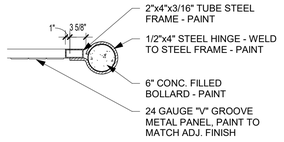
C4 SIDEWALK CURB DETAIL
1/2" = 1'-0"



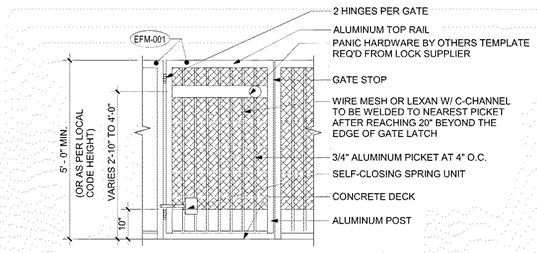
B3 SITE - BOLLARD - STEEL
1/2" = 1'-0"



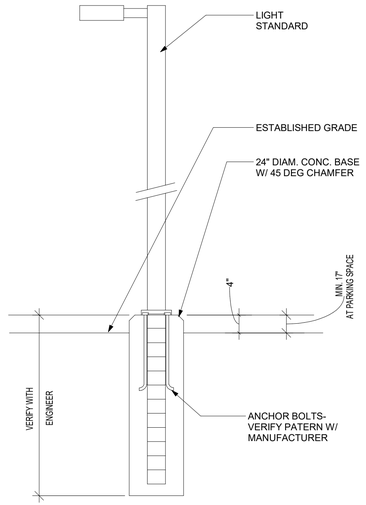
A4 SITE - CANE BOLT DETAIL
3" = 1'-0"



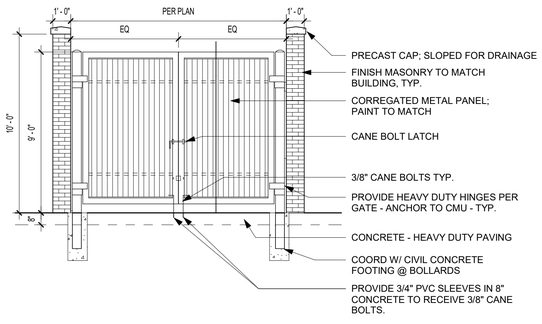
A3 TRASH GATE CROSS SECTION
3/4" = 1'-0"



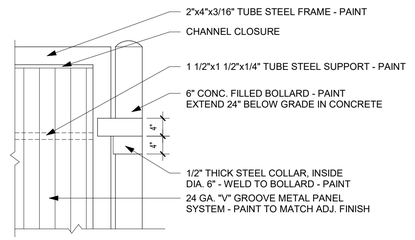
D2 POOL GATE ELEVATION
1/2" = 1'-0"



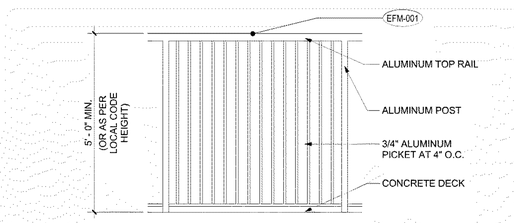
C2 SITE LIGHT POLE
3/4" = 1'-0"



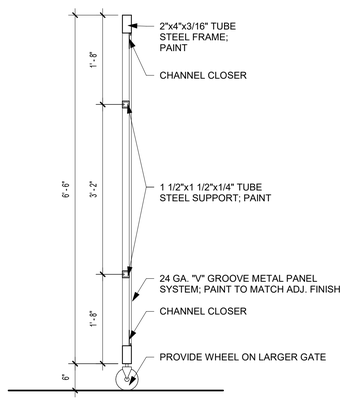
B2 ENCLOSURE FRONT ELEVATION
1/4" = 1'-0"



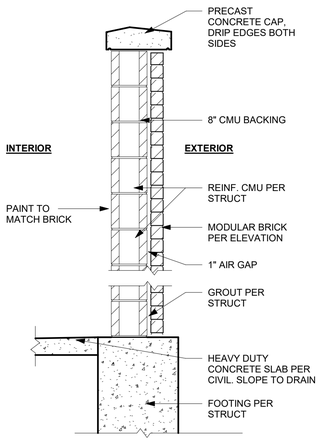
A2 TRASH GATE DETAIL
3/4" = 1'-0"



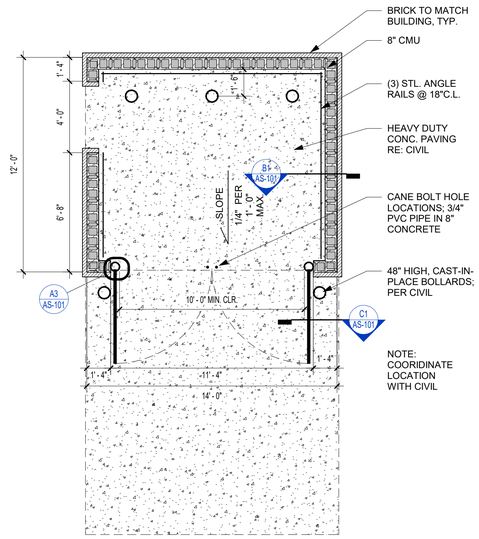
D1 POOL FENCE ELEVATION
1/2" = 1'-0"



C1 TRASH GATE SECTION
3/4" = 1'-0"



B1 SITE - ENCLOSURE - CMU - WALL SECTION
3/4" = 1'-0"



A1 SINGLE DUMPSTER TRASH ENCLOSURE PLAN
1/4" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ARCHITECTURAL SITE AMENITIES

PROJECT NUMBER: 23098

SHEET NUMBER:
AS-101

1/25/2024 8:51:14 AM
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REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

- PARTIAL HEIGHT PARTITION
- NON-RATED PARTITION; SEE ASSEMBLIES
- 1 HR RATED PARTITION; SEE ASSEMBLIES
- 2 HR RATED PARTITION; SEE ASSEMBLIES
- A1 — WINDOW TYPE; SEE WINDOW SCHEDULE
- 101 — DOOR TYPE; SEE DOOR SCHEDULE
- P7 — PARTITION TYPE; SEE ASSEMBLIES
- 6' - 0" — FRAMING DIMENSIONS
- 6' - 0" LAYOUT — LAYOUT LINE DIMENSIONS
- HEARING/VISIBILITY
- ADA/ACCESSIBLE UNITS

KEYNOTE LEGEND

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FIRST FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-101

1 1ST FLOOR PLAN
3/32" = 1'-0"

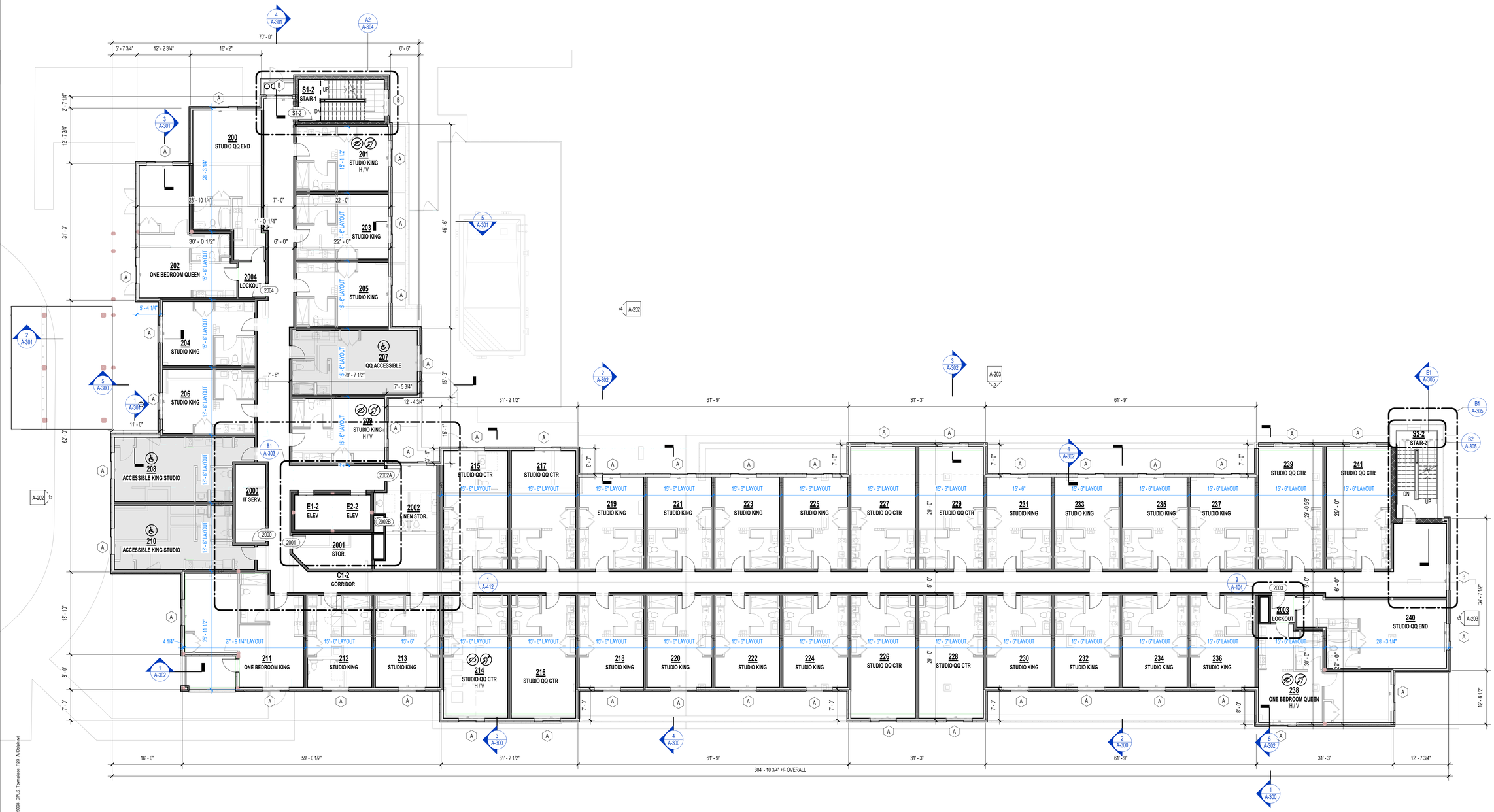
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REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-101 FOR PLAN LEGEND

