

SECTION 10, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO

SECTION 10, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER THE YARCO COMPANIES 7920 WARD PKWY KANSAS CITY, MISSOURI 64114 CONTACT: GRUBE, MIKE PHONE: 816.300.0640 FAX: 816.389.5640 EMAIL: MGRUBE@YARCO.COM	UTILITY SERVICE NUMBERS NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940 NAME: SPIRE (MGE) PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: KCP&L PHONE: 816-471-5275
ENGINEER OLSSON ASSOCIATES 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: NICHOLAS D. HEISER, P.E. PHONE: 816.587.4320	NAME: SPECTRUM (TWC) PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959
SURVEYOR OLSSON ASSOCIATES 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUBEUSH PHONE: 816.587.4320	



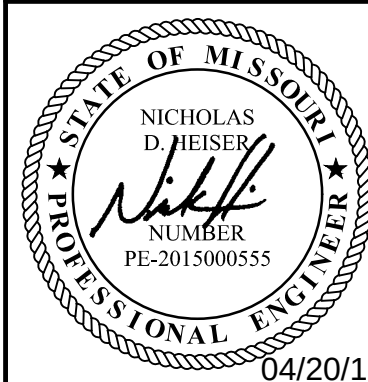
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PROPERTY DESCRIPTION:

LOT 2, MINOR PLAT OF FASCINATION AT NEW LONGVIEW, LOTS 1 & 2, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI. CONTAINING 6.76 ACRES MORE OR LESS.

BENCHMARK

THE STATION IS A KC METRO DISK SET IN CONCRETE AND FLUSH WITH THE GROUND. THE STATION IS TAMPED JA-147, 2000.
STATION JA-148

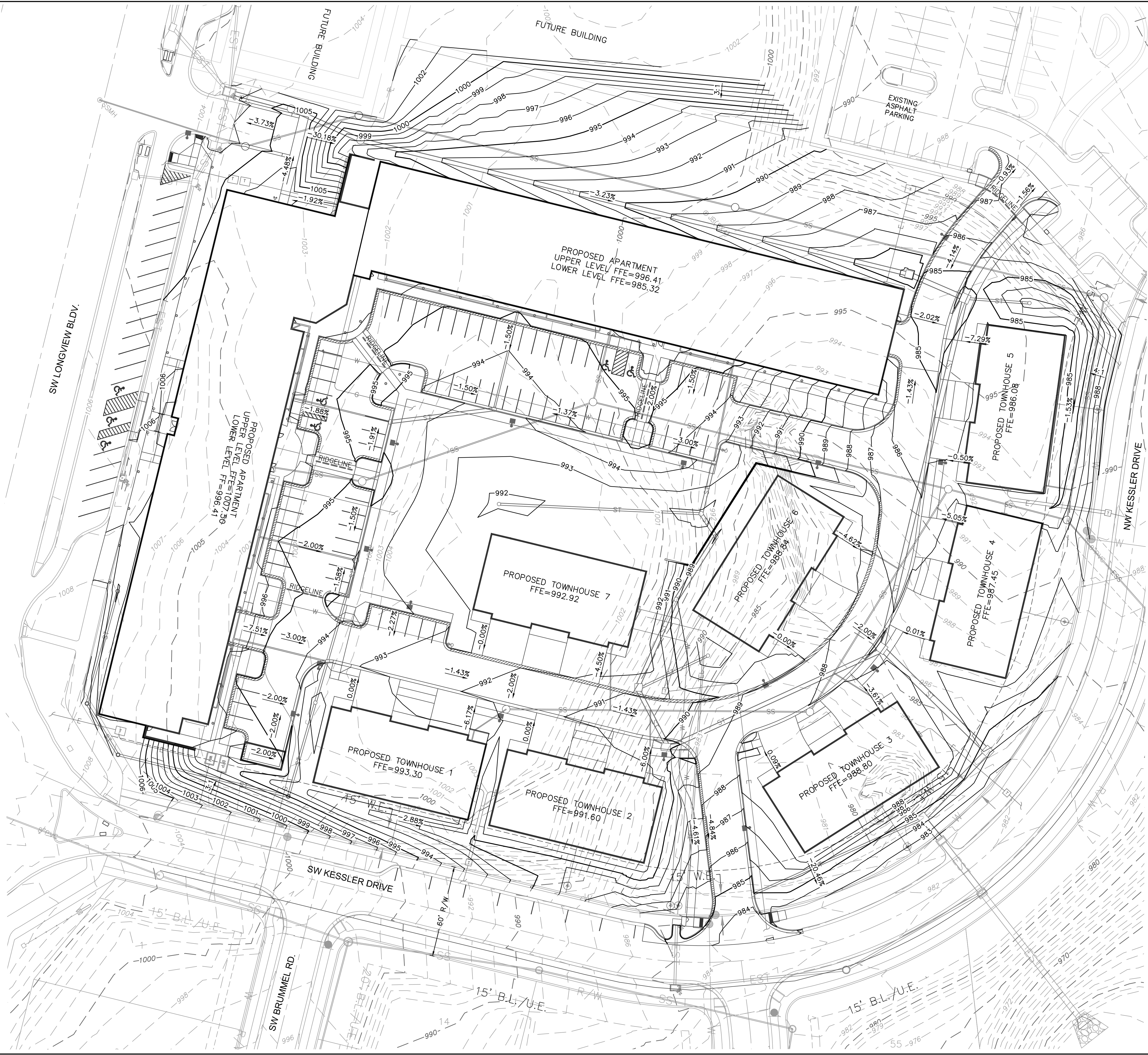
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TITLE SHEET DEVELOPMENT PLANS	
KESSLER RIDGE APARMENTS	
LEE'S SUMMIT, MO	2018

drawn by: D.A.H.C.
checked by: N.D.H.
designed by: N.D.H.
QA/QC by: M.G.D.
project no.: 017-3697
date: 2018-04-20

SHEET
C100

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GENERAL NOTES:

1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND/ OR TESTING AGENCY. SOILS REMOVED DURING SITE STRIPPING SHOULD BE EVALUATED TO DETERMINE IF PORTIONS OF THE TOPSOIL STRATUM MAY BE UTILIZED AS STRUCTURAL FILL WITHIN PAVEMENT AREAS. ANY MATERIAL NOT DEEMED AS SUITABLE FILL MATERIAL BY THE GEOTECHNICAL ENGINEER AND/ OR TESTING AGENCY SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AT THEIR EXPENSE.
3. CONTRACTOR SHALL ADHERE TO THE SITE PREPARATION AND STRUCTURAL FILL RECOMMENDATIONS AS CALLED OUT IN THE GEOTECHNICAL REPORT AND ENGINEERING EVALUATION AS PROVIDED BY THE GEOTECHNICAL ENGINEER.
4. ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 9". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +3 PERCENT OF OPTIMUM MOISTURE CONTENT.

LEGEND	
-100-	EXISTING INDEX CONTOURS
-100-	EXISTING INTERMEDIATE CONTOURS
-100-	PROPOSED INDEX CONTOURS
-100-	PROPOSED INTERMEDIATE CONTOURS

EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
SITE	66,985	8,066

EARTHWORK QUANTITIES NOTES:

1. EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
2. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.

OLSSON[®]
ASSOCIATES

NICHOLAS D. HEISER
PROFESSIONAL ENGINEER
NUMBER
PE-2015000555

04/20/18

GRADING PLAN
DEVELOPMENT PLANS
KESSLER RIDGE APARTMENTS

LEE'S SUMMIT, MO

2018

drawn by: D.A.H.
checked by: N.D.H.
designed by: N.D.H.
QA/QC by: M.G.D.
project no.: 017-3697
date: 2018-04-20

SHEET
C103

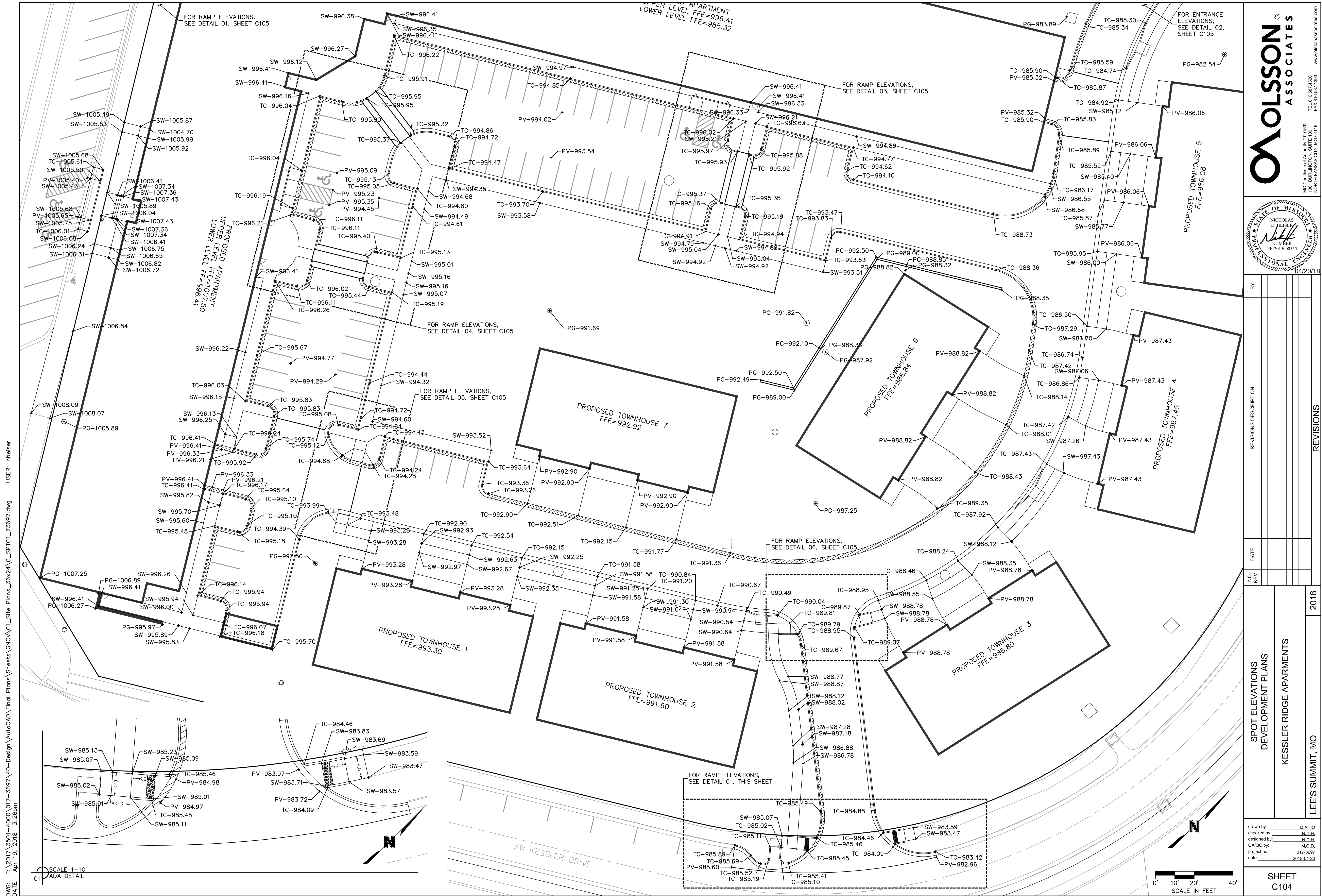
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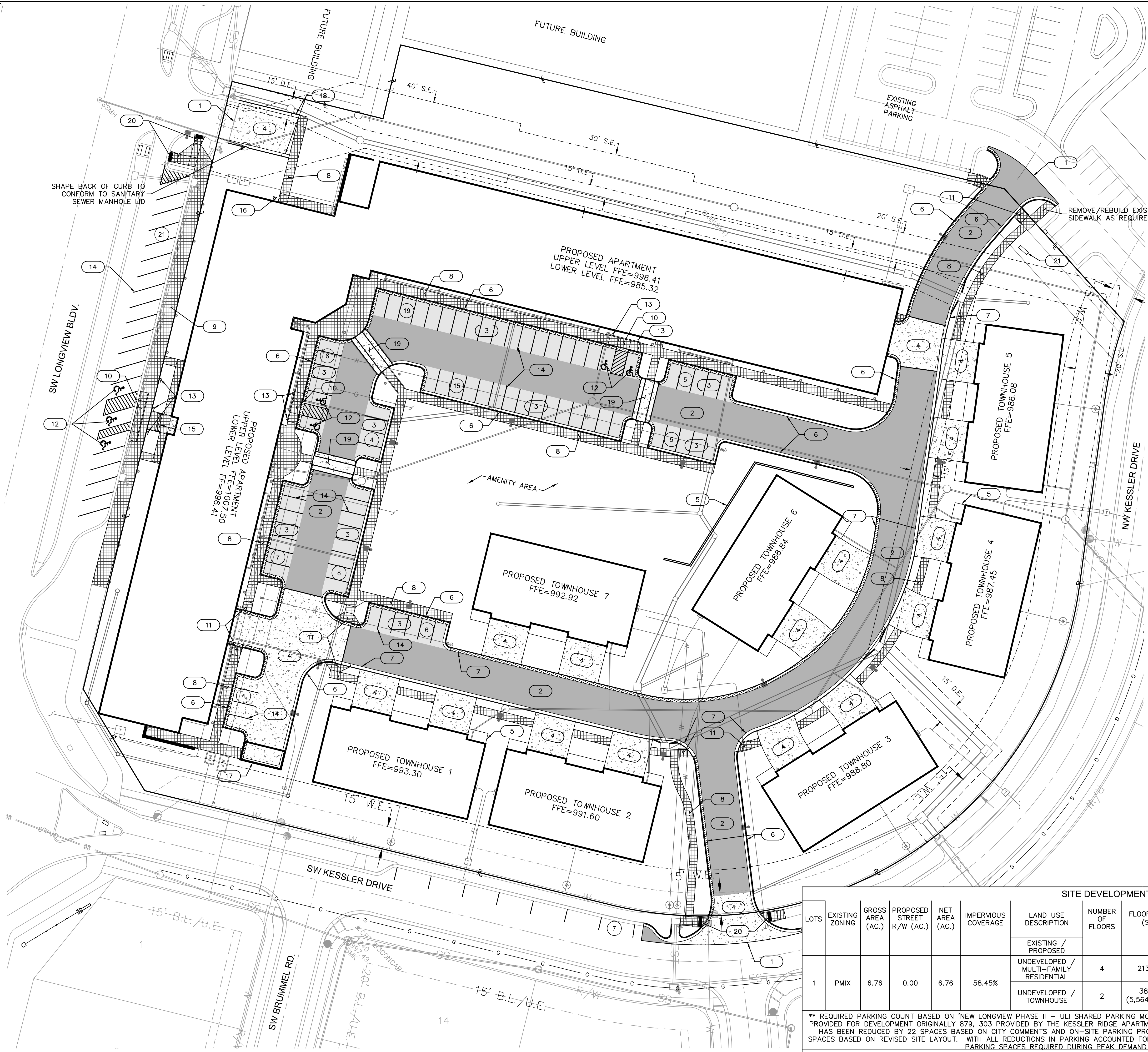
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REVISIONS DESCRIPTION