KEYNOTE LEGEND

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2 01/19/2024 Addendum #2



1 SECOND FLOOR PLAN
3/32" = 1'-0"

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SHEET TITLE
SECOND FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-102

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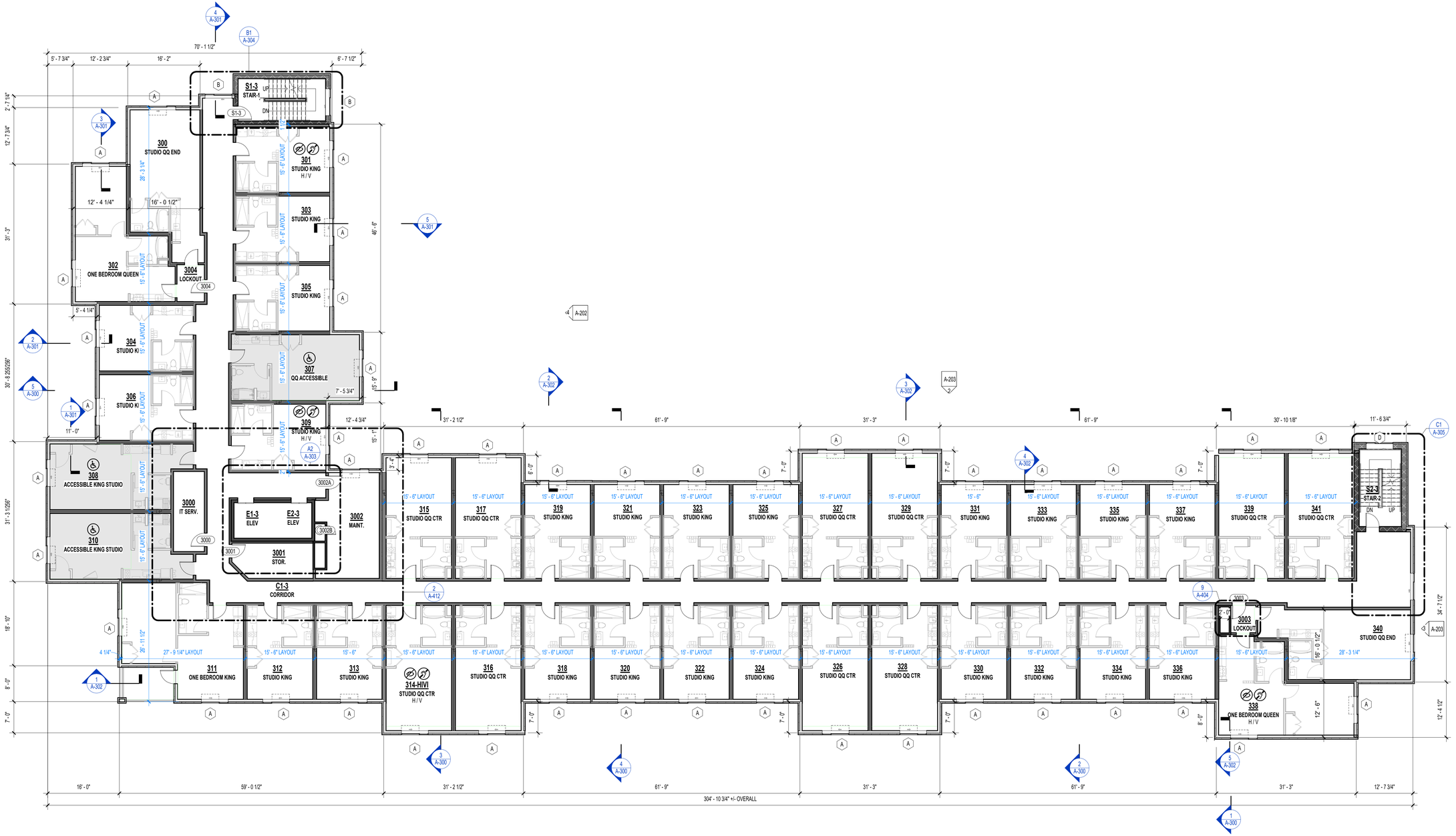
VERIFY SHEET #'S

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-101 FOR PLAN LEGEND

KEYNOTE LEGEND

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2



3" 12" 6" 24"

N

1 THIRD FLOOR PLAN
3/32" = 1'-0"

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TOWNEPLACE SUITES

2
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SHEET TITLE
THIRD FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-103

1/25/2024 8:52:27 AM
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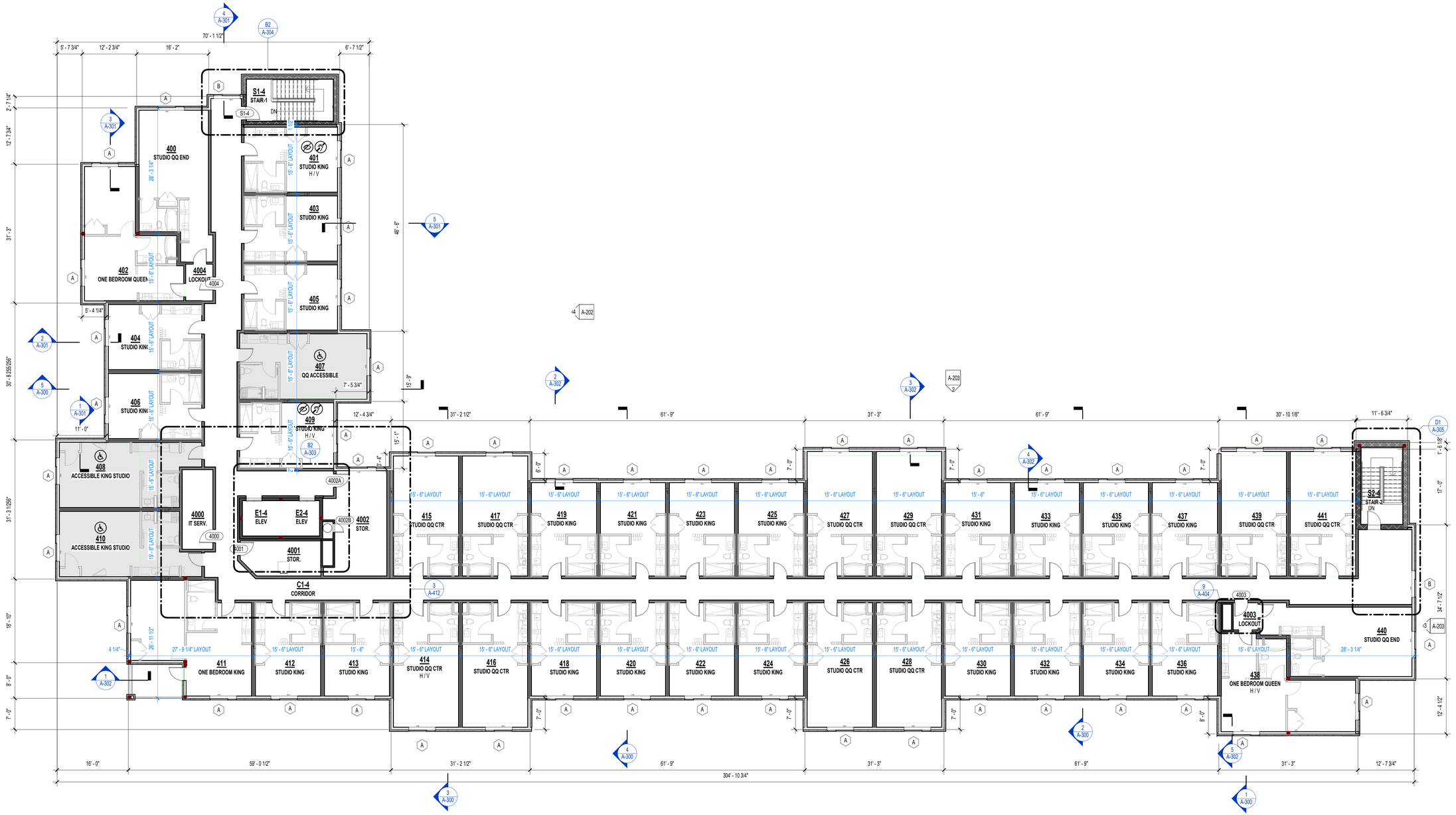
VERIFY SHEET #'S

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-101 FOR PLAN LEGEND

KEYNOTE LEGEND

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2



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TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FOURTH FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-104

1 FOURTH FLOOR PLAN
3/32" = 1'-0"

1/20/2024 4:55:22 AM
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Zone A					Zone B				
AREA TO BE VENTED				**866 S.F.**	**AREA TO BE VENTED**				**1360 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(866 S.F. x 144) / 300 =		**416 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(1360 S.F. x 144) / 300 =		**653 SQ.IN.**
HIGH ROOF VENTING	=	416 SQ.IN. x **1** =		416 SQ.IN.	HIGH ROOF VENTING	=	653 SQ.IN. x **1** =		653 SQ.IN.
LOW ROOF VENTING	=	416 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	653 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**416 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**653 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**762 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(2)** Exhaust Vent	@	254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**508 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**762 SQ.IN. PROVIDED**

Zone C					Zone D				
AREA TO BE VENTED				**763 S.F.**	**AREA TO BE VENTED**				**915 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(763 S.F. x 144) / 300 =		**366 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(915 S.F. x 144) / 300 =		**439 SQ.IN.**
HIGH ROOF VENTING	=	366 SQ.IN. x **1** =		366 SQ.IN.	HIGH ROOF VENTING	=	439 SQ.IN. x **1** =		439 SQ.IN.
LOW ROOF VENTING	=	366 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	439 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**366 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**439 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**508 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**508 SQ.IN. PROVIDED**