BY

REVISIONS





LEGEND	
	CONCRETE SIDEWALK
	STANDARD DUTY ASPHALT PAVEMENT
	HEAVY DUTY ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	CG-1 CURB & GUTTER (See Detail Sheet)
	CG-1 DRY CURB & GUTTER (See Detail Sheet)
	CG-2 CURB & GUTTER (See Detail Sheet)
	CG-2 DRY CURB & GUTTER (See Detail Sheet)
	# OF PARKING STALLS

- CONSTRUCTION NOTES**
- CONTRACTOR TO SAW-CUT AND REMOVE EXISTING CURB & GUTTER AND PAVEMENT TO PROVIDE FOR PROPOSED ENTRANCES.
 - CONSTRUCT HEAVY DUTY ASPHALT PAVEMENT (SEE LEGEND)
 - CONSTRUCT STANDARD DUTY ASPHALT PAVEMENT (SEE LEGEND)
 - CONSTRUCT STANDARD CONCRETE PAVEMENT (SEE LEGEND)
 - PROPOSED RETAINING WALL (SEE SPOT ELEVATION PLAN) TO BE DESIGN-BUILD LANDSCAPE BLOCK. COORDINATE STYLE/COLOR WITH OWNER AND ARCHITECT.
 - TYPE CG-1 CONCRETE CURB AND GUTTER (SEE LEGEND)
 - TYPE CG-2 CONCRETE CURB AND GUTTER (SEE LEGEND)
 - CONSTRUCT PRIVATE SIDEWALK
 - CONSTRUCT PUBLIC SIDEWALK
 - CONSTRUCT ACCESSIBLE SIDEWALK RAMP AT HEAD-IN ADA PARKING (SEE SPOT ELEVATION PLAN)
 - CONSTRUCT PERPENDICULAR SIDEWALK RAMP (SEE SPOT ELEVATION PLAN)
 - PROPOSED ACCESSIBLE PARKING STALLS (TYP.)
 - PROPOSED ACCESSIBLE SIGNAGE AND STRIPING (TYP.) (SEE DETAIL SHEET)
 - PROPOSED PAVEMENT STRIPING (TYP.). SEE NOTE 10, SHEET C101.
 - CONSTRUCT CONCRETE EXTERIOR STAIRS, RE: ARCH PLANS
 - FIRE DEPARTMENT CONNECTION, RE: MEP PLANS
 - TRASH ENCLOSURE, RE: ARCH PLANS
 - CONSTRUCT 5' CURB TERMINUS (SEE SPOT ELEVATION PLAN & DETAIL SHEET)
 - CONSTRUCT RAISED CONCRETE CROSSWALK (SEE SPOT ELEVATION PLAN & DETAIL SHEET)
 - CONSTRUCT PUBLIC SIDEWALK RAMP PER LEE'S SUMMIT STANDARD
 - MONUMENT SIGN, RE: ARCH PLANS.

SITE DEVELOPMENT DATA														
LOTS	EXISTING ZONING	GROSS AREA (AC.)	PROPOSED STREET R/W (AC.)	NET AREA (AC.)	IMPERVIOUS COVERAGE	LAND USE DESCRIPTION	NUMBER OF FLOORS	FLOOR AREA (S.F.)	BUILDING COVERAGE (S.F.)	# OF UNITS	F.A.R.	PARKING STALLS REQUIRED**		
						EXISTING / PROPOSED						RATIO	REQUIRED	PROVIDED
1	PMIX	6.76	0.00	6.76	58.45%	UNDEVELOPED / MULTI-FAMILY RESIDENTIAL	4	213,865	52,330	76 1-BED 70 2-BED	0.86	1.5:1 UNIT	219	217
						UNDEVELOPED / TOWNHOUSE	2	38,948 (5,564/BLDG.)	38,290 (5,470/BLDG.)	28		2:1 UNIT	56	56

** REQUIRED PARKING COUNT BASED ON 'NEW LONGVIEW PHASE II - ULI SHARED PARKING MODEL', SEPT. 2, 2016, BY CONFLUENCE ARCHITECTURE. TOTAL PARKING SPACES PROVIDED FOR DEVELOPMENT ORIGINALLY 879, 303 PROVIDED BY THE KESSLER RIDGE APARTMENTS SITE AND ADJACENT PUBLIC STREET PARKING. PUBLIC STREET PARKING HAS BEEN REDUCED BY 22 SPACES BASED ON CITY COMMENTS AND ON-SITE PARKING PROVIDED BY THE KESSLER RIDGE APARTMENTS SITE IS BEING REDUCED BY 30 SPACES BASED ON REVISED SITE LAYOUT. WITH ALL REDUCTIONS IN PARKING ACCOUNTED FOR, TOTAL PARKING SPACES PROVIDED FOR THE DEVELOPMENT IS 827 WITH 717 PARKING SPACES REQUIRED DURING PEAK DEMAND PER THE SHARED PARKING MODEL.

OLSSON ASSOCIATES

REGISTERED PROFESSIONAL ENGINEER

NICHOLAS D. HEISER

PE-2015000555

04/20/18

BY

REVISIONS DESCRIPTION

DATE

NO. REV.

SITE PLAN DEVELOPMENT PLANS

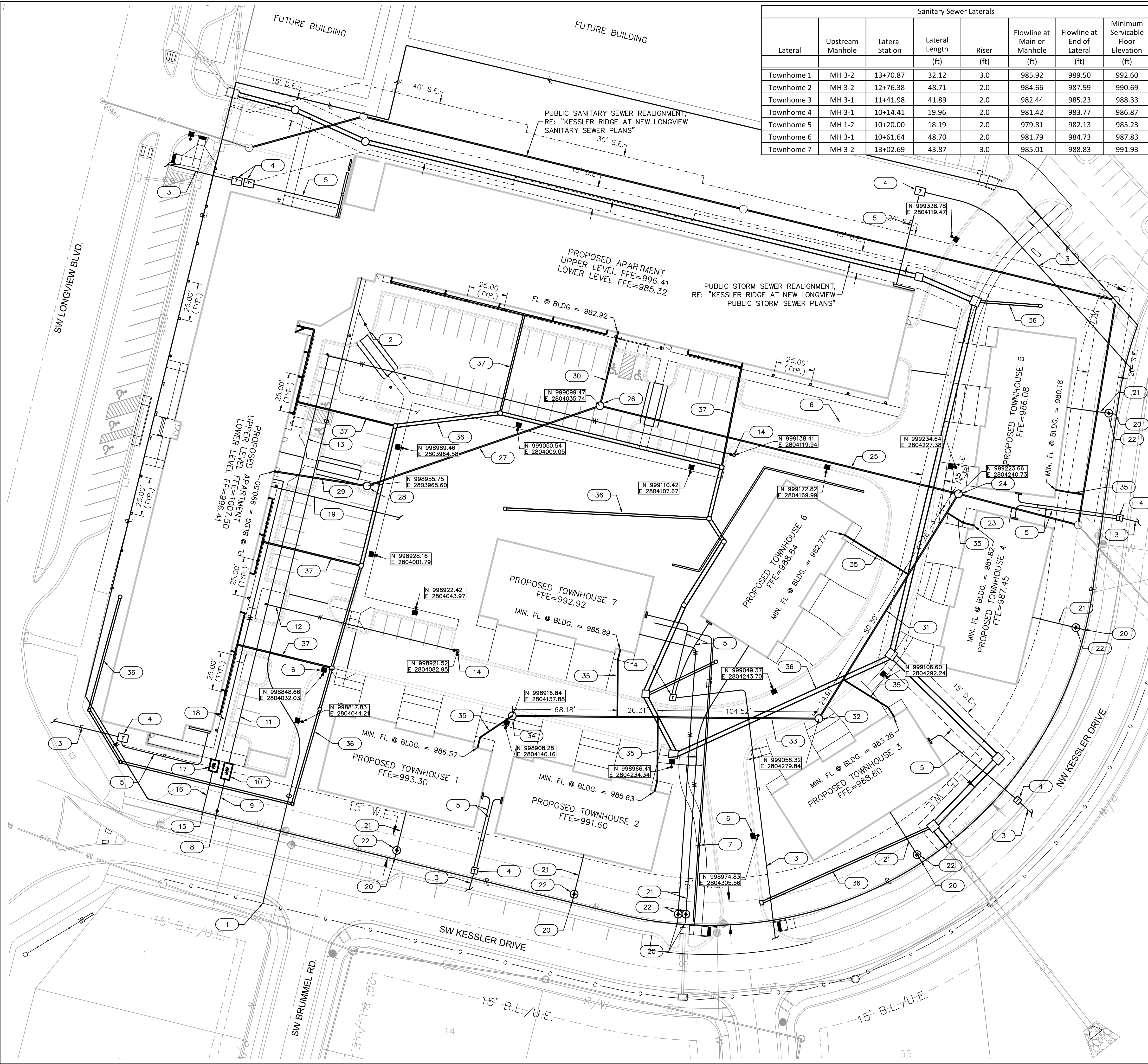
KESSLER RIDGE APARTMENTS

LEE'S SUMMIT, MO

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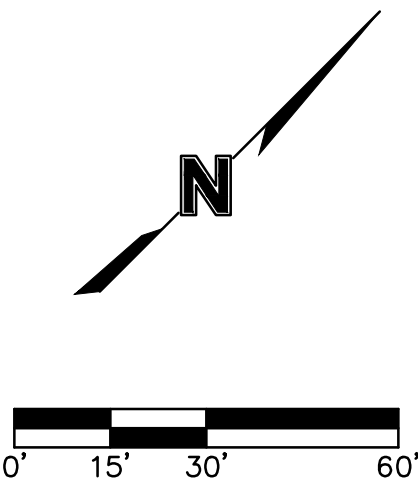
SHEET C107



Sanitary Sewer Laterals							
Lateral	Upstream Manhole	Lateral Station	Lateral Length (ft)	Riser (ft)	Flowline at Main or Manhole (ft)	Flowline at End of Lateral (ft)	Minimum Servicable Floor Elevation (ft)
Townhome 1	MH 3-2	13+70.87	32.12	3.0	985.92	989.50	992.60
Townhome 2	MH 3-2	12+76.38	48.71	2.0	984.66	987.59	990.69
Townhome 3	MH 3-1	11+41.98	41.89	2.0	982.44	985.23	988.33
Townhome 4	MH 3-1	10+14.41	19.96	2.0	981.42	983.77	986.87
Townhome 5	MH 1-2	10+20.00	18.19	2.0	979.81	982.13	985.23
Townhome 6	MH 3-1	10+61.64	48.70	2.0	981.79	984.73	987.83
Townhome 7	MH 3-2	13+02.69	43.87	3.0	985.01	988.83	991.93

- UTILITY NOTES** ##
- NATURAL GAS SERVICE**
1. INSTALL APPROX. 405 L.F. 4" PVC (SDR-26) CONDUIT (TO WITHIN 5' OF BUILDING) TO BE UTILIZED BY GAS COMPANY. CONTRACTOR TO MAKE APPLICATION WITH SPIRE ENERGY FOR METER SET AND COORDINATE WITH SPIRE FOR INSTALLATION OF SERVICE.
 2. COORDINATE WITH ARCHITECT, MEP, OWNER, AND AMENITY DESIGNER TO PROVIDE GAS SERVICE TO AMENITY AREA, AS REQUIRED.
- ELECTRIC SERVICE**
3. INSTALL 4" ELEC. PVC CONDUIT(S), PER KCP&L STANDARDS, FROM EXISTING LINE WITHIN RIGHT-OF-WAY TO PROPOSED TRANSFORMER PAD(S). ROUTE SHALL BE GENERALLY AS SHOWN, BUT COORDINATED WITH KCP&L. EASEMENT SHALL BE COORDINATED WITH ENGINEER AND KCP&L AFTER CONDUIT INSTALLATION. COORDINATE FOR KCP&L TO INSTALL TRANSFORMER, PRIMARY WIRE, AND CONNECTION.
 4. CONSTRUCT CONCRETE PAD FOR TRANSFORMER AND PROVIDE GRADING, AS NECESSARY, PER KCP&L STANDARDS.
 5. SEE MEP PLANS FOR SECONDARY CONDUITS AND WIRE, BUILDING CONNECTION, AND CONTINUATION.
 6. PRIVATE SITE LIGHTING (TYP.), RE: MEP PLANS FOR DETAILS.
- TELEPHONE/CABLE/DATA SERVICE**
7. INSTALL TWO (2), PARALLEL 3" PVC CONDUITS FROM RIGHT-OF-WAY TO WITHIN 5'-0" OF BUILDING (30" MIN. COVER) FOR USE BY TELEPHONE/CABLE/DATA COMPANY. ASSIST OWNER IN COORDINATING WITH UTILITIES FOR INSTALLATION OF SERVICE AND LOCATION OF PROPOSED PEDESTALS, ETC. ALL CONDUITS SHALL BE CAPPED AND ACCURATELY STAKED WITH HARDWOOD POSTS, OR STUBBED UP TO SURFACE AT ENDS AND BENDS. MAINTAIN STAKES OR STUBS THROUGHOUT CONSTRUCTION.
- FIRE WATER SERVICE**
8. COORDINATE WITH CITY TO CONNECT TO EXISTING 8" PVC C900 DR-18 WATER MAIN WITH NEW 8"x8"x6" TEE WITH BACKING BLOCK, TWO (2) 8" SOLID SLEEVES, AND ONE (1) 6" GATE VALVE ON THE SERVICE BRANCH.
 9. INSTALL APPROX. 24 L.F. 6" PVC C900 DR-18 (48" MIN. COVER) TO PROPOSED DOUBLE CHECK DETECTOR BACKFLOW PREVENTER VAULT.
 10. INSTALL CITY STANDARD BACKFLOW PREVENTER VAULT (10"x6" INSIDE) AND 6" DOUBLE CHECK DETECTOR BACKFLOW PREVENTER ASSEMBLY.
 11. INSTALL APPROX. 220 L.F. 6" PVC C900 DR-18 (48" MIN. COVER) TO BUILDING, INCLUDING TWO (2) 6" TEES, AS SHOWN. RE: MEP PLANS FOR CONTINUATION.
 12. CONNECT TO PROPOSED 6" TEE AND INSTALL APPROX. 127 L.F. 6" PVC C900 DR-18 (48" MIN. COVER) FROM TEE TO PRIVATE HYDRANT.
 13. CONNECT TO PROPOSED 6" TEE AND INSTALL APPROX. 339 L.F. 6" PVC C900 DR-18 (48" MIN. COVER) FROM TEE TO PRIVATE HYDRANT, INCLUDING ONE (1) 6" 90-DEGREE BEND, AS SHOWN.
 14. INSTALL STANDARD STRAIGHT-SET FIRE HYDRANT ASSEMBLY.
- DOMESTIC WATER SERVICES**
15. COORDINATE WITH CITY TO CONNECT TO EXISTING 8" PVC C900 WATER MAIN WITH NEW 8"x8"x8" TEE WITH BACKING BLOCK, TWO (2) 8" SOLID SLEEVES, AND 6"x4" REDUCER ON THE SERVICE BRANCH.
 16. INSTALL 27 L.F. 4" PVC C900 DR-18 (48" MIN. COVER) TO METER VAULT.
 17. INSTALL CITY STANDARD METER VAULT AND METER SET FOR 4" DOMESTIC SERVICE. COORDINATE WITH CITY FOR REQUEST AND INSTALLATION OF 4" METER WITHIN VAULT.
 18. INSTALL 194 L.F. 4" PVC C900 DR-18 (48" MIN. COVER) FROM METER VAULT TO BUILDING, INCLUDING ONE (1) 90-DEGREE BEND, AS SHOWN. RE: MEP PLANS FOR CONTINUATION. RPZ AND SHUT-OFF VALVE SHALL BE LOCATED WITHIN THE BUILDING.
 19. COORDINATE WITH ARCHITECT, MEP, OWNER, AND AMENITY DESIGNER TO INSTALL 1/2" TYPE 'K' COPPER PIPE FROM BUILDING TO AMENITY AREA FOR YARD HYDRANT AND AMENITY SERVICE.
 20. COORDINATE WITH CITY TO TAP EXISTING 8" PVC C900 WATER MAIN FOR 1 1/2-INCH DOMESTIC SERVICE TO TOWNHOUSE BUILDING.
 21. INSTALL TYPE 'K' COPPER PIPE FROM MAIN TAP TO METER WELL AND FROM METER WELL TO BUILDING FOR 1-INCH DOMESTIC SERVICE TO TOWNHOUSE BUILDING.
 22. COORDINATE WITH CITY TO PROVIDE METER WELL AND METER FOR 1" DOMESTIC SERVICE. RPZ AND SHUT-OFF VALVE SHALL BE LOCATED INSIDE THE BUILDING.
- SANITARY SEWER SERVICE**
23. CONNECT TO 6" PVC STUB (FL: 978.81) AND INSTALL 70.32 L.F. 8" PVC (SDR-26) AT 1.27% TO MANHOLE 2-1, AS SHOWN.
 24. MH 2-1: INSTALL 48" DIAMETER STD. SANITARY MANHOLE. FL IN (SW) = 980.30, FL IN (S) = 980.30, FL OUT (NE) = 979.70, RIM EL. = 986.24
 25. INSTALL 239.67 L.F. 8" PVC (SDR-26) AT 0.70% TO MANHOLE 2-2, AS SHOWN.
 26. MH 2-2: INSTALL 48" DIAMETER STD. SANITARY MANHOLE. FL IN (NW) = 982.58, FL IN (SW) = 982.58, FL OUT (NE) = 981.98, RIM EL. = 994.54
 27. INSTALL 159.93 L.F. 8" PVC (SDR-26) AT 0.70% TO MANHOLE 2-3, AS SHOWN.
 28. MH 2-3: INSTALL 48" DIAMETER SANITARY DROP MANHOLE. FL IN (SW) = 988.68, DROP FL IN (SW) = 984.30, FL OUT (NE) = 983.70, RIM EL. = 995.42
 29. INSTALL 60.59 L.F. 8" PVC (SDR-26) AT 3.00% TO BUILDING, AS SHOWN. FL @ BLDG. = 990.50. RE: MEP PLANS FOR CONTINUATION.
 30. INSTALL 49.03 L.F. 8" PVC (SDR-26) AT 0.70% TO BUILDING, AS SHOWN. FL @ BLDG. = 982.92. RE: MEP PLANS FOR CONTINUATION.
 31. INSTALL 171.86 L.F. 8" PVC (SDR-26) AT 0.80% TO MANHOLE 3-1, AS SHOWN.
 32. MH 3-1: INSTALL 48" DIAMETER STD. SANITARY MANHOLE. FL IN (SW) = 982.27, FL OUT (N) = 981.67, RIM EL. = 988.37
 33. INSTALL 199.01 L.F. 8" PVC (SDR-26) AT 1.33% TO MANHOLE 3-2, AS SHOWN.
 34. MH 3-2: INSTALL 48" DIAMETER STD. SANITARY MANHOLE. FL IN (SW) = 985.52, FL OUT (NE) = 984.92, RIM EL. = 991.89
 35. INSTALL 4" PVC (SDR-26) AT 2.0% MIN. TO TOWNHOME, AS SHOWN. MINIMUM FLOWLINE AT BLDG. AS SHOWN ON PLAN. RE: MEP PLANS FOR CONTINUATION.
- STORM SEWER**
36. PROPOSED PRIVATE STORM SEWER. RE: STORM SEWER PLAN & PROFILES FOR PROPOSED SIZE, DEPTH AND LOCATION.
 37. ROOF DRAIN LINE, RE: SHEET C111.

LEGEND	
—CIV—	PROPOSED CABLE TV, UNDERGROUND
—FP—	PROPOSED FIRE PROTECTION SYSTEM LINE
—EG—	EXISTING NATURAL GAS LINE
—G—	PROPOSED NATURAL GAS LINE
—TEL—	PROPOSED TELEPHONE LINE, UNDERGROUND
—EE—	EXISTING POWER/ELECTRIC LINE, UNDERGROUND
—E—	PROPOSED POWER/ELECTRIC LINE, UNDERGROUND
—SS—	EXISTING SANITARY SEWER
—SS—	PROPOSED SANITARY SEWER
—EST—	EXISTING STORM SEWER
—ST—	PROPOSED STORM SEWER
—EW—	EXISTING WATER LINE
—W—	PROPOSED WATER LINE



NICHOLAS D. HEISER
PROFESSIONAL ENGINEER
NUMBER
PE-2015000555

04/20/18

BY

REVISIONS DESCRIPTION

DATE

NO. REV.

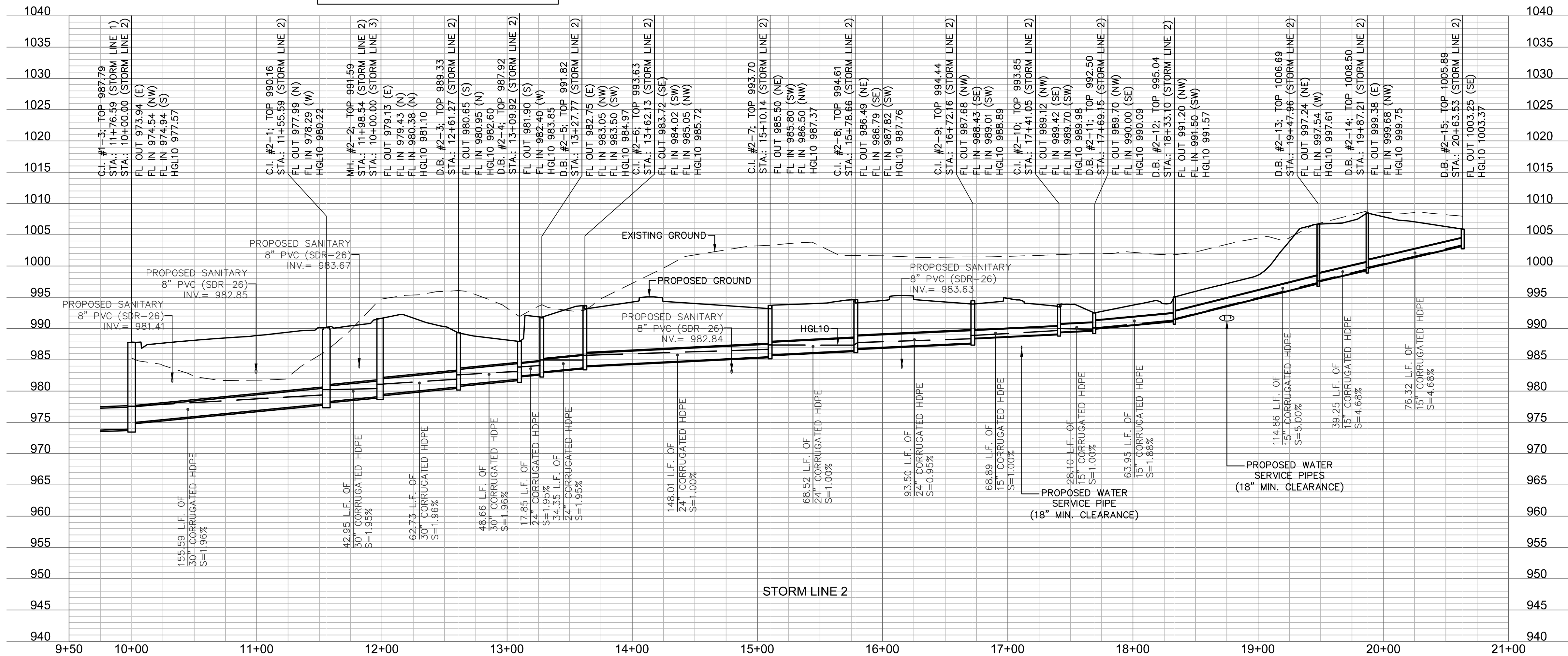
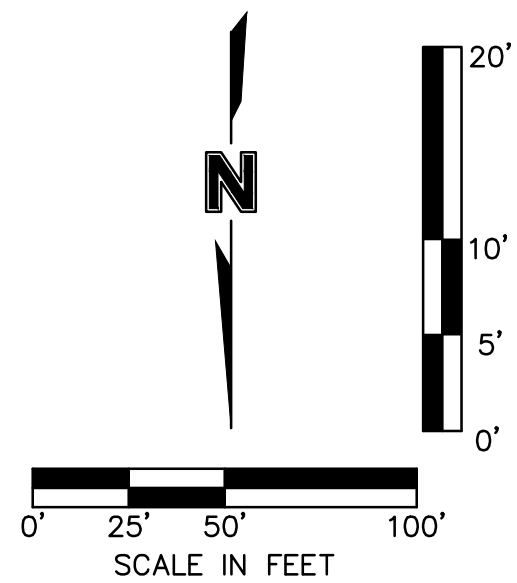
UTILITY PLAN
DEVELOPMENT PLANS
KESSLER RIDGE APARTMENTS

2018

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SHEET
C108



C.I. #2-1, CONSTRUCT STD. CURB
INLET (5'x4' INSIDE)
STA.: 11+55.59 (STORM LINE 2)
N: 998,973.2836
E: 2,804,229.3068

D.B. #2-3, CONSTRUCT
NYLOPLAST DRAIN BASIN (30")
WITH SOLID TOP
STA.: 12+61.27 (STORM LINE 2)
N: 999,046.5551
E: 2,804,165.8533

C.I. #1-3, CONNECT TO EXISTING
CURB INLET (5'x5') INSIDE
REFER TO PUBLIC STORM SEWER PLANS
STA.: 11+76.59 (STORM LINE 1)
=STA.: 10+00.00 (STORM LINE 2)
N: 999,119.0877
E: 2,804,283.6160

D.B. #2-4, CONSTRUCT
NYLOPLAST DRAIN BASIN (30")
WITH BEEHIVE TOP
STA.: 13+09.92 (STORM LINE 2)
N: 999,093.9969
E: 2,804,155.0491

D.B. #2-11, CONSTRUCT
NYLOPLAST DRAIN BASIN (24")
WITH BEEHIVE TOP
STA.: 17+69.15 (STORM LINE 2)
N: 998,831.4988
E: 2,804,046.4374

D.B. #2-12, CONSTRUCT
NYLOPLAST DRAIN BASIN (18")
WITH SOLID TOP
STA.: 18+33.10 (STORM LINE 2)
N: 998,775.5104
E: 2,804,077.3421

D.B. #2-5, CONSTRUCT
NYLOPLAST DRAIN BASIN (30")
WITH BEEHIVE TOP
STA.: 13+27.77 (STORM LINE 2)
=STA.: 10+00.00 (STORM LINE 6)
N: 999,097.7595
E: 2,804,137.6025

C.I. #2-6, CONSTRUCT
NYLOPLAST C.I. (30"-3'x2')
STA.: 13+62.13 (STORM LINE 2)
N: 999,127.1246
E: 2,804,119.7752

C.I. #2-8, CONSTRUCT
NYLOPLAST C.I. (30"-3'x2')
STA.: 15+78.66 (STORM LINE 2)
N: 998,996.3377
E: 2,803,951.0446

C.I. #2-9, CONSTRUCT
NYLOPLAST C.I. (30"-3'x2')
STA.: 16+72.16 (STORM LINE 2)
N: 998,916.4132
E: 2,803,999.5660

C.I. #2-10, CONSTRUCT
NYLOPLAST C.I. (24"-3'x2')
STA.: 17+41.05 (STORM LINE 2)
N: 998,856.1015
E: 2,804,032.8571

D.B. #2-15, CONSTRUCT
NYLOPLAST DRAIN BASIN (24")
WITH BEEHIVE TOP
STA.: 20+63.53 (STORM LINE 2)
N: 998,791.5271
E: 2,803,903.2106

D.B. #2-14, CONSTRUCT
NYLOPLAST DRAIN BASIN (18")
WITH SOLID TOP
STA.: 19+87.21 (STORM LINE 2)
N: 998,725.2440
E: 2,803,941.0385

D.B. #2-13, CONSTRUCT
NYLOPLAST DRAIN BASIN (18")
WITH SOLID TOP
STA.: 19+47.96 (STORM LINE 2)
N: 998,715.9068
E: 2,803,979.1631

STORM SEWER PLAN & PROFILE
DEVELOPMENT PLANS

KESSLER RIDGE APARTMENTS

LEE'S SUMMIT, MO

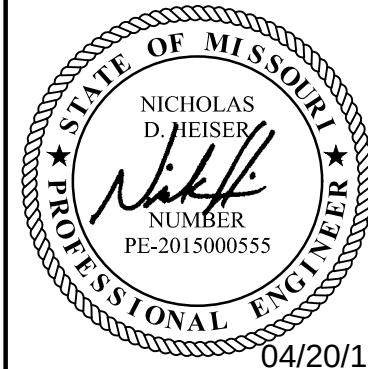
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SHEET
C109