Zone E					Zone F				
AREA TO BE VENTED				**1228 S.F.**	**AREA TO BE VENTED**				**975 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(1228 S.F. x 144) / 300 =		**589 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(975 S.F. x 144) / 300 =		**468 SQ.IN.**
HIGH ROOF VENTING	=	589 SQ.IN. x **1** =		589 SQ.IN.	HIGH ROOF VENTING	=	468 SQ.IN. x **1** =		468 SQ.IN.
LOW ROOF VENTING	=	589 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	468 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**589 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**468 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**762 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(2) Exhaust Vent	@	254 NFA =	508 SQ.IN./FT NFA		**(1)** Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**762 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**508 SQ.IN. PROVIDED**

Zone G					Zone H				
AREA TO BE VENTED				**743 S.F.**	**AREA TO BE VENTED**				**815 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(743 S.F. x 144) / 300 =		**357 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(815 S.F. x 144) / 300 =		**391 SQ.IN.**
HIGH ROOF VENTING	=	357 SQ.IN. x **1** =		357 SQ.IN.	HIGH ROOF VENTING	=	391 SQ.IN. x **1** =		391 SQ.IN.
LOW ROOF VENTING	=	357 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	391 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**357 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**391 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**508 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**508 SQ.IN. PROVIDED**

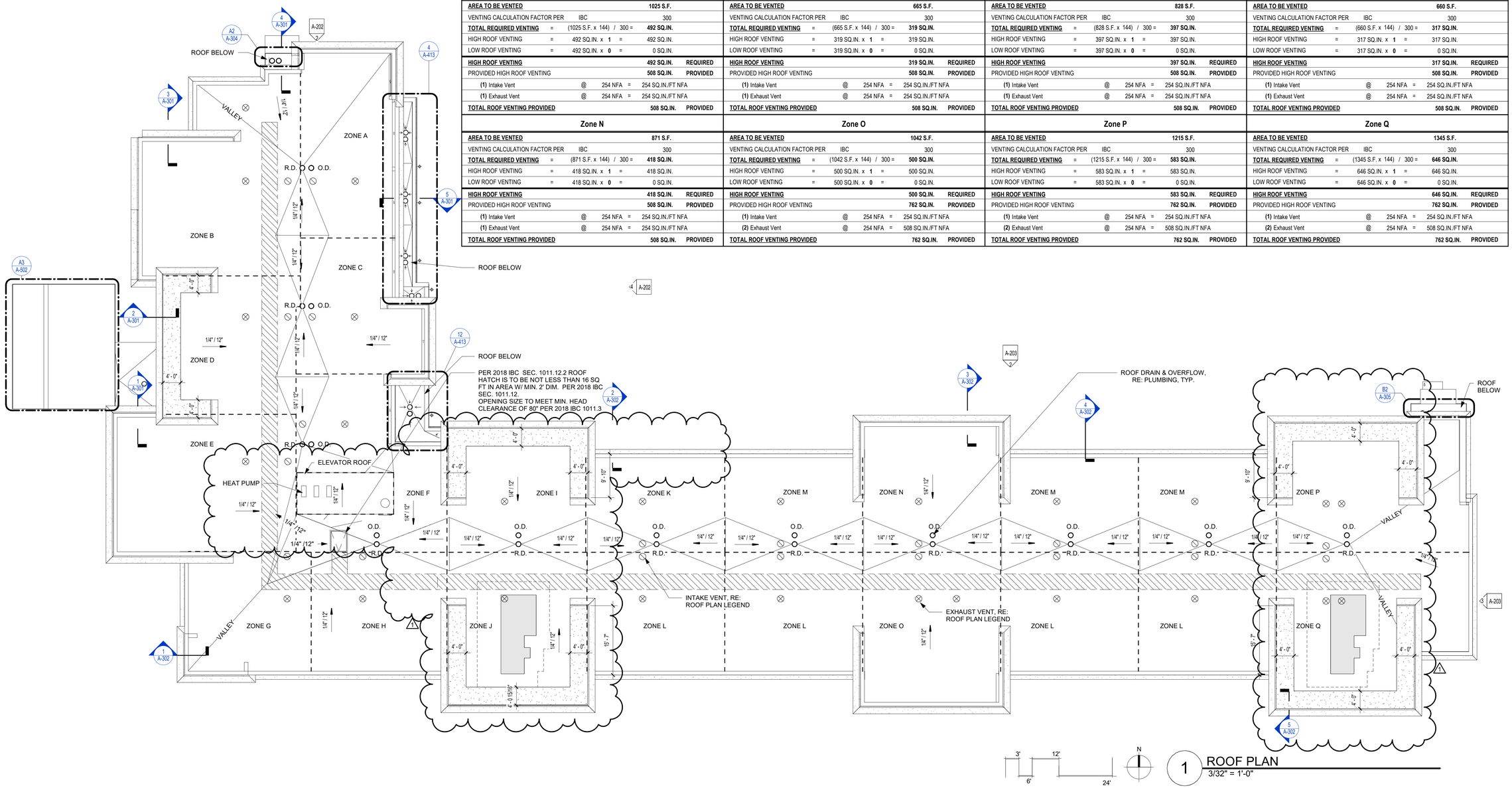
Zone I				
AREA TO BE VENTED				**849 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(849 S.F. x 144) / 300 =		**408 SQ.IN.**
HIGH ROOF VENTING	=	408 SQ.IN. x **1** =		408 SQ.IN.
LOW ROOF VENTING	=	408 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**408 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**508 SQ.IN. PROVIDED**

Zone J					Zone K				
AREA TO BE VENTED				**1025 S.F.**	**AREA TO BE VENTED**				**665 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(1025 S.F. x 144) / 300 =		**492 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(665 S.F. x 144) / 300 =		**319 SQ.IN.**
HIGH ROOF VENTING	=	492 SQ.IN. x **1** =		492 SQ.IN.	HIGH ROOF VENTING	=	319 SQ.IN. x **1** =		319 SQ.IN.
LOW ROOF VENTING	=	492 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	319 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**492 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**319 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**508 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**508 SQ.IN. PROVIDED**

Zone L					Zone M				
AREA TO BE VENTED				**828 S.F.**	**AREA TO BE VENTED**				**660 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(828 S.F. x 144) / 300 =		**397 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(660 S.F. x 144) / 300 =		**317 SQ.IN.**
HIGH ROOF VENTING	=	397 SQ.IN. x **1** =		397 SQ.IN.	HIGH ROOF VENTING	=	317 SQ.IN. x **1** =		317 SQ.IN.
LOW ROOF VENTING	=	397 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	317 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**397 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**317 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**508 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**508 SQ.IN. PROVIDED**

Zone N					Zone O				
AREA TO BE VENTED				**871 S.F.**	**AREA TO BE VENTED**				**1042 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(871 S.F. x 144) / 300 =		**418 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(1042 S.F. x 144) / 300 =		**500 SQ.IN.**
HIGH ROOF VENTING	=	418 SQ.IN. x **1** =		418 SQ.IN.	HIGH ROOF VENTING	=	500 SQ.IN. x **1** =		500 SQ.IN.
LOW ROOF VENTING	=	418 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	500 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**418 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**500 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**508 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**762 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(2)** Exhaust Vent	@	254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**508 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**762 SQ.IN. PROVIDED**

Zone P					Zone Q				
AREA TO BE VENTED				**1215 S.F.**	**AREA TO BE VENTED**				**1345 S.F.**
VENTING CALCULATION FACTOR PER	IBC			300	VENTING CALCULATION FACTOR PER	IBC			300
TOTAL REQUIRED VENTING	=	(1215 S.F. x 144) / 300 =		**583 SQ.IN.**	**TOTAL REQUIRED VENTING**	=	(1345 S.F. x 144) / 300 =		**646 SQ.IN.**
HIGH ROOF VENTING	=	583 SQ.IN. x **1** =		583 SQ.IN.	HIGH ROOF VENTING	=	646 SQ.IN. x **1** =		646 SQ.IN.
LOW ROOF VENTING	=	583 SQ.IN. x **0** =		0 SQ.IN.	LOW ROOF VENTING	=	646 SQ.IN. x **0** =		0 SQ.IN.
HIGH ROOF VENTING				**583 SQ.IN. REQUIRED**	**HIGH ROOF VENTING**				**646 SQ.IN. REQUIRED**
PROVIDED HIGH ROOF VENTING				**762 SQ.IN. PROVIDED**	PROVIDED HIGH ROOF VENTING				**762 SQ.IN. PROVIDED**
(1) Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA		**(1)** Intake Vent	@	254 NFA =	254 SQ.IN./FT NFA	
(2) Exhaust Vent	@	254 NFA =	508 SQ.IN./FT NFA		**(2)** Exhaust Vent	@	254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED				**762 SQ.IN. PROVIDED**	**TOTAL ROOF VENTING PROVIDED**				**762 SQ.IN. PROVIDED**



1 ROOF PLAN
3/32" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES

ROOF PLAN LEGEND

INTAKE VENTS

EXHAUST VENTS

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TOWNEPLACE SUITES
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SHEET TITLE
ROOF PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