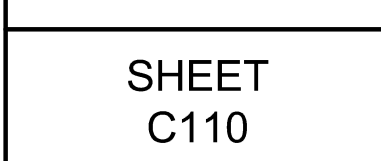
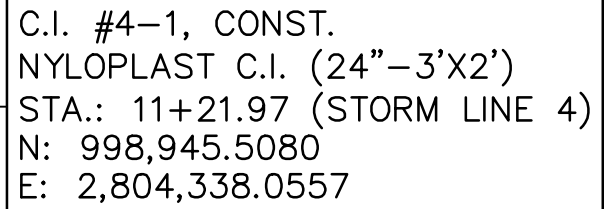
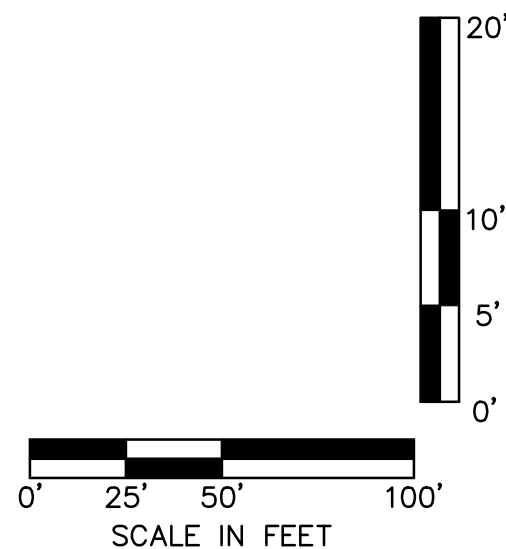
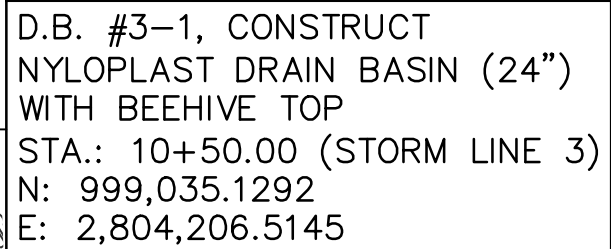
REVISIONS

BY

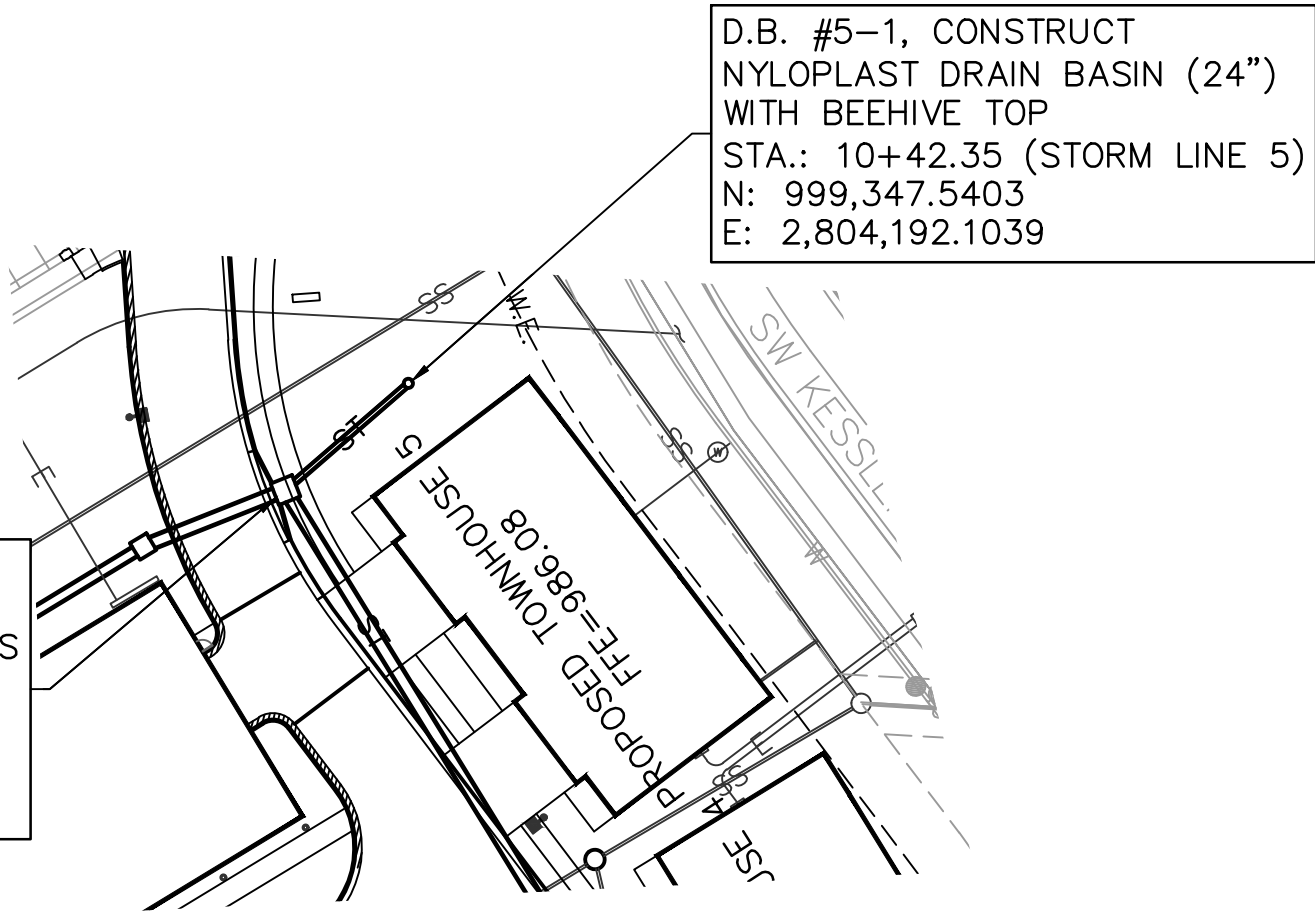


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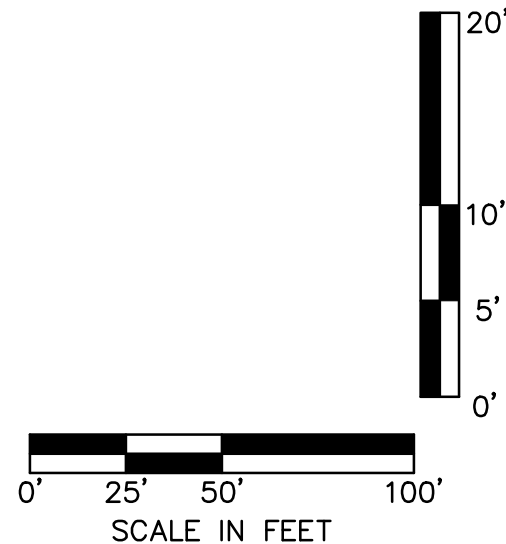
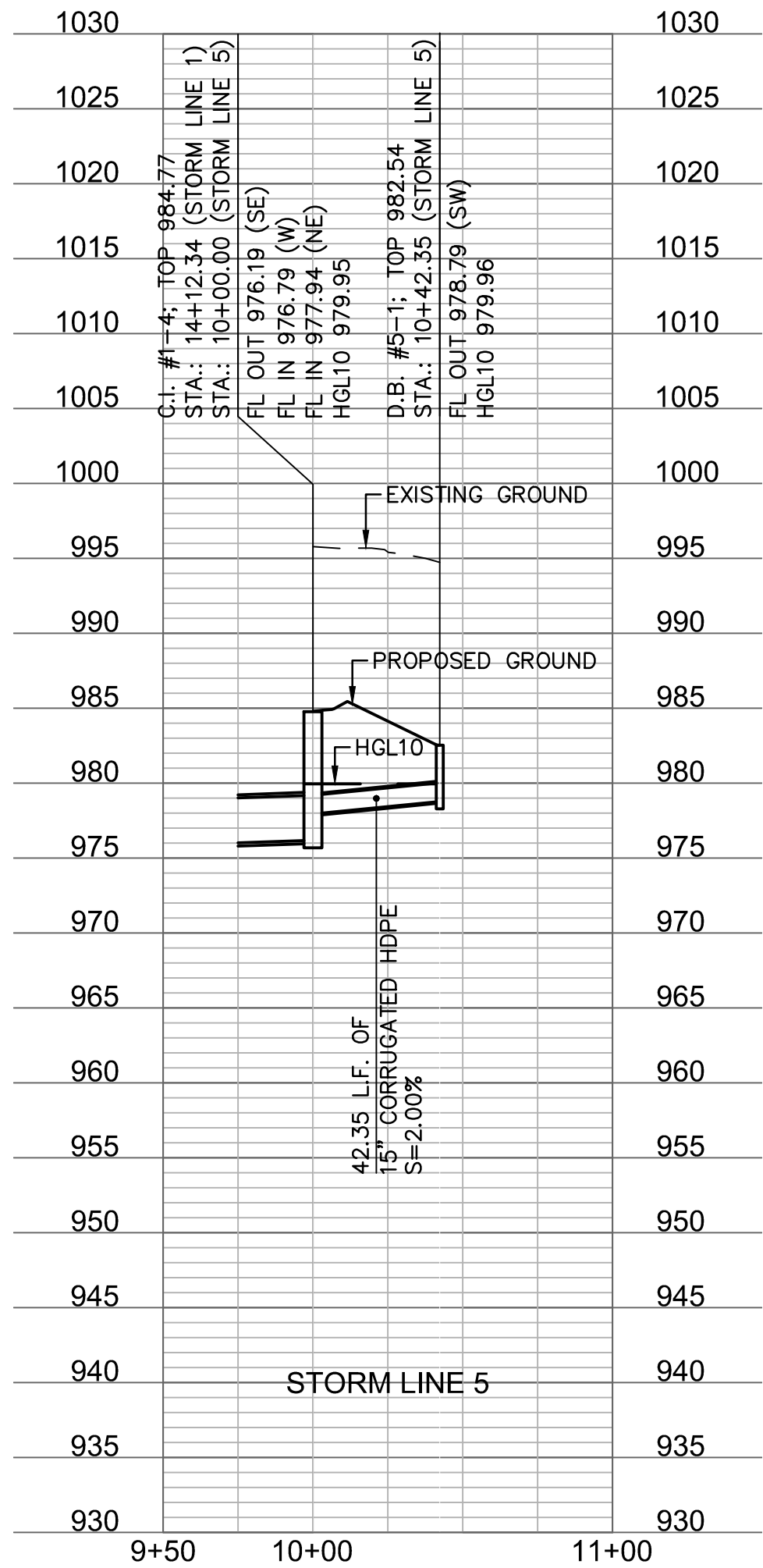
NO. 017-3697
301 E. HURON STREET, SUITE 100
NORTH KANSAS CITY, MO 64116
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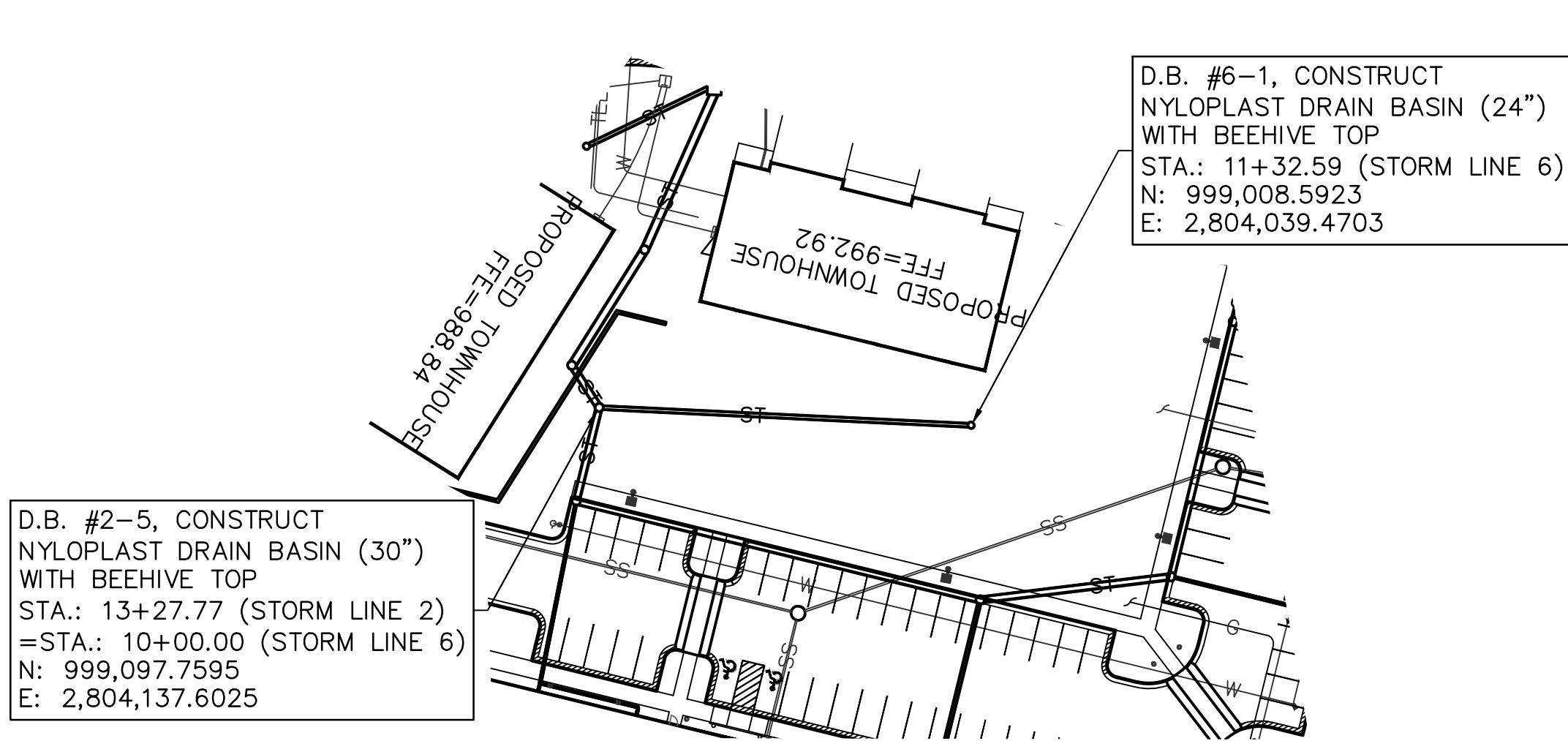
C.I. #1-4, CONNECT TO EXISTING CURB INLET (5'x5" INSIDE) REFER TO PUBLIC STORM SEWER PLANS STA.: 14+12.34 (STORM LINE 1) =STA.: 10+00.00 (STORM LINE 5) N: 999,319.8615 E: 2,804,160.0556