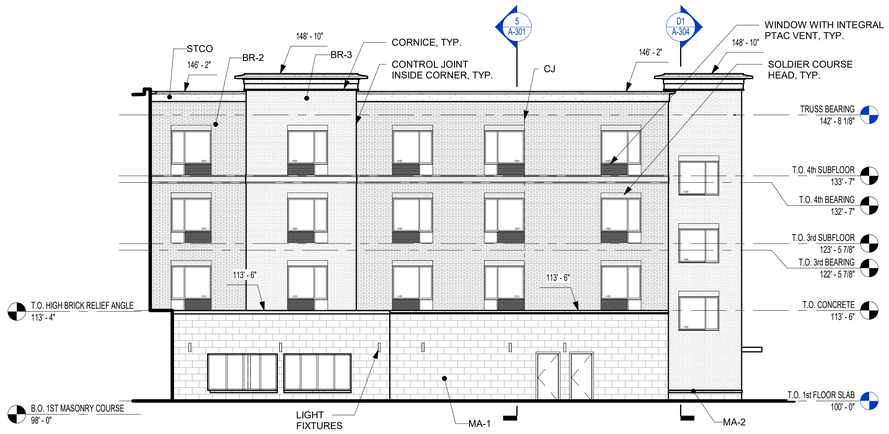
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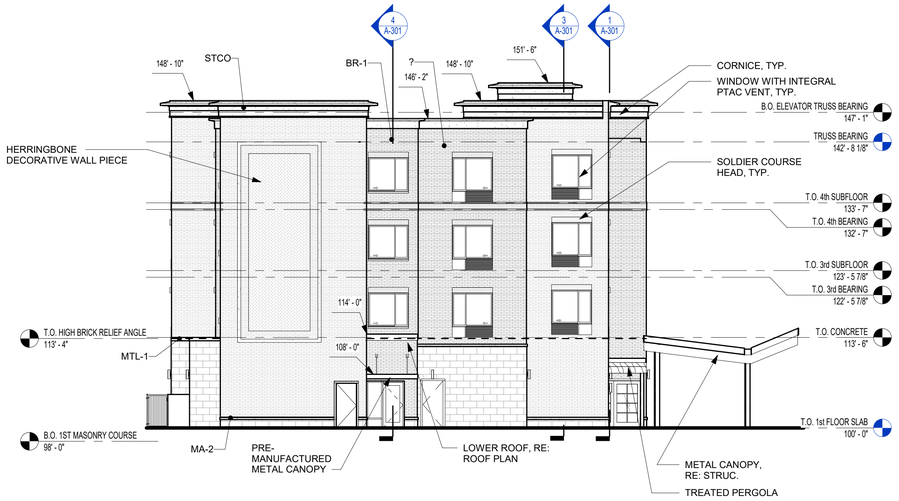
REFERENCE G-003 FOR GENERAL NOTES

MATERIAL LEGEND

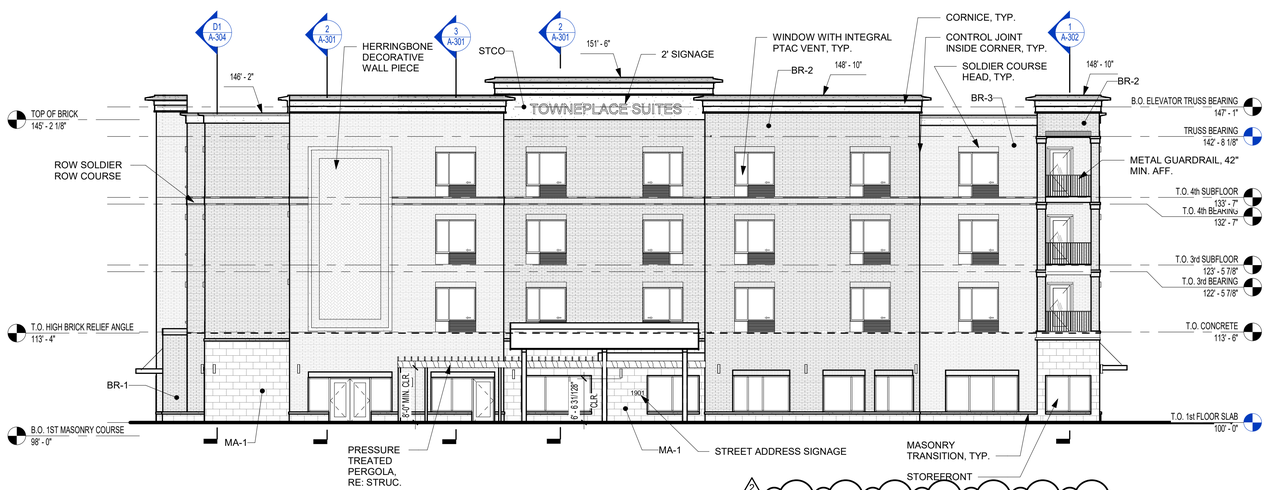
- MA-1 - STONE - ROCK FACE
- MA-2 - STONE SILL - SMOOTH FACE
- BR-1 - BRICK - RED
- BR-2 - BRICK - DARK RED
- BR-3 - BRICK - GREY
- MTL-1 - METAL - DARK BRONZE
- STCO - STUCCO - COLOR TO MATCH STONE
- BRICK RELIEF ANGLE LOCATION



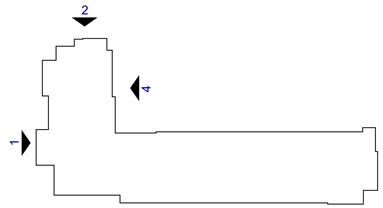
4 EAST ELEVATION (NORTH WING)
3/32" = 1'-0"



2 NORTH ELEVATION (NORTH WING)
3/32" = 1'-0"



2 1 WEST ELEVATION - FRONT
3/32" = 1'-0"



KEY PLAN

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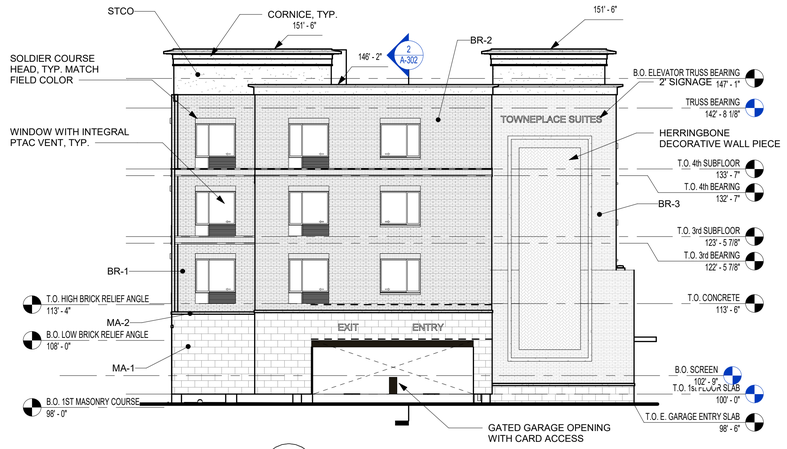
SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER: 23098

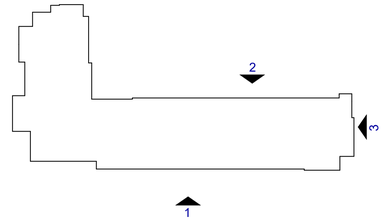
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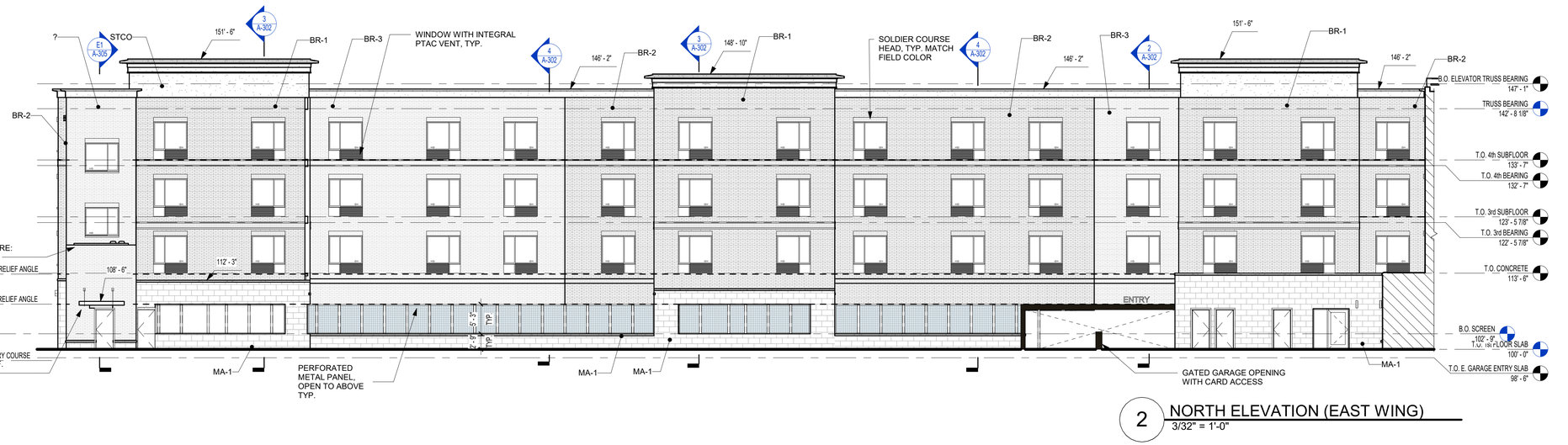
REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-200 FOR MATERIALS LEGEND



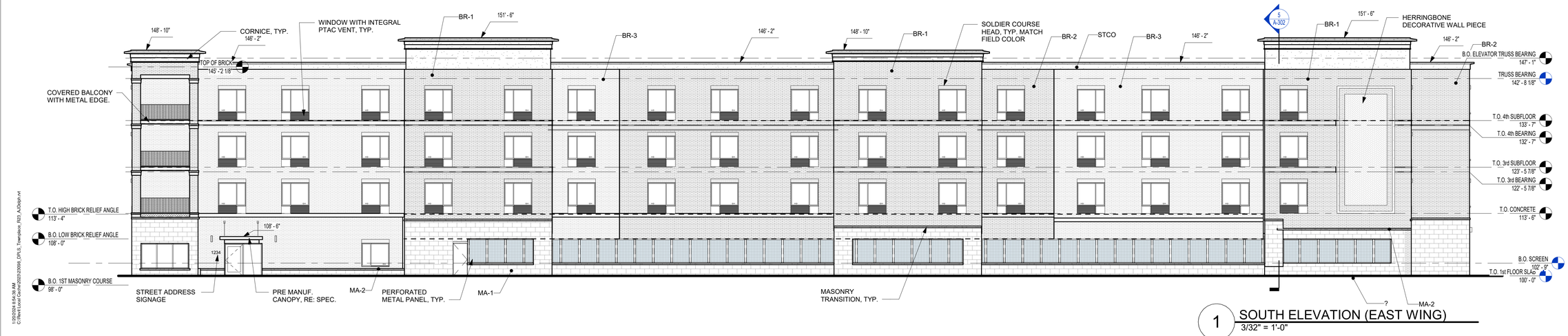
3 EAST ELEVATION (EAST WING)
3/32" = 1'-0"



KEY PLAN



2 NORTH ELEVATION (EAST WING)
3/32" = 1'-0"



1 SOUTH ELEVATION (EAST WING)
3/32" = 1'-0"

1/20/2024 8:54:39 AM
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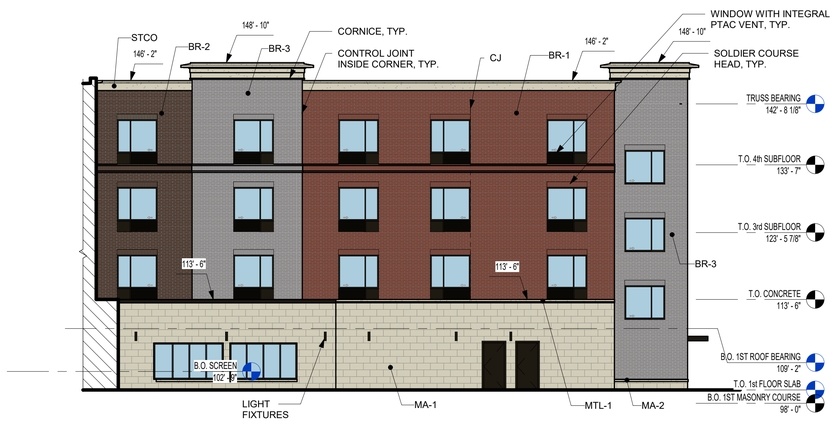
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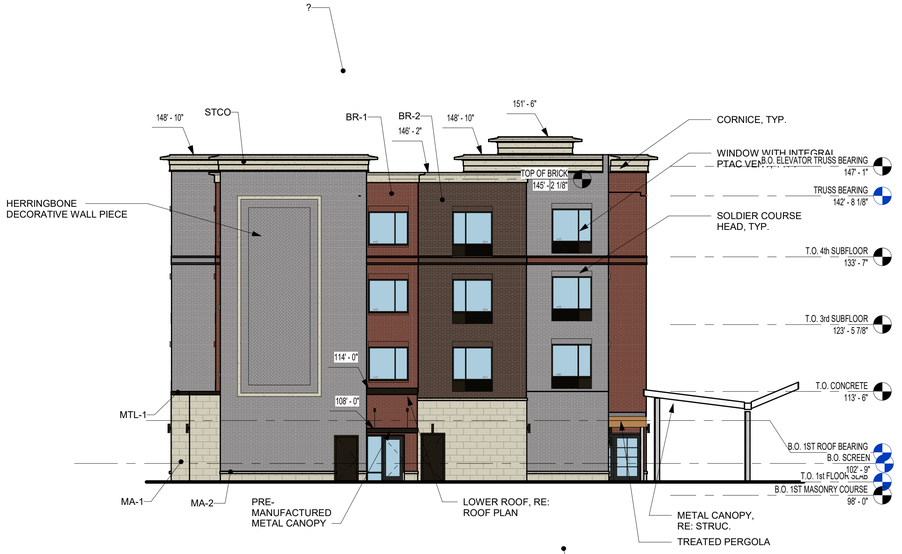
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EXTERIOR ELEVATIONS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-201



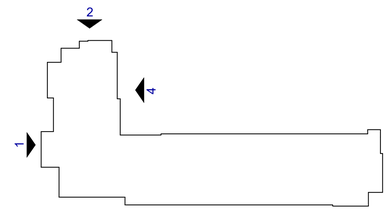
4 EAST ELEVATION (NORTH WING)
3/32" = 1'-0"



2 NORTH ELEVATION (NORTH WING)
3/32" = 1'-0"



1 WEST ELEVATION - FRONT
3/32" = 1'-0"



KEY PLAN

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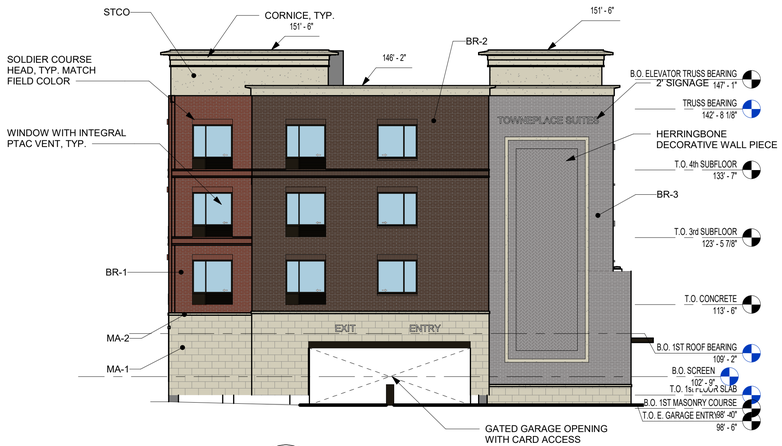
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1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
EXTERIOR COLOR ELEVATIONS

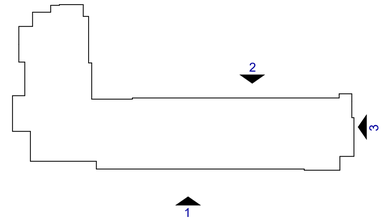
PROJECT NUMBER: 23098

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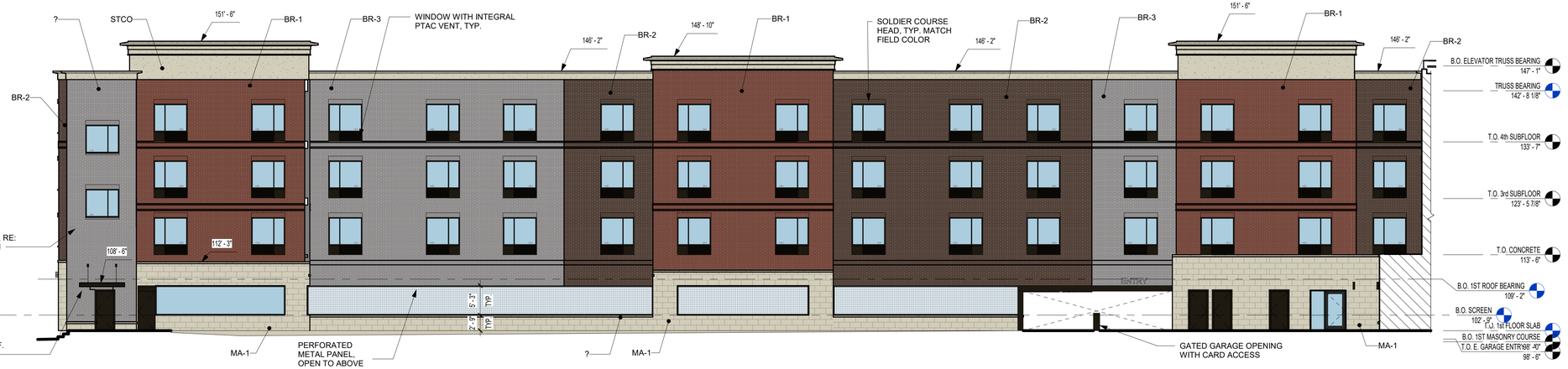
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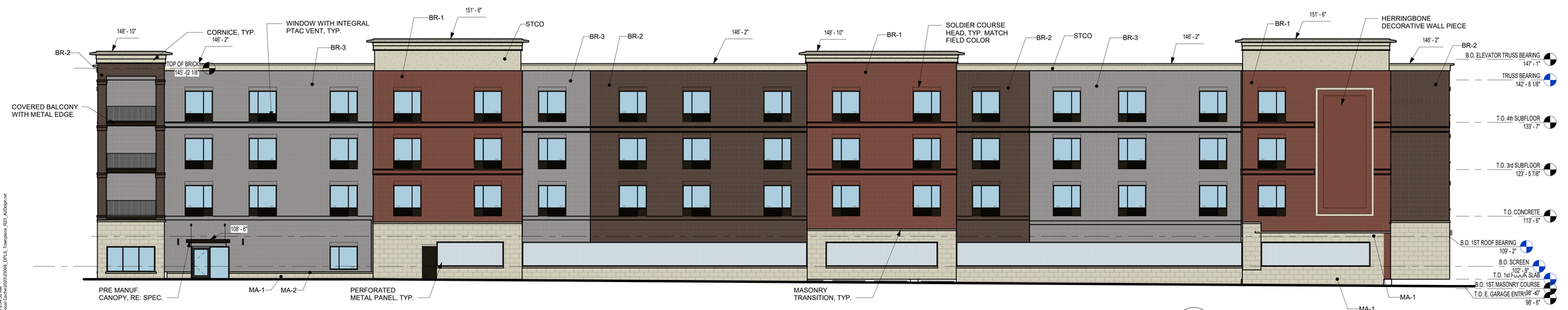
3 EAST ELEVATION (EAST WING)
3/32" = 1'-0"



KEY PLAN



2 NORTH ELEVATION (EAST WING)
3/32" = 1'-0"



1 SOUTH ELEVATION (EAST WING)
3/32" = 1'-0"

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SHEET TITLE
EXTERIOR COLOR ELEVATIONS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-203
1