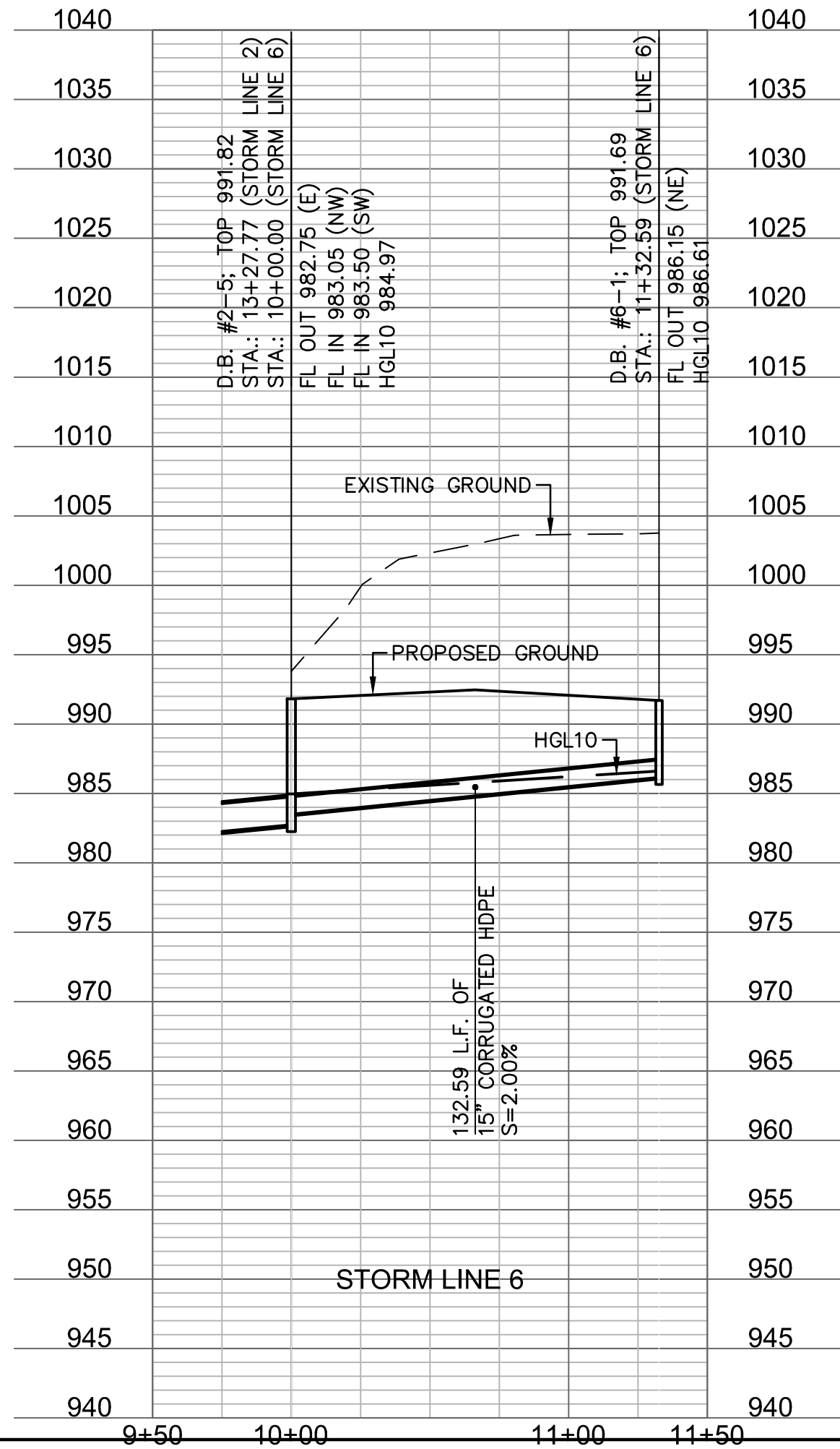
D.B. #5-1, CONSTRUCT NYLOPLAST DRAIN BASIN (24") WITH BEEHIVE TOP STA.: 10+42.35 (STORM LINE 5) N: 999,347.5403 E: 2,804,192.1039



D.B. #2-5, CONSTRUCT NYLOPLAST DRAIN BASIN (30") WITH BEEHIVE TOP STA.: 13+27.77 (STORM LINE 2) =STA.: 10+00.00 (STORM LINE 6) N: 999,097.7595 E: 2,804,137.6025

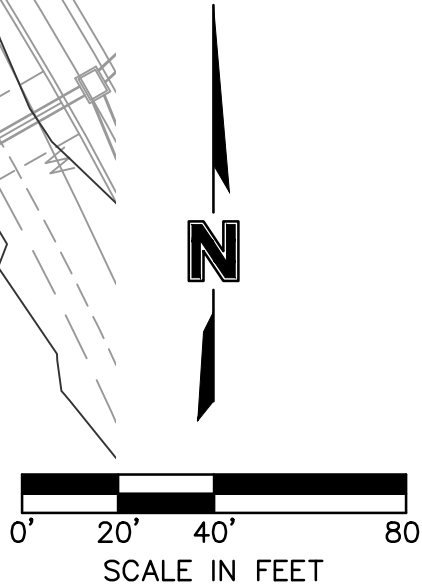


D.B. #6-1, CONSTRUCT NYLOPLAST DRAIN BASIN (24") WITH BEEHIVE TOP STA.: 11+32.59 (STORM LINE 6) N: 999,008.5923 E: 2,804,039.4703



LEGEND	
	FINISHED INDEX CONTOURS
	FINISHED INTERMEDIATE CONTOURS
	RIDGE LINE
A	DRAINAGE AREA
C	RUNOFF COEFFICIENT
C.I. 0-0	STORM STRUCTURE NUMBER

NOTES:
1. THE SITE IS LOCATED IN ZONE X, "AREAS OUTSIDE THE 1-PERCENT ANNUAL CHANCE FLOODPLAINS, AREAS OF 1-PERCENT ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1-PERCENT ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1-PERCENT ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE"
2. THE SITE IS LOCATED OUTSIDE OF ANY REQUIRED BUFFER ZONES FOR NATURAL STREAMS.



DRAWING PLAN DEVELOPMENT PLANS KESSLER RIDGE APARMENTS		LEE'S SUMMIT, MO		2018
drawn by: D.A.H.		checked by: N.D.H.		
designed by: N.D.H.		QA/QC by: M.G.D.		
project no.: 017-3697		date: 2018-04-20		
SHEET C113				

OLSSON ASSOCIATES

NICHOLAS D. HEISER
PROFESSIONAL ENGINEER
NUMBER PE-2015000555
04/20/18

NO. REV. DATE

REVISIONS DESCRIPTION

BY

REVISIONS

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NO. 017-3697

301 E. HURLOCK ST. SUITE 100

NORTH KANSAS CITY, MO 64116

Drainage Area Design Table						
10 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
EX. C.I. 3 (L)	0.87	0.62	5.0	7.35	1.0	3.98
EX. C.I. 3 (R)	0.00	0.00	5.0	7.35	1.0	0.00
EX. C.I. 3 (B)	0.00	0.00	5.0	7.35	1.0	0.00
EX. C.I. 3	0.87	0.62	5.0	7.35	1.0	3.98
EX. C.I. 1-0 (L)	0.24	0.59	5.0	7.35	1.0	1.05
EX. C.I. 1-0 (R)	0.64	0.59	5.0	7.35	1.0	2.76
EX. C.I. 1-0 (B)	0.00	0.59	5.0	7.35	1.0	0.00
EX. C.I. 1-0	0.88	0.59	5.0	7.35	1.0	3.81
C.I. 1-3	0.27	0.83	5.0	7.35	1.0	1.65
C.I. 1-4 (L)	0.06	0.78	5.0	7.35	1.0	0.32
C.I. 1-4 (R)	0.81	0.78	5.0	7.35	1.0	4.67
C.I. 1-4 (B)	0.00	0.78	5.0	7.35	1.0	0.00
C.I. 1-4	0.87	0.78	5.0	7.35	1.0	4.99
F.I. 1-5	1.92	0.30	5.0	7.35	1.0	4.24
C.I. 2-1	0.52	0.82	5.0	7.35	1.0	3.13
D.B. 2-4	0.11	0.59	5.0	7.35	1.0	0.46
D.B. 2-5	0.17	0.44	5.0	7.35	1.0	0.54
C.I. 2-6 (L)	0.04	0.89	5.0	7.35	1.0	0.26
C.I. 2-6 (R)	0.00	0.89	5.0	7.35	1.0	0.00
C.I. 2-6 (B)	0.13	0.90	5.0	7.35	1.0	0.86
C.I. 2-6	0.17	0.90	5.0	7.35	1.0	1.12
C.I. 2-7 (L)	0.15	0.88	5.0	7.35	1.0	0.99
C.I. 2-7 (R)	0.16	0.88	5.0	7.35	1.0	1.07
C.I. 2-7 (B)	0.45	0.88	5.0	7.35	1.0	2.92
C.I. 2-7	0.77	0.88	5.0	7.35	1.0	4.98
C.I. 2-8 (L)	0.01	0.87	5.0	7.35	1.0	0.04
C.I. 2-8 (R)	0.13	0.87	5.0	7.35	1.0	0.84
C.I. 2-8 (B)	0.16	0.87	5.0	7.35	1.0	1.05
C.I. 2-8	0.30	0.87	5.0	7.35	1.0	1.92
C.I. 2-9 (L)	0.05	0.87	5.0	7.35	1.0	0.32
C.I. 2-9 (R)	0.09	0.87	5.0	7.35	1.0	0.58
C.I. 2-9 (B)	0.15	0.87	5.0	7.35	1.0	0.96
C.I. 2-9	0.29	0.87	5.0	7.35	1.0	1.86
C.I. 2-10	0.29	0.86	5.0	7.35	1.0	1.83
D.B. 2-11	0.05	0.41	5.0	7.35	1.0	0.14
D.B. 2-15	0.04	0.30	5.0	7.35	1.0	0.09
D.B. 3-1	0.09	0.34	5.0	7.35	1.0	0.23
C.I. 4-1	0.15	0.67	5.0	7.35	1.0	0.72
D.B. 5-1	0.33	0.50	5.0	7.35	1.0	1.19
D.B. 6-1	0.43	0.43	5.0	7.35	1.0	1.37

STORM SEWER DESIGN CALCULATION (10-YR)																
Upstream Structure	Downstream Structure	Line Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Pipe Slope (%)	Pipe Size (in)	Manning's n	Total Flow (cfs)	Upstream Velocity (ft/s)	Downstream Velocity (ft/s)	Pipe Capacity (cfs)	Upstream Depth (ft)	Downstream Depth (ft)	Upstream Struct. HGL (ft)	Downstream Struct. HGL (ft)	Upstream Top Elev. (ft)
EX. C.I. 0-0	EX. F.E.S.	109.094	967.18	959.93	6.65	42	0.012	74.47	9.35	8.26	280.97	2.70**	3.10	969.88	963.03	982.04
EX. C.I. 1-0	EX. C.I. 0-0	44.069	971.38	969.72	3.77	42	0.012	68.43	8.96	9.98	211.54	2.59**	2.35	973.97	972.07	981.85
EX. MH.	EX. C.I. 0-0	102.052	973.40	971.69	1.68	15	0.012	4.79	5.15	7.48	9.06	0.89**	0.65	974.29	972.34	983.32
EX. C.I. 2	EX. MH.	112.800	975.51	973.90	1.43	15	0.012	4.79	5.15	4.49	8.36	0.89**	1.01	976.40 j	974.91	984.94
EX. C.I. 3	EX. C.I. 2	43.171	979.53	978.33	2.78	15	0.012	3.98	4.75	8.60	11.66	0.81**	0.50	980.34	978.83	985.07
J.B. 1-1	EX. C.I. 1-0	18.786	971.63	971.50	0.69	42	0.012	64.62	6.72	6.72	90.67	3.50	3.50	975.99	975.92	985.23
J.B. 1-2	J.B. 1-1	60.861	972.66	972.23	0.71	42	0.012	63.90	6.64	6.64	91.61	3.50	3.50	976.50	976.29	984.29
C.I. 1-3	J.B. 1-2	96.942	973.94	973.26	0.70	42	0.012	63.90	7.23	6.64	91.28	3.02	3.50	976.96	976.77	987.79
C.I. 1-4	C.I. 1-3	235.748	976.19	974.54	0.70	36	0.012	44.58	8.13	6.31	60.45	2.17**	3.00	978.36 j	977.57	984.77
F.I. 1-5	C.I. 1-4	39.866	977.19	976.79	1.00	36	0.012	38.40	5.54	5.43	72.38	2.85	3.00	980.04	979.95	985.00
MH. 1-6	F.I. 1-5	370.045	989.74	977.79	3.23	30	0.012	34.16	8.17	7.01	79.84	1.99**	2.44	991.73 j	980.23	998.12
MH. 1-7	MH. 1-6	50.008	991.55	990.34	2.42	30	0.012	34.16	8.17	6.96	69.11	1.99**	2.50	993.54	993.43	1004.82
EX. C.I. 1-8	MH. 1-7	42.017	993.17	992.15	2.43	30	0.012	34.16	7.49	6.96	69.22	2.19	2.50	995.36	995.24	1004.00
C.I. 2-1	C.I. 1-3	155.590	977.99	974.94	1.96	30	0.012	17.67	6.13	3.60	62.21	1.42**	2.50	979.41 j	977.57	990.16
J.B. 2-2	C.I. 2-1	42.946	979.13	978.29	1.96	30	0.012	14.54	5.73	3.57	62.14	1.28**	1.93	980.41 j	980.22	991.59
D.B. 2-3	J.B. 2-2	62.732	980.65	979.43	1.94	30	0.012	14.31	5.69	4.11	61.96	1.27**	1.67	981.92 j	981.10	989.33
D.B. 2-4	D.B. 2-3	48.656	981.90	980.95	1.95	30	0.012	14.31	5.69	4.17	62.08	1.27**	1.65	983.17 j	982.60	987.92
D.B. 2-5	D.B. 2-4	17.848	982.75	982.40	1.96	24	0.012	13.85	6.19	5.68	34.31	1.34**	1.45	984.09 j	983.85	991.82
C.I. 2-6	D.B. 2-5	34.353	983.72	983.05	1.95	24	0.012	11.94	5.83	3.85	34.22	1.24**	1.92	984.96 j	984.97	993.63
C.I. 2-7	C.I. 2-6	148.010	985.50	984.02	1.00	24	0.012	10.82	5.62	3.81	24.50	1.18**	1.70	986.68 j	985.72	993.70
C.I. 2-8	C.I. 2-7	68.522	986.49	985.80	1.01	24	0.012	5.84	4.57	2.21	24.59	0.85**	1.57	987.34 j	987.37	994.61
C.I. 2-9	C.I. 2-8	93.500	987.68	986.79	0.95	24	0.012	3.92	4.05	2.59	23.91	0.69**	0.97	988.37 j	987.76	994.44
C.I. 2-10	C.I. 2-9	68.890	989.12	988.43	1.00	15	0.012	2.06	3.77	4.96	7.00	0.57**	0.46	989.69	988.89	993.85
D.B. 2-11	C.I. 2-10	28.102	989.70	989.42	1.00	15	0.012	0.23	2.03	0.43	6.98	0.19**	0.56	989.89	989.98	992.50
D.B. 2-12	D.B. 2-11	63.952	991.20	990.00	1.88	15	0.012	0.09	1.59	2.46	9.58	0.12**	0.09	991.32	990.09	995.39
D.B. 2-13	D.B. 2-12	114.855	997.24	991.50	5.00	15	0.012	0.09	1.59	3.45	15.64	0.12**	0.07	997.36	991.57	1006.69
D.B. 2-14	D.B. 2-13	39.251	999.38	997.54	4.69	15	0.012	0.09	1.59	3.37	15.15	0.12**	0.07	999.50	997.61	1008.50
D.B. 2-15	D.B. 2-14	76.318	1003.25	999.68	4.68	15	0.012	0.09	1.59	3.37	15.13	0.12**	0.07	1003.37	999.75	1005.89
D.B. 3-1	J.B. 2-2	50.000	983.00	980.38	5.24	15	0.012	0.23	2.03	0.32	16.01	0.19**	0.72	983.19 j	981.10	987.25
C.I. 4-1	J.B. 1-1	121.970	980.00	973.88	5.02	15	0.012	0.72	2.76	0.59	15.67	0.33**	1.25	980.33 j	976.97	984.44
D.B. 5-1	C.I. 1-4	42.346	978.79	977.94	2.01	15	0.012	1.19	1.00	0.97	9.91	1.17	1.25	979.96	979.95	982.54
D.B. 6-1	D.B. 2-5	132.592	986.15	983.50	2.00	15	0.012	1.37	3.32	1.12	9.89	0.46**	1.25	986.61 j	984.97	991.69