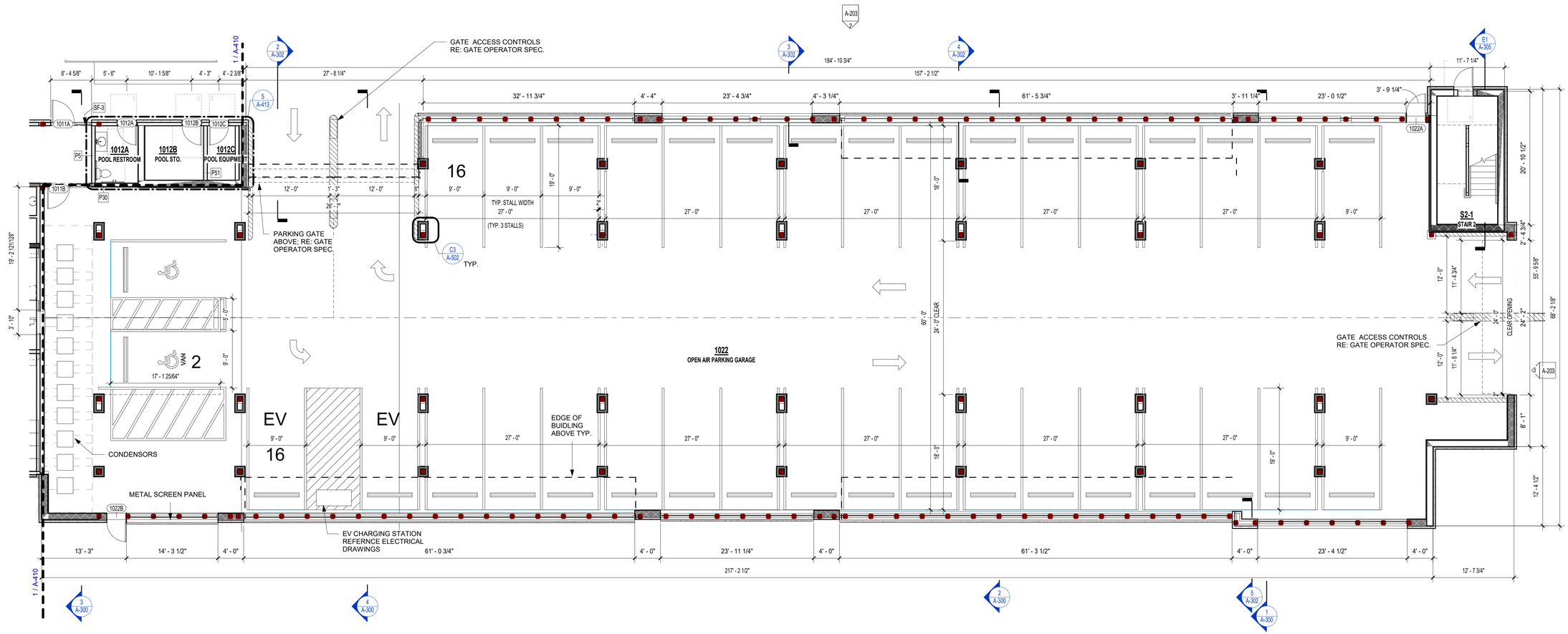
REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-410 FOR PLAN LEGEND

KEYNOTE LEGEND

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1 1ST FLOOR PLAN - ZONE B - GARAGE PLAN
1/8" = 1'-0"

2' 8' 4' 16'

N

TOWNEPLACE SUITES
2
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ENLARGED 1ST FLOOR PLAN - GARAGE PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:
1
A-411

1/20/2024 9:05:04 AM
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SITE PLAN SYMBOL LEGEND

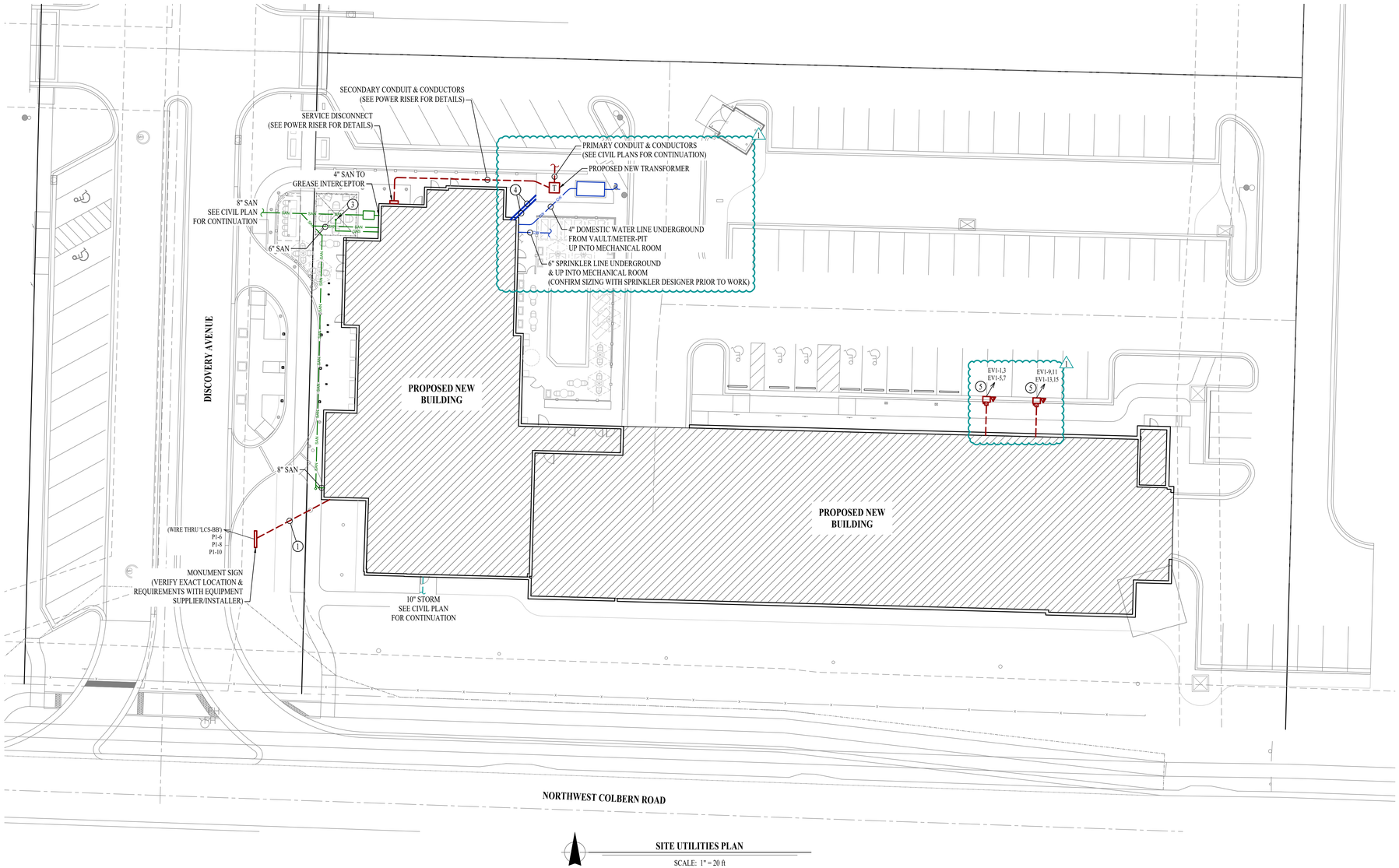
- SAN — SAN — SANITARY SEWER PIPING
- CW — CW — COLD WATER LINE
- M — WATER METER
- VALVE
- GAS — GAS — GAS LINE
- G — GAS METER
- TIE INTO EXISTING
- ELECTRIC

SITE UTILITIES PLAN GENERAL NOTES:

1. REFER TO CIVIL PLANS FOR EXACT UTILITY LOCATIONS, CONNECTIONS, DETAILS, ETC.

SITE UTILITIES PLAN KEY NOTES:

1. (1) 2" CONDUIT WITH (6) #10 CU. & (3) #10 CU. EQ. GRD.
2. STUB UP PRIMARY CONDUIT FOR FUTURE EXTENSION TO NEW TRANSFORMER FOR EV-CHARGING. COORDINATE WITH EVERGY.
3. TOTAL ESTIMATED LOAD AT GRILL/FIREPIT = 200kBTU. PLUMBING CONTRACTOR PROVIDE & INSTALL 120V ELECTRICALLY HELD (NORMALLY CLOSED) SOLENOID ON GAS LINE FOR EMERGENCY SHUT-OFF; COORDINATE WITH ELECTRICAL CONTRACTOR.
4. (2) 2" SLEEVES BELOW GRADE FROM MECHANICAL ROOM TO IRRIGATION METER FOR CONTROLS. COORDINATE WITH IRRIGATION CONTRACTOR.
5. PROVIDE & INSTALL LEVEL-2, DUAL-STATION, EV-CHARGING SYSTEM EQUAL TO JUICEBAR GEN-3 #JB3.0-402; COORDINATE EXACT LOCATION & REQUIREMENTS WITH OWNER.



SITE UTILITIES PLAN

SCALE: 1" = 20 ft

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573 - 234 - 4492 phone
www.j-squaredeng.com

J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
REVISION 1	12 / 22 / 2023

1

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

SITE UTILITIES PLAN

SHEET NUMBER

MEP2

SITE LIGHTING PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- PX-XX — CIRCUIT TAG
- X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- POLE LIGHT
- ARROW INDICATES FORWARD AIMING DIRECTION
- 1.1 — PHOTOMETRIC CALCULATIONS (IN FOOT-CANDLES)

LIGHTING PLAN GENERAL NOTES:

1. SITE PHOTOMETRIC VALUES SHOWN HAVE BEEN CALCULATED PER SPECIFIED LIGHT FIXTURES AT INDICATED MOUNTING HEIGHTS. ANY CHANGES OR ALTERATIONS TO LIGHTING LAYOUT SHOWN WILL REQUIRE RECALCULATING SITE PHOTOMETRICS AND WILL THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR / EQUIPMENT SUPPLIER.
2. PHOTOMETRIC CALCULATIONS SHOWN DO NOT INCLUDE EXISTING LIGHT FIXTURE(S), ONLY NEW POLE LIGHT FIXTURE(S) SHOWN.
3. SEE SHEET EL101 & EL111 FOR BUILDING MOUNTED EXTERIOR LIGHT FIXTURE CIRCUITING AND
4. ADDITIONAL DETAILS.

SITE LIGHTING PLAN KEY NOTES:

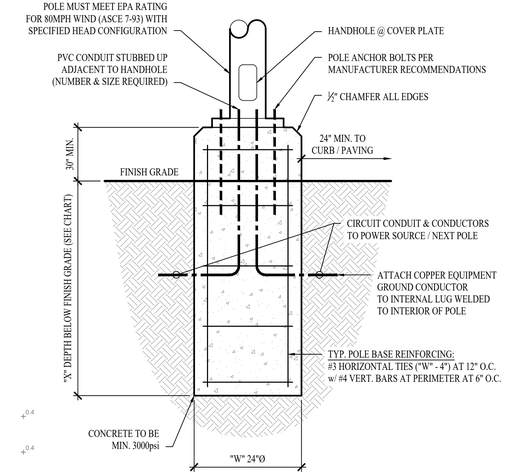
(1) 1" CONDUIT WITH (2) #10 CU. & (1) #10 CU. EQ. GRD.

SITE LIGHTING FIXTURE SCHEDULE

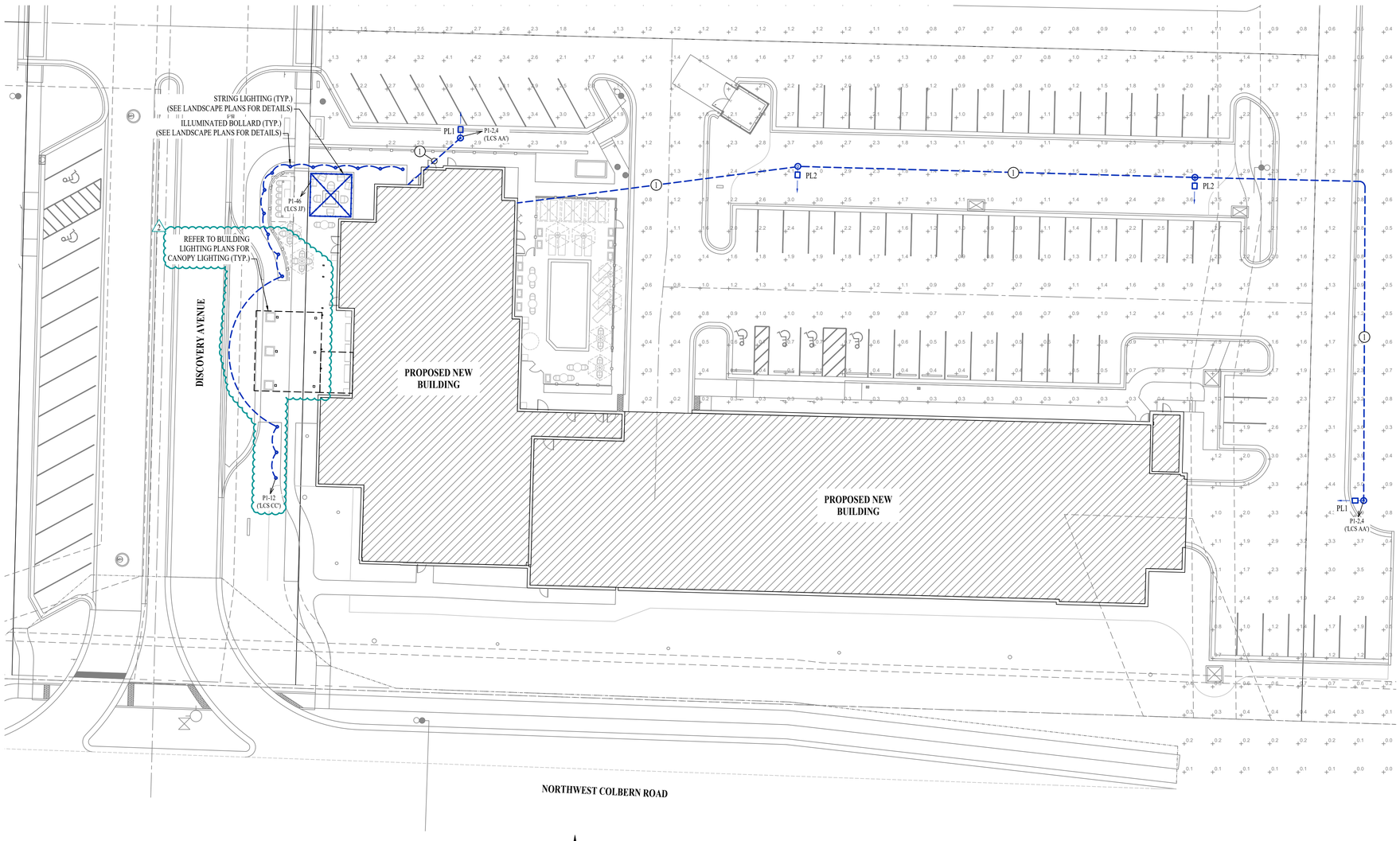
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
PL1	MCGRAW EDISON	PRV-XL-PA3B-740-U-T4W-HSS	POLE LIGHT	20' #SSS POLE ON 30" BASE	24,843	4000	70	208	234	WITH #MS/DIM-L40W MOTION SENSING DIMMING
PL2	MCGRAW EDISON	PRV-XL-PA3B-740-U-5WQ	POLE LIGHT	20' #SSS POLE ON 30" BASE	31,559	4000	70	208	234	WITH #MS/DIM-L40W MOTION SENSING DIMMING

NOTES:
1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION

POLE HEIGHT	"X" DEPTH
10ft - 14ft	4'-6"
15ft - 20ft	6'-0"
21ft - 25ft	7'-0"
26ft - 30ft	8'-0"



TYP. LIGHT POLE DETAIL - 1



SITE LIGHTING PLAN
SCALE: 1" = 20 ft

JAMES P. WATSON — STATE OF MISSOURI — NUMBER PE-2015017071 — PROFESSIONAL ENGINEER

James Watson, P.E. January 19, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
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Columbia, Missouri 65201
573 - 234 - 4492 phone
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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
REVISION 1	12 / 22 / 2023
REVISION 2	01 / 19 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

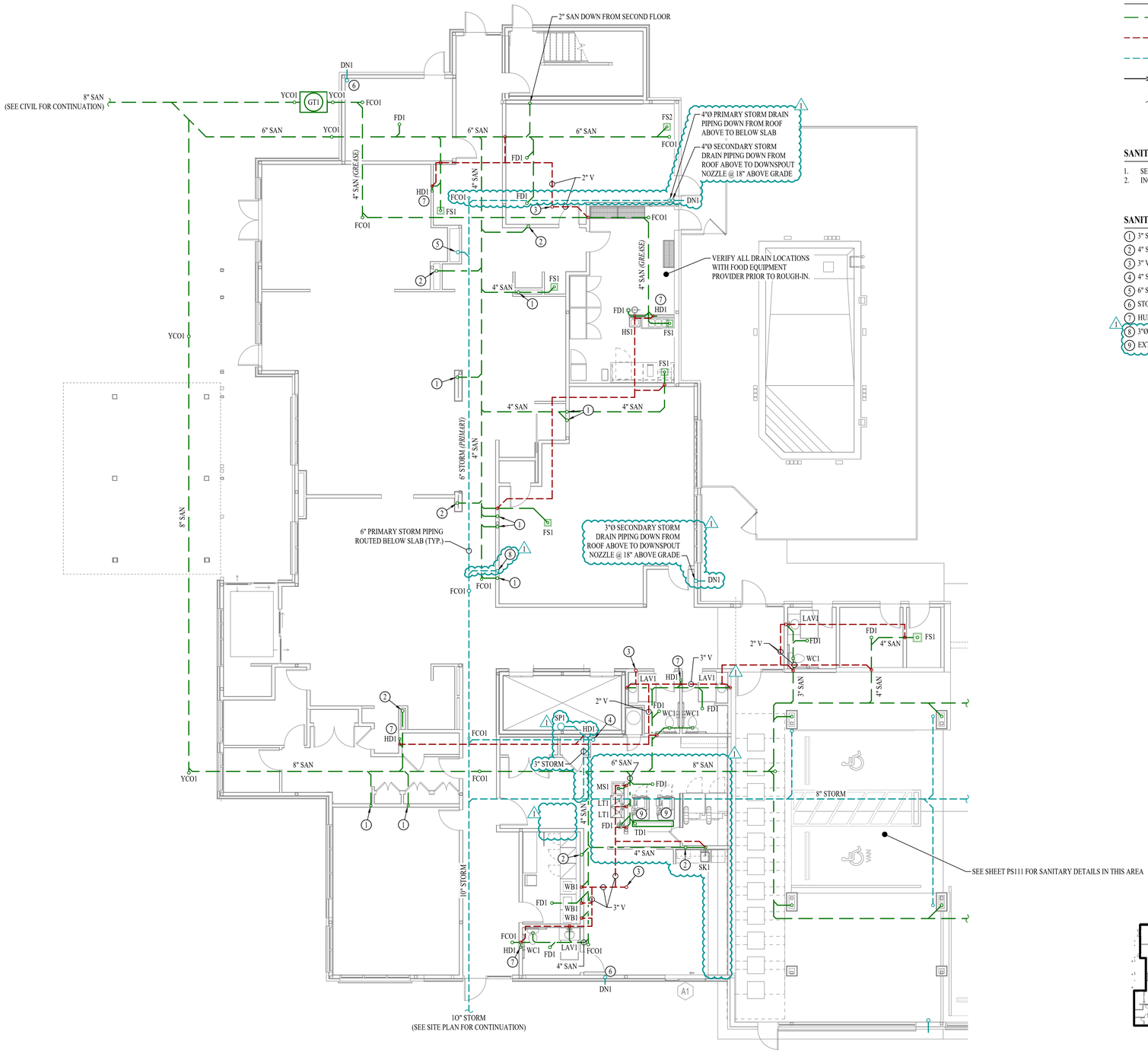
AHJ APPROVAL STAMP

SHEET TITLE

SITE LIGHTING PLAN

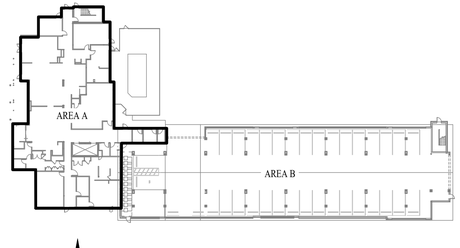
SHEET NUMBER

MEP3



SANITARY SEWER PLAN - 1ST FLOOR - AREA A

SCALE: 1/8" = 1'-0"



KEY PLAN

SCALE: 1" = 50 ft

SANITARY SEWER PLAN SYMBOL LEGEND

- SANITARY SEWER PIPING
- VENT PIPING
- STORM PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. INCLUDE ACCESSIBLE CLEANOUT WITH ACCESS COVER AT BASE OF EACH SANITARY STACK.