Notes: j - Line contains hyd. jump; ** - critical depth

Inlet Design Table													
10 Year Return Frequency													
Inlet ID	Inlet Location	Peak Flow	Upstream Bypass	Total Flow	Clogging Factor	Inlet Capacity	Sag Inlet Capacity (Note 1)	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
		(cfs)	(cfs)	(cfs)		(cfs)	(cfs)	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
EX. C.I. 3 (L)	SAG	3.98	0.00	3.98	0.8	19.40	15.52	3.98	0.00	100.00%	0.16	7.49	...
EX. C.I. 3 (R)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	0.00	0.00	...
EX. C.I. 3 (B)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	...	...	...
EX. C.I. 3	SAG	3.98	0.00	3.98	0.8	19.40	15.52	3.98	0.00	100.00%	...	...	...
EX. C.I. 1-0 (L)	SAG	1.05	0.38	1.43	0.8	19.40	15.52	1.43	0.00	100.00%	0.15	6.74	...
EX. C.I. 1-0 (R)	SAG	2.76	0.00	2.76	0.8	19.40	15.52	2.76	0.00	100.00%	0.16	7.18	...
EX. C.I. 1-0 (B)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	...	...	...
EX. C.I. 1-0	SAG	3.81	0.00	3.81	0.8	19.40	15.52	3.81	0.00	100.00%	...	...	...
C.I. 1-3	GRADE	1.65	0.00	1.65	1.0	1.48	1.48	1.48	0.17	89.48%	0.16	7.78	...
C.I. 1-4 (L)	SAG	0.32	0.00	0.32	0.8	19.40	15.52	0.32	0.00	100.00%	0.07	3.33	...
C.I. 1-4 (R)	SAG	4.67	0.17	4.84	0.8	19.40	15.52	4.84	0.00	100.00%	0.23	11.69	...
C.I. 1-4 (B)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	...	...	...
C.I. 1-4	SAG	4.99	0.00	4.99	0.8	15.52	12.42	4.99	0.00	100.00%	...	...	...
F.I. 1-5	SAG	4.24	0.00	4.24	0.8	39.60	31.68	4.24	0.00	100.00%	...	...	0.23
C.I. 2-1	GRADE	3.13	0.11	3.24	1.0	2.59	2.59	2.59	0.65	79.82%	0.20	10.02	...
D.B. 2-4	GRADE	0.46	0.00	0.46	0.8	20.72	16.58	0.46	0.00	100.00%	...	...	0.08
D.B. 2-5	GRADE	0.54	0.00	0.54	0.8	20.72	16.58	0.54	0.00	100.00%	...	...	0.09
C.I. 2-6 (L)	SAG	0.26	0.00	0.26	0.8	11.64	9.31	0.26	0.00	100.00%	0.07	3.37	...
C.I. 2-6 (R)	SAG	0.00	0.00	0.00	0.8	11.64	9.31	0.00	0.00	...	0.00	0.00	...
C.I. 2-6 (B)	SAG	0.86	0.00	0.86	0.8	11.64	9.31	0.86	0.00	100.00%	...	...	...
C.I. 2-6	SAG	1.12	0.00	1.12	0.8	11.64	9.31	1.12	0.00	100.00%	...	...	...
C.I. 2-7 (L)	SAG	0.99	0.00	0.99	0.8	11.64	9.31	0.99	0.00	100.00%	0.13	5.97	...
C.I. 2-7 (R)	SAG	1.07	0.00	1.07	0.8	11.64	9.31	1.07	0.00	100.00%	0.13	6.02	...
C.I. 2-7 (B)	SAG	2.92	0.00	2.92	0.8	11.64	9.31	2.92	0.00	100.00%	...	...	...
C.I. 2-7	SAG	4.98	0.00	4.98	0.8	11.64	9.31	4.98	0.00	100.00%	...	...	...
C.I. 2-8 (L)	SAG	0.04	0.00	0.04	0.8	11.64	9.31	0.04	0.00	100.00%	0.04	1.63	...
C.I. 2-8 (R)	SAG	0.84	0.00	0.84	0.8	11.64	9.31	0.84	0.00	100.00%	0.11	5.25	...
C.I. 2-8 (B)	SAG	1.05	0.00	1.05	0.8	11.64	9.31	1.05	0.00	100.00%	...	...	...
C.I. 2-8	SAG	1.92	0.00	1.92	0.8	11.64	9.31	1.92	0.00	100.00%	...	...	...
C.I. 2-9 (L)	SAG	0.32	0.00	0.32	0.8	11.64	9.31	0.32	0.00	100.00%	0.08	3.82	...
C.I. 2-9 (R)	SAG	0.58	0.00	0.58	0.8	11.64	9.31	0.58	0.00	100.00%	0.10	4.74	...
C.I. 2-9 (B)	SAG	0.96	0.00	0.96	0.8	11.64	9.31	0.96	0.00	100.00%	...	...	...
C.I. 2-9	SAG	1.86	0.00	1.86	0.8	11.64	9.31	1.86	0.00	100.00%	...	...	...
C.I. 2-10	GRADE	1.83	0.00	1.83	1.0	1.71	1.71	1.71	0.11	93.77%	0.15	6.98	...
D.B. 2-11	SAG	0.14	0.00	0.14	0.8	20.72	16.58	0.14	0.00	100.00%	...	...	0.04
D.B. 2-15	SAG	0.09	0.00	0.09	0.8	20.72	16.58	0.09	0.00	100.00%	...	...	0.03
D.B. 3-1	SAG	0.23	0.00	0.23	0.8	20.72	16.58	0.23	0.00	100.00%	...	...	0.05
C.I. 4-1	GRADE	0.72	0.65	1.37	1.0	0.99	0.99	0.99	0.38	72.07%	0.11	5.66	...
D.B. 5-1	SAG	1.19	0.00	1.19	0.8	20.72	16.58	1.19	0.00	100.00%	...	...	0.15
D.B. 6-1	SAG	1.37	0.00	1.37	0.8	20.72	16.58	1.37	0.00	100.00%	...	...	0.16

Drainage Area Design Table						
100 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
EX. C.I. 3 (L)	0.87	0.62	5.0	10.32	1.25	6.98
EX. C.I. 3 (R)	0.00	0.00	5.0	10.32	1.25	0.00
EX. C.I. 3 (B)	0.00	0.00	5.0	10.32	1.25	0.00
EX. C.I. 3	0.87	0.62	5.0	10.32	1.25	6.98
EX. C.I. 1-0 (L)	0.24	0.59	5.0	10.32	1.25	1.84
EX. C.I. 1-0 (R)	0.64	0.59	5.0	10.32	1.25	4.85
EX. C.I. 1-0 (B)	0.00	0.59	5.0	10.32	1.25	0.00
EX. C.I. 1-0	0.88	0.59	5.0	10.32	1.25	6.68
C.I. 1-3	0.27	0.83	5.0	10.32	1.25	2.90
C.I. 1-4 (L)	0.06	0.78	5.0	10.32	1.25	0.57
C.I. 1-4 (R)	0.81	0.78	5.0	10.32	1.25	8.19
C.I. 1-4 (B)	0.00	0.78	5.0	10.32	1.25	0.00
C.I. 1-4	0.87	0.78	5.0	10.32	1.25	8.76
F.I. 1-5	1.92	0.30	5.0	10.32	1.25	7.43
C.I. 2-1	0.52	0.82	5.0	10.32	1.25	5.49
D.B. 2-4	0.11	0.59	5.0	10.32	1.25	0.80
D.B. 2-5	0.17	0.44	5.0	10.32	1.25	0.95
C.I. 2-6 (L)	0.04	0.89	5.0	10.32	1.25	0.46
C.I. 2-6 (R)	0.00	0.89	5.0	10.32	1.25	0.00
C.I. 2-6 (B)	0.13	0.90	5.0	10.32	1.25	1.51
C.I. 2-6	0.17	0.90	5.0	10.32	1.25	1.97
C.I. 2-7 (L)	0.15	0.88	5.0	10.32	1.25	1.75
C.I. 2-7 (R)	0.16	0.88	5.0	10.32	1.25	1.87
C.I. 2-7 (B)	0.45	0.88	5.0	10.32	1.25	5.12
C.I. 2-7	0.77	0.88	5.0	10.32	1.25	8.74
C.I. 2-8 (L)	0.01	0.87	5.0	10.32	1.25	0.06
C.I. 2-8 (R)	0.13	0.87	5.0	10.32	1.25	1.47
C.I. 2-8 (B)	0.16	0.87	5.0	10.32	1.25	1.84
C.I. 2-8	0.30	0.87	5.0	10.32	1.25	3.37
C.I. 2-9 (L)	0.05	0.87	5.0	10.32	1.25	0.56
C.I. 2-9 (R)	0.09	0.87	5.0	10.32	1.25	1.01
C.I. 2-9 (B)	0.15	0.87	5.0	10.32	1.25	1.68
C.I. 2-9	0.29	0.87	5.0	10.32	1.25	3.26
C.I. 2-10	0.29	0.86	5.0	10.32	1.25	3.21
D.B. 2-11	0.05	0.41	5.0	10.32	1.25	0.25
D.B. 2-15	0.04	0.30	5.0	10.32	1.25	0.16
D.B. 3-1	0.09	0.34	5.0	10.32	1.25	0.40
C.I. 4-1	0.15	0.67	5.0	10.32	1.25	1.26
D.B. 5-1	0.33	0.50	5.0	10.32	1.25	2.10
D.B. 6-1	0.43	0.43	5.0	10.32	1.25	2.41

STORM SEWER DESIGN CALCULATION (100-YR)																	
Upstream Structure	Downstream Structure	Line Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Pipe Slope (%)	Pipe Size (in)	Manning's n	Total Flow (cfs)	Upstream Velocity (ft/s)	Downstream Velocity (ft/s)	Pipe Capacity (cfs)	Upstream Depth (ft)	Downstream Depth (ft)	Upstream Struct. HGL (ft)	Downstream Struct. HGL (ft)	Upstream Top Elev. (ft)	
EX. C.I. 0-0	EX. F.E.S.	109.094	967.18	959.93	6.65	42	0.012	118.36	12.74	13.13	280.97	3.24**	3.10	970.42	963.03	982.04	
EX. C.I. 1-0	EX. C.I. 0-0	44.069	971.38	969.72	3.77	42	0.012	111.59	11.60	11.60	211.54	3.50	3.50	975.83	975.36	981.85	
EX. MH.	EX. C.I. 0-0	102.052	973.40	971.69	1.68	15	0.012	5.08	4.14	4.14	9.06	1.25	1.25	975.90	975.36	983.32	
EX. C.I. 2	EX. MH.	112.800	975.51	973.90	1.43	15	0.012	5.08	4.77	4.14	8.36	1.01	1.25	976.52	976.01	984.94	
EX. C.I. 3	EX. C.I. 2	43.171	979.53	978.33	2.78	15	0.012	3.98	4.75	8.60	11.66	0.81**	0.50	980.34	978.83	985.07	
J.B. 1-1	EX. C.I. 1-0	18.786	971.63	971.50	0.69	42	0.012	104.91	10.90	10.91	90.67	3.50	3.50	978.75	978.57	985.23	
J.B. 1-2	J.B. 1-1	60.861	972.66	972.23	0.71	42	0.012	103.65	10.77	10.78	91.61	3.50	3.50	980.08	979.53	984.29	
C.I. 1-3	J.B. 1-2	96.942	973.94	973.26	0.70	42	0.012	103.65	10.77	10.78	91.28	3.50	3.50	981.68	980.80	987.79	
C.I. 1-4	C.I. 1-3	235.748	976.19	974.54	0.70	36	0.012	71.43	10.11	10.11	60.45	3.00	3.00	984.92	982.62	984.77	
F.I. 1-5	C.I. 1-4	39.866	977.19	976.79	1.00	36	0.012	64.34	9.10	9.10	72.38	3.00	3.00	986.17	985.86	985.00	
MH. 1-6	F.I. 1-5	370.045	989.74	977.79	3.23	30	0.012	60.10	12.24	12.25	79.84	2.50	2.50	993.46	986.69	998.12	
MH. 1-7	MH. 1-6	50.008	991.55	990.34	2.42	30	0.012	60.10	12.24	12.25	69.11	2.50	2.50	997.97	997.05	1004.82	
EX. C.I. 1-8	MH. 1-7	42.017	993.17	992.15	2.43	30	0.012	60.10	12.24	12.25	69.22	2.50	2.50	999.63	998.86	1004.00	
C.I. 2-1	C.I. 1-3	155.590	977.99	974.94	1.96	30	0.012	29.32	5.97	5.97	62.21	2.50	2.50	984.33	983.65	990.16	
J.B. 2-2	C.I. 2-1	42.946	979.13	978.29	1.96	30	0.012	23.83	4.85	4.86	62.14	2.50	2.50	984.86	984.74	991.59	
D.B. 2-3	J.B. 2-2	62.732	980.65	979.43	1.94	30	0.012	23.43	4.77	4.77	61.96	2.50	2.50	985.20	985.02	989.33	
D.B. 2-4	D.B. 2-3	48.656	981.90	980.95	1.95	30	0.012	23.43	4.77	4.77	62.08	2.50	2.50	985.47	985.34	987.92	
D.B. 2-5	D.B. 2-4	17.848	982.75	982.40	1.96	24	0.012	22.63	7.20	7.20	34.31	2.00	2.00	985.77	985.61	991.82	
C.I. 2-6	D.B. 2-5	34.353	983.72	983.05	1.95	24	0.012	19.27	6.13	6.13	34.22	2.00	2.00	986.06	985.85	993.63	
C.I. 2-7	C.I. 2-6	148.010	985.50	984.02	1.00	24	0.012	17.30	6.85	5.51	24.50	1.50**	2.00	987.00 j	986.24	993.70	
C.I. 2-8	C.I. 2-7	68.522	986.49	985.80	1.01	24	0.012	8.56	2.98	2.73	24.59	1.72	2.00	988.21	988.15	994.61	
C.I. 2-9	C.I. 2-8	93.500	987.68	986.79	0.95	24	0.012	6.88	4.81	2.65	23.91	0.93**	1.54	988.61 j	988.33	994.44	
C.I. 2-10	C.I. 2-9	68.890	989.12	988.43	1.00	15	0.012	3.62	4.58	5.61	7.00	0.77**	0.65	989.89	989.08	993.85	
D.B. 2-11	C.I. 2-10	28.102	989.70	989.42	1.00	15	0.012	0.41	2.37	0.42	6.98	0.25**	0.93	989.95	990.35	992.50	
D.B. 2-12	D.B. 2-11	63.952	991.20	990.00	1.88	15	0.012	0.16	1.84	2.92	9.58	0.15**	0.11	991.35	990.11	995.39	
D.B. 2-13	D.B. 2-12	114.855	997.24	991.50	5.00	15	0.012	0.16	1.84	4.12	15.64	0.15**	0.09	997.39	991.59	1006.69	
D.B. 2-14	D.B. 2-13	39.251	999.38	997.54	4.69	15	0.012	0.16	1.84	4.02	15.15	0.15**	0.09	999.53	997.63	1008.50	
D.B. 2-15	D.B. 2-14	76.318	1003.25	999.68	4.68	15	0.012	0.16	1.84	4.02	15.13	0.15**	0.09	1003.40	999.77	1005.89	
D.B. 3-1	J.B. 2-2	50.000	983.00	980.38	5.24	15	0.012	0.40	0.33	0.33	16.01	1.25	1.25	985.38	985.37	987.25	
C.I. 4-1	J.B. 1-1	121.970	980.00	973.88	5.02	15	0.012	1.26	1.03	1.03	15.67	1.25	1.25	981.36	981.32	984.44	
D.B. 5-1	C.I. 1-4	42.346	978.79	977.94	2.01	15	0.012	2.10	1.71	1.71	9.91	1.25	1.25	987.14	987.10	982.54	
D.B. 6-1	D.B. 2-5	132.592	986.15	983.50	2.00	15	0.012	2.41	3.96	1.96	9.89	0.62**	1.25	986.77 j	985.85	991.69	