SANITARY SEWER PLAN KEY NOTES:

1. 3" SAN DOWN FROM SECOND FLOOR.
2. 4" SAN DOWN FROM SECOND FLOOR.
3. 3" VENT UP TO SECOND FLOOR.
4. 4" STORM DRAIN PIPING DOWN FROM SECOND FLOOR.
5. 6" STORM DRAIN PIPING DOWN FROM SECOND FLOOR.
6. STORM PIPING DOWN FROM SECOND FLOOR TO DOWNSPOUT NOZZLE AT 18" ABOVE GRADE.
7. HUB DRAIN IN WALL WITH ACCESS PANEL FOR CONDENSATE FROM GUEST ROOM PTACS.
8. 3"Ø STORM DRAIN PIPING DOWN FROM SECOND FLOOR.
9. EXTEND FULL-SIZE DRAIN FROM COMMERCIAL CLOTHES WASHER TO OVER LAUNDRY TROUGH.

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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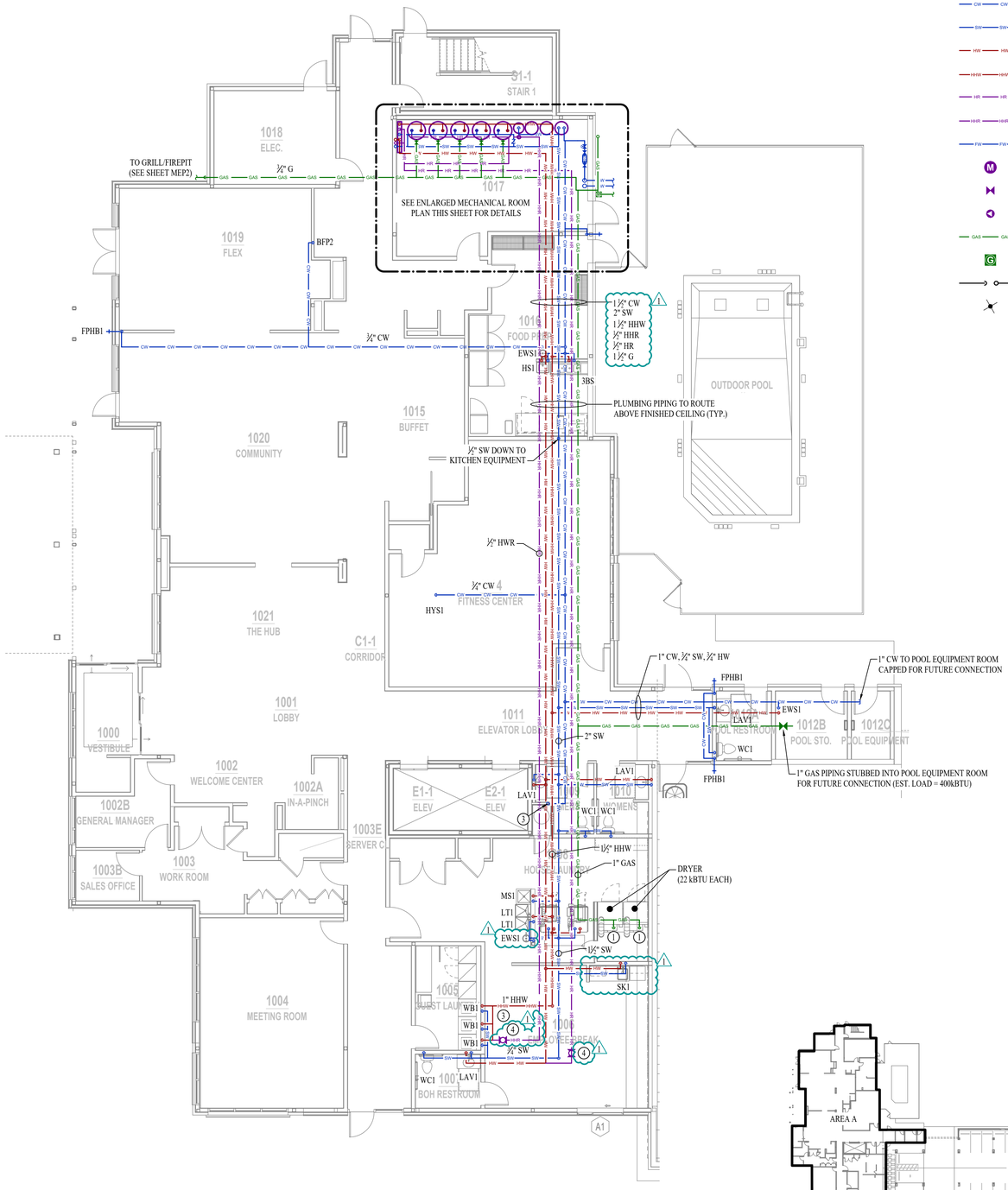
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SHEET TITLE

SANITARY SEWER PLAN - 1ST FLOOR - AREA A

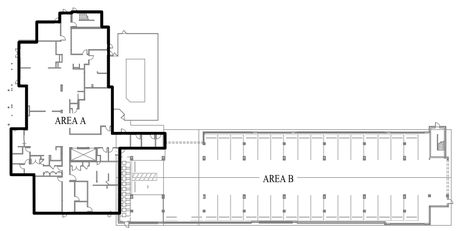
SHEET NUMBER

PS101



WATER & GAS PLAN - 1ST FLOOR - AREA A

SCALE: 1/8" = 1'-0"



KEY PLAN

SCALE: 1" = 50 ft

WATER & GAS PLAN SYMBOL LEGEND

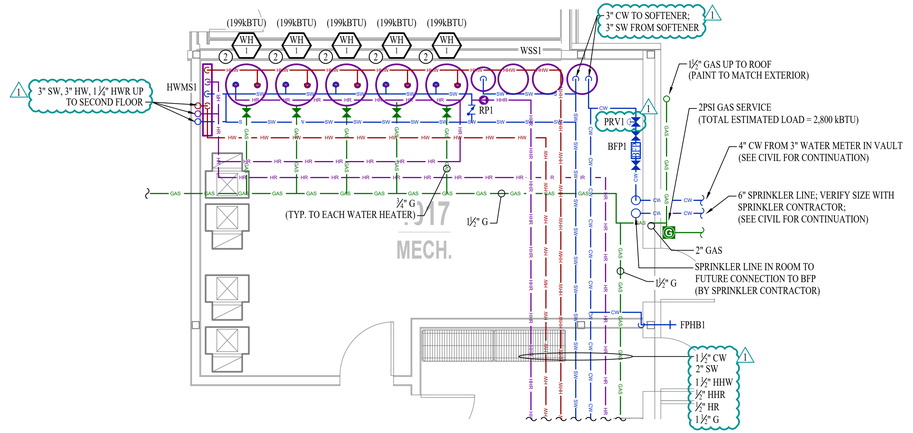
- COLD WATER LINE
- COLD SOFT WATER LINE
- HOT (120°F) WATER LINE
- HOT (140°F) WATER LINE
- HOT (120°) WATER RECIRCULATION LINE
- HOT (140°) WATER RECIRCULATION LINE
- FILTERED WATER LINE
- WATER METER
- VALVE
- PUMP
- GAS LINE
- GAS METER
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

WATER & GAS PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. PROVIDE & INSTALL 2PSI TO 11"W.C. VENTLESS REGULATOR & SHUT-OFF VALVE AT ALL GAS EQUIPMENT.
3. CALCULATED WATER DEMAND FOR THIS FACILITY IS 900 WSFU'S (APPROXIMATELY 180GPM)

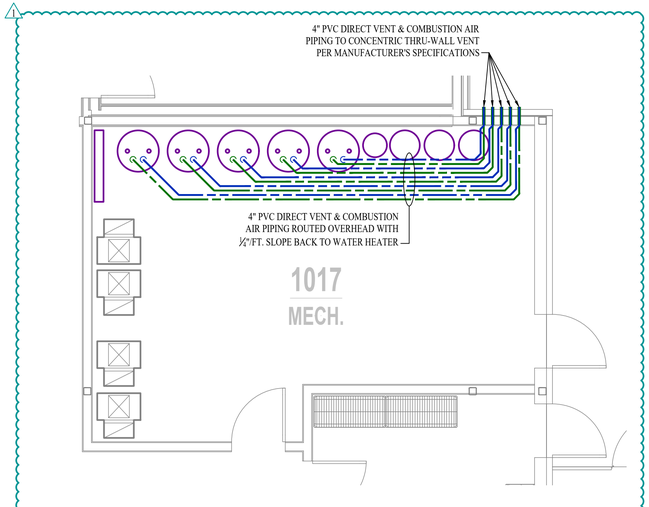
WATER & GAS PLAN KEY NOTES:

1. PROVIDE UNION, 3" MINIMUM DIRT LEG, SHUT-OFF VALVE, & PRESSURE REGULATOR IN GAS PIPING AT CONNECTION TO EQUIPMENT. VENT PRESSURE REGULATOR TO OUTSIDE AS REQUIRED. PROVIDE A UNION ON BOTH SIDES OF REGULATOR. REGULATOR MUST BE INSTALLED IN HORIZONTAL POSITION DOWNSTREAM OF DIRT LEG.
2. PROVIDE & INSTALL WATER HEATER VENT & COMBUSTION AIR TO EXTERIOR PER MANUFACTURER'S SPECIFICATIONS.
3. ½" CW UP TO ROOF HYDRANT(S) ON ROOF. (SEE SHEET MEP4 FOR HYDRANT LOCATIONS)
4. PROVIDE & INSTALL AUTOMATIC FLOW BALANCING VALVE EQUAL TO WATTS #LFIDROSET IN HWR LINE IN ACCESSIBLE LOCATION IN CORRIDOR; SET FLOW TO ½" GPM.



ENLARGED MECHANICAL ROOM PLAN

SCALE: 1/4" = 1'-0"



ENLARGED MECHANICAL ROOM PLAN
(WATER HEATER VENT ROUTING)

SCALE: 1/4" = 1'-0"

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WATER & GAS PLAN - 1ST FLOOR - AREA A

SHEET NUMBER

PW101