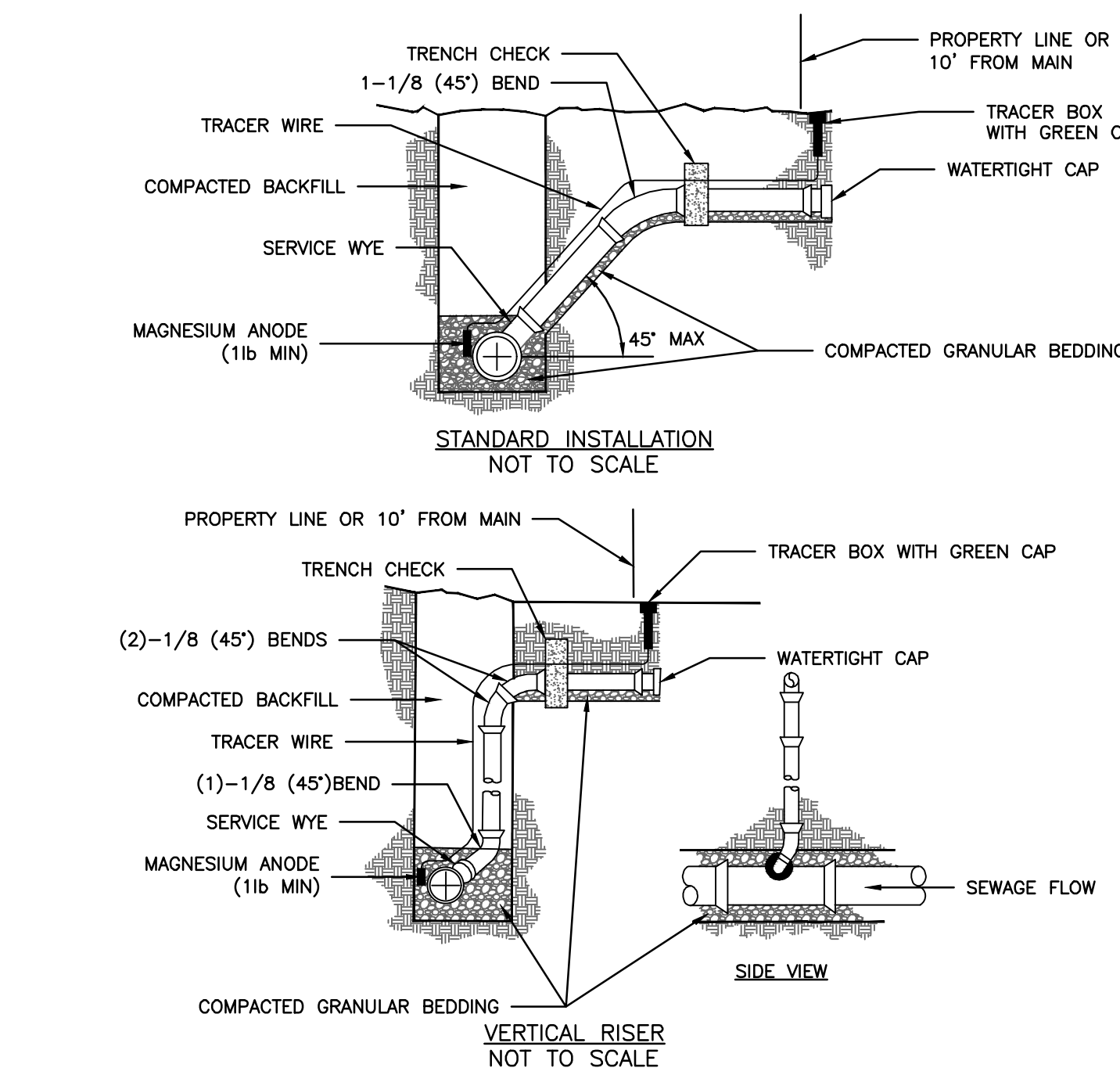
Notes: j - Line contains hyd. jump; ** - critical depth

Inlet Design Table													
100 Year Return Frequency													
Inlet ID	Inlet Location	Peak Flow	Upstream Bypass	Total Flow	Clogging Factor	Inlet Capacity	Sag Inlet Capacity (Note 1)	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
		(cfs)	(cfs)	(cfs)		(cfs)	(cfs)	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
EX. C.I. 3 (L)	SAG	6.98	0.00	6.98	0.8	19.40	15.52	6.98	0.00	100.00%	0.20	9.25	...
EX. C.I. 3 (R)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	0.00	0.00	...
EX. C.I. 3 (B)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	...	...	...
EX. C.I. 3	SAG	6.98	0.00	6.98	0.8	19.40	15.52	6.98	0.00	100.00%	...	...	...
EX. C.I. 1-0 (L)	SAG	1.84	1.66	3.50	0.8	19.40	15.52	3.50	0.00	100.00%	0.20	9.43	...
EX. C.I. 1-0 (R)	SAG	4.85	0.00	4.85	0.8	19.40	15.52	4.85	0.00	100.00%	0.19	8.87	...
EX. C.I. 1-0 (B)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	...	...	...
EX. C.I. 1-0	SAG	6.68	0.00	6.68	0.8	19.40	15.52	6.68	0.00	100.00%	...	...	...
C.I. 1-3	GRADE	2.90	0.00	2.90	1.0	2.37	2.37	2.37	0.53	81.77%	0.19	9.61	...
C.I. 1-4 (L)	SAG	0.57	0.00	0.57	0.8	19.40	15.52	0.57	0.00	100.00%	0.08	4.11	...
C.I. 1-4 (R)	SAG	8.19	0.53	8.72	0.8	19.40	15.52	8.72	0.00	100.00%	0.29	14.58	...
C.I. 1-4 (B)	SAG	0.00	0.00	0.00	0.8	19.40	15.52	0.00	0.00	...	...	...	...
C.I. 1-4	SAG	8.76	0.00	8.76	0.8	15.52	12.42	8.76	0.00	100.00%	...	...	...
F.I. 1-5	SAG	7.43	0.00	7.43	0.8	39.60	31.68	7.43	0.00	100.00%	...	...	0.33
C.I. 2-1	GRADE	5.49	0.52	6.01	1.0	3.98	3.98	3.98	2.03	66.17%	0.25	12.62	...
D.B. 2-4	GRADE	0.80	0.00	0.80	0.8	20.72	16.58	0.80	0.00	100.00%	...	...	0.11
D.B. 2-5	GRADE	0.95	0.00	0.95	0.8	20.72	16.58	0.95	0.00	100.00%	...	...	0.13
C.I. 2-6 (L)	SAG	0.46	0.00	0.46	0.8	11.64	9.31	0.46	0.00	100.00%	0.09	4.16	...
C.I. 2-6 (R)	SAG	0.00	0.00	0.00	0.8	11.64	9.31	0.00	0.00	...	0.00	0.00	...
C.I. 2-6 (B)	SAG	1.51	0.00	1.51	0.8	11.64	9.31	1.51	0.00	100.00%	...	...	...

NOTES:

- ALL HDPE AND PVC PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
- IF TRENCH IS EXCAVATED IN ROCK OR HIGH-BEARING STRENGTH SOILS, TRENCH WIDTHS FOR 24" - 60" DIA. MAY BE REDUCED, FROM VALUES IN TABLE 1, TO THE PIPE OD PLUS 12".
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE GEOTECHNICAL ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE ASTM CLASS 1A OR 1B, MODOT TYPE 1, OR APPROVED OTHER, COMPACTED TO 95% STANDARD MAX. DENSITY. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR PIPE 24" DIAMETER AND LESS; 6" FOR 30"-60" DIAMETER PIPE.
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE ASTM CLASS 1A OR 1B, MODOT TYPE 1, OR APPROVED OTHER, COMPACTED TO 95% STANDARD MAX. DENSITY IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. INSTALL AND COMPACT IN 6" MAXIMUM LIFTS.
- FINAL BACKFILL: EXCEPT WHERE SUPERCEDED BY CITY REQUIREMENTS FOR RIGHT-OF-WAY CONSTRUCTION, GEOTECHNICAL REQUIREMENTS FOR UTILITY TRENCH BACKFILL, AND OTHER CONSIDERATIONS, SUITABLE MATERIAL MAY BE SITE SOILS COMPACTED TO 95% STANDARD MAX. DENSITY TO WITHIN 12" OF THE PAVEMENT SUBGRADE, AND TO SUBGRADE ELEVATION FOR NON-PAVED AREAS.
- MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC RATED APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED PER CITY AND/OR UTILITY STANDARDS AND/OR TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" FOR UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR UP TO 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE OR TO TOP OF RIGID PAVEMENT.

01 PIPE TRENCHING & BEDDING

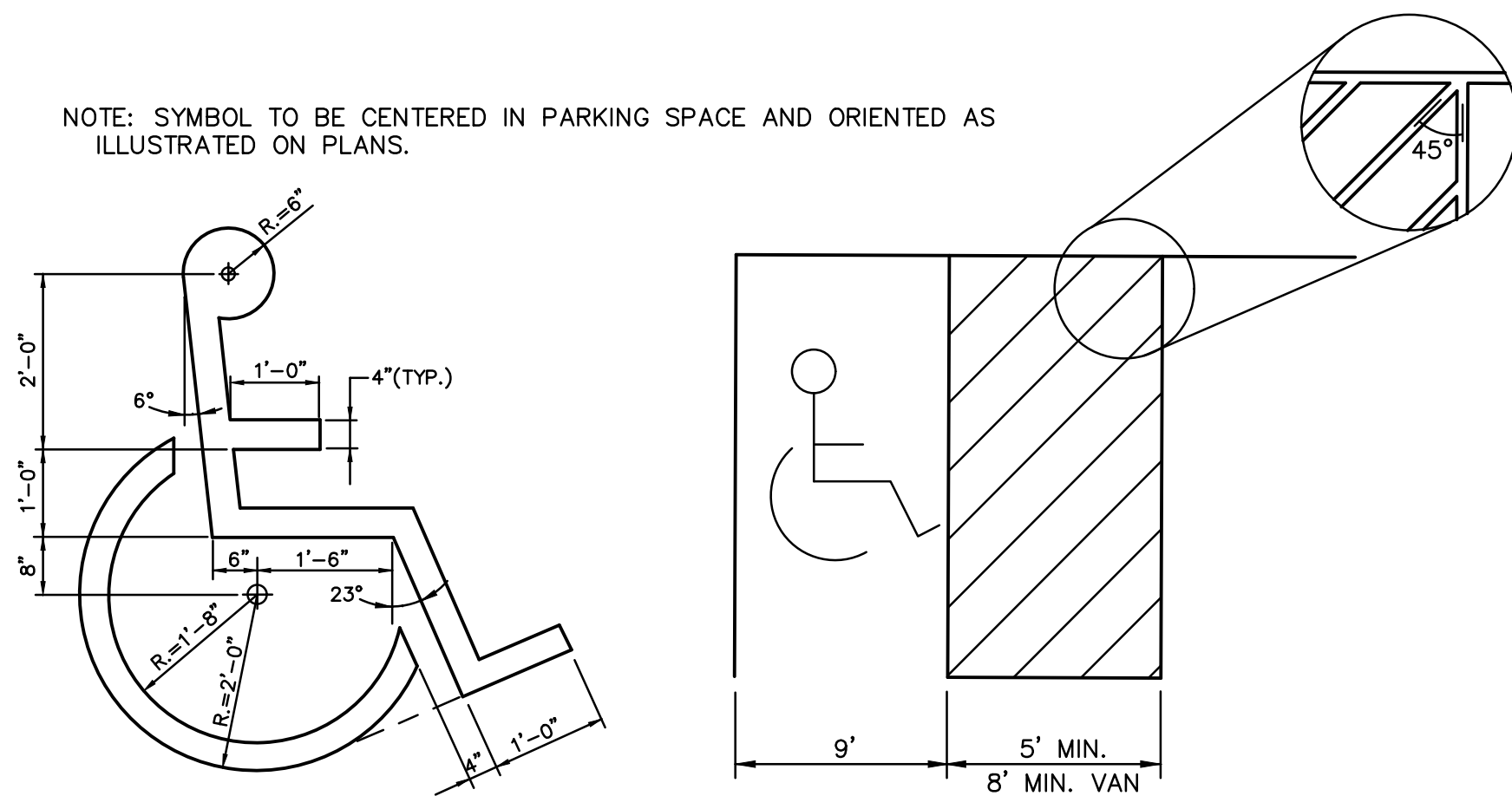


NOTES:

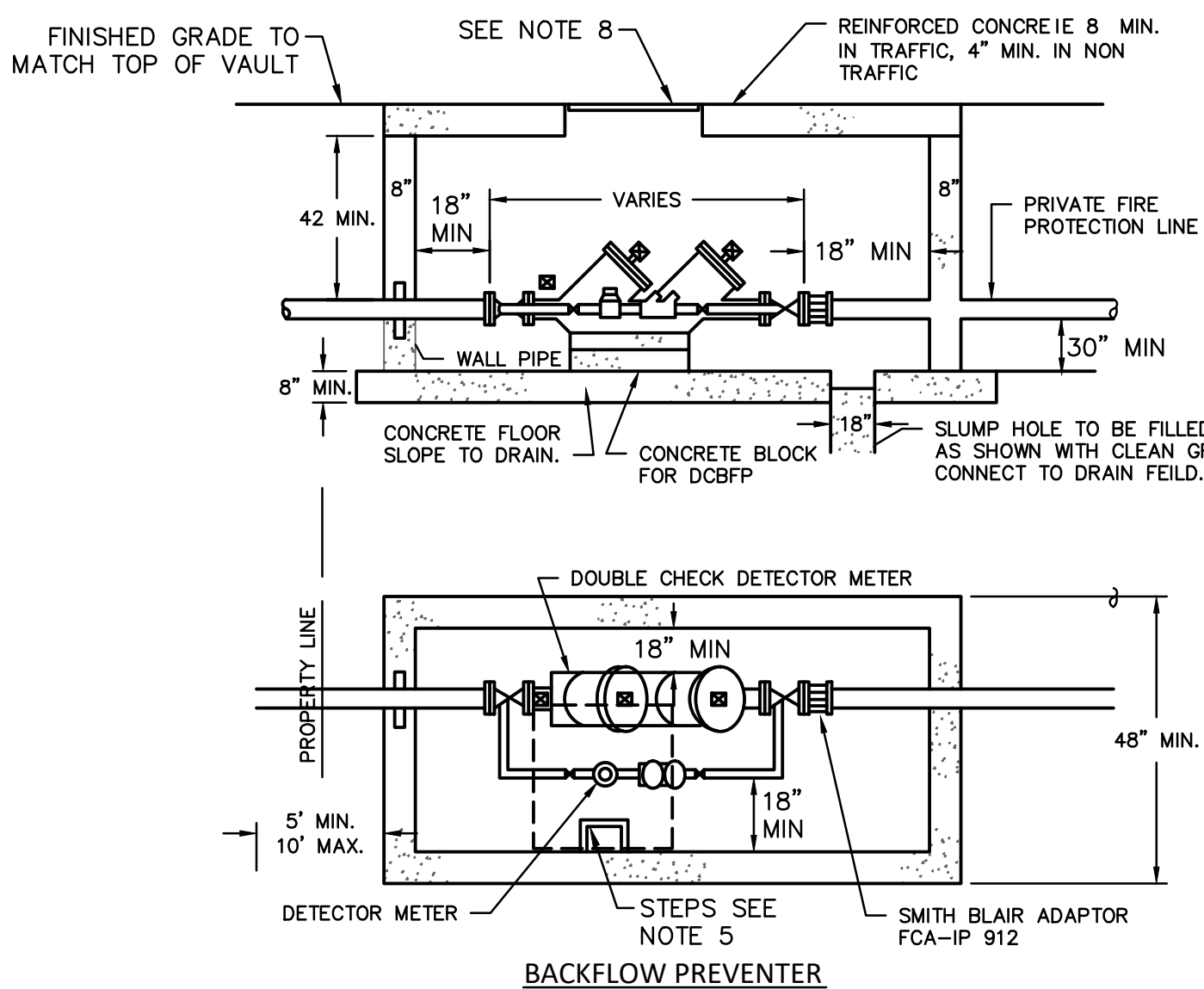
- ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
- ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
- IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
- 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.
- SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
- #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.
- 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.
- TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
- 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.

04 BUILDING SEWER STUB AND RISER

NOTE: SYMBOL TO BE CENTERED IN PARKING SPACE AND ORIENTED AS ILLUSTRATED ON PLANS.



02 ACCESSIBLE STRIPING DETAIL



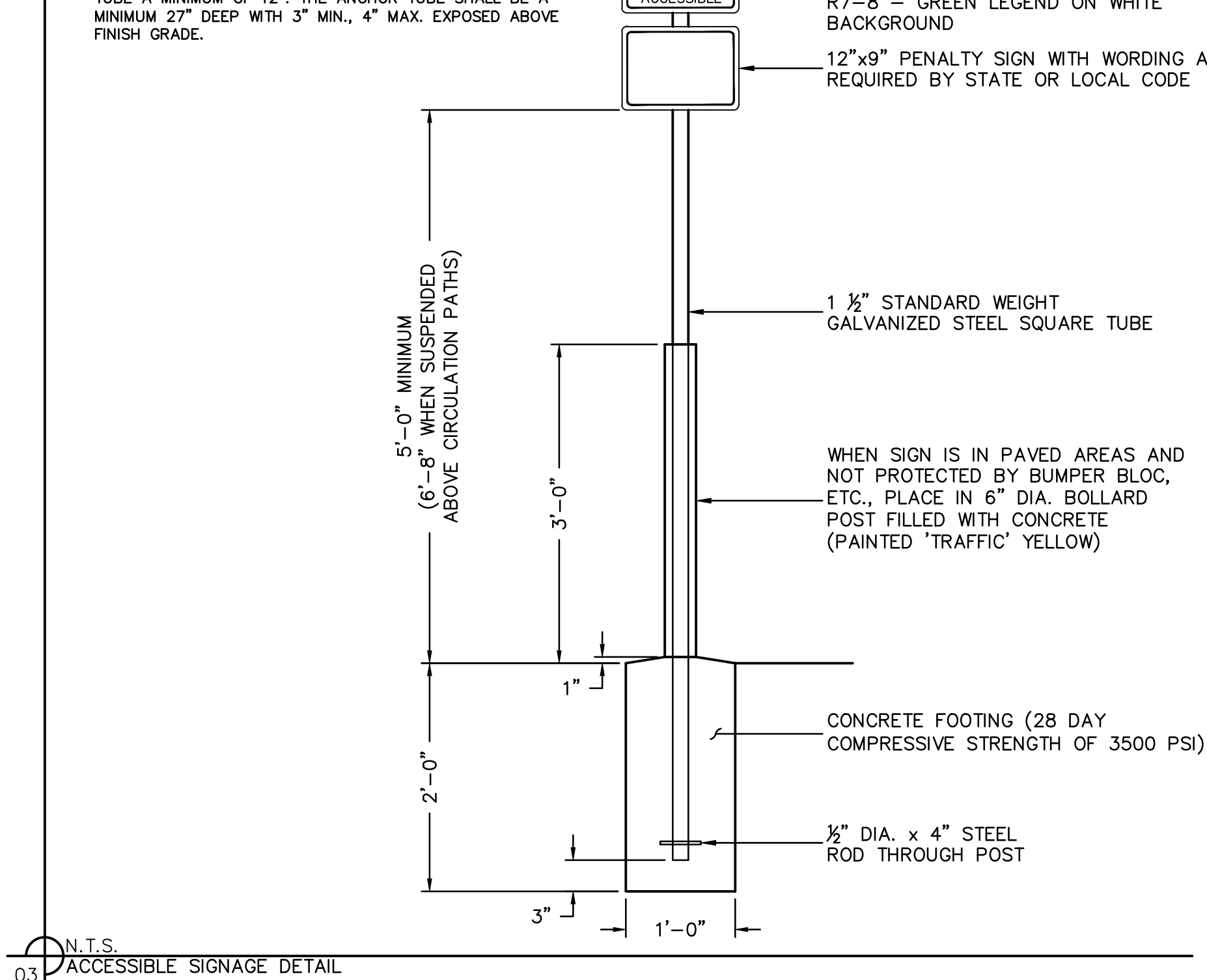
GENERAL NOTES

- METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE. METER VAULT ROOF TO BE REINFORCED CONCRETE WITH OPENING CENTERED OVER DETECTOR METER. REINFORCED WALLS AND SLABS ARE TO BE DESIGNED BY THE OWNER'S ENGINEER OR PRECAST ENGINEER.
- METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA AND WHERE SURFACE WATER WILL NOT DRAIN INTO IT. PROVIDE CONCRETE SUMP TO DRAIN TO AN ABOVE GROUND DISCHARGE POINT.
- ALL PIPE AND FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
- ALL FITTINGS FOR THE DETECTOR METER BE BRASS.
- STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCT LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
- A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTRACT WATER UTILITIES AT 816.969.1900.
- ALL VALVES SHALL HAVE RISING STEMS.
- MANHOLE COVER SHALL BE A BILCO K-1 MODEL UNLESS IN A VEHICLE TRAFFIC AREA. SEE THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR TRAFFIC CONDITIONS. THE COVER SHALL HAVE A 1-3/4" DIAMETER HOLE DRILLED FOR A TOUGH/READ DEWIC.
- A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
- CONTACT PUBLIC WORKS ENGINEERING FOR VAULTS THAT INCLUDE A FIRE DEPARTMENT CONNECTION OF A 3" OR LARGER METER.

05 BACKFLOW PREVENTER

NOTES:

- ALL SIGNS SHALL COMPLY WITH THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
 - GALVANIZED SQUARE TUBE
- POST TUBES - 2"x2"x3/4" 12GA.
POST TUBE SHALL MEET ASTM A1011 GRADE 50.
POST TUBE GALVANIZED AS PER ASTM A653 GRADE 90.
- ANCHOR TUBE - 2-1/2"x2-1/2"x3/8" 12GA.
HEAVY DUTY ANCHOR TUBE SHALL MEET ASTM A500 GRADE B.
STRUCTURAL TUBE AND STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123.
- THE UPPER SIGN POST SHALL TELESCOPE INSIDE THE ANCHOR TUBE A MINIMUM OF 12". THE ANCHOR TUBE SHALL BE A MINIMUM 27" DEEP WITH 3" MIN., 4" MAX. EXPOSED ABOVE FINISH GRADE.

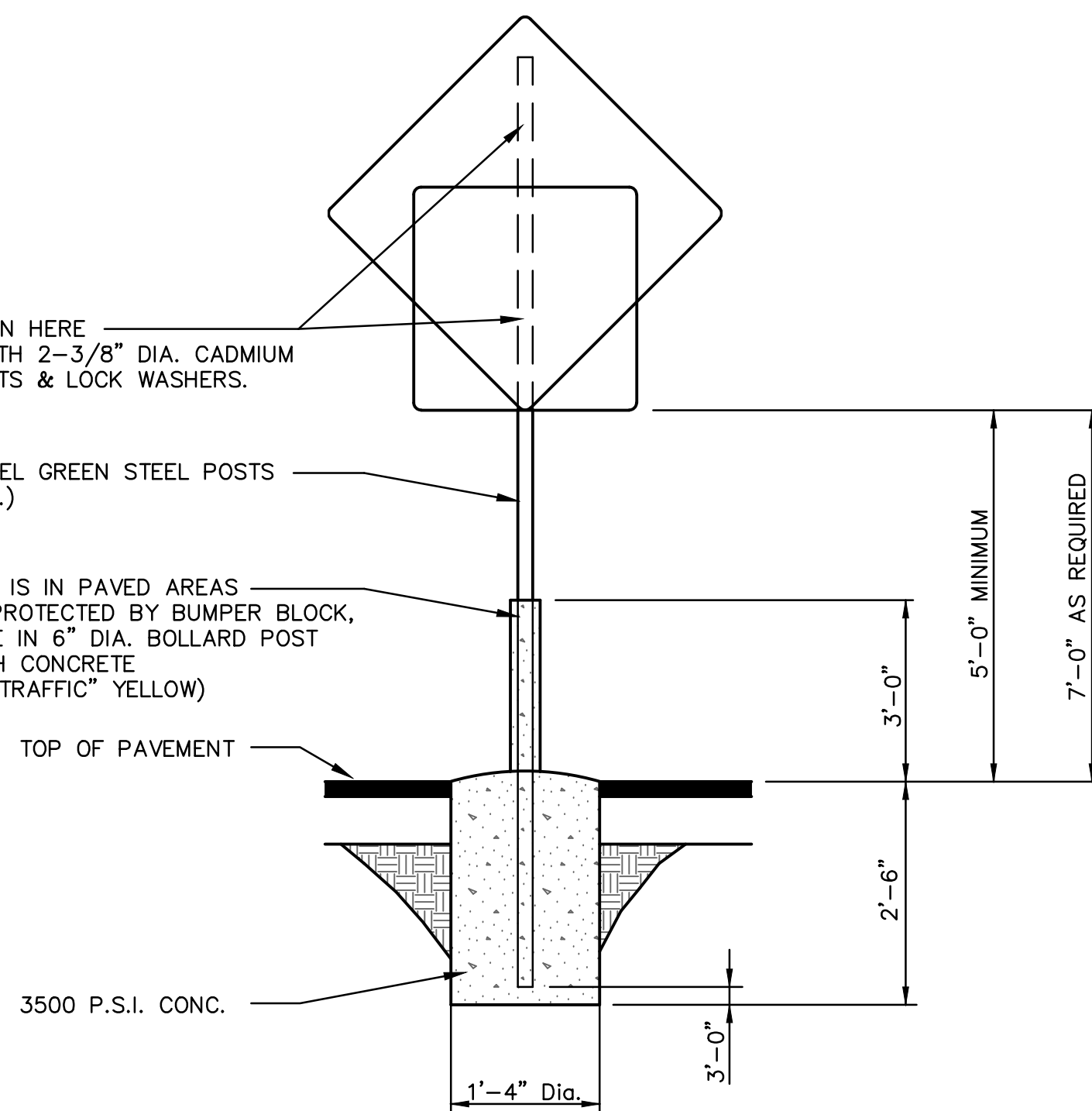


03 ACCESSIBLE SIGNAGE DETAIL

MOUNT SIGN HERE
FASTEN WITH 2-3/8" DIA. CADMIUM BOLTS, NUTS & LOCK WASHERS.

"U" CHANNEL GREEN STEEL POSTS
(2 LBS./FT.)

WHEN SIGN IS IN PAVED AREAS AND NOT PROTECTED BY BUMPER BLOCK, ETC. PLACE IN 6" DIA. BOLLARD POST FILLED WITH CONCRETE (PAINTED "TRAFFIC" YELLOW)



- ALL SIGNS SHOULD COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION'S "UNIFORM TRAFFIC CONTROL DEVICES", AND LOCAL CODES AS SPECIFIED. MOUNT SIGNS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- IF ANY SIGN PROTRUDES MORE THAN 1'-0" PAST THE CENTER LINE OF THE POST IT IS MOUNTED TO THE BOTTOM OF THE SIGN SHALL BE SET AT 7'-0" INSTEAD OF 5'-0".
- ALL SIGNS MAY NOT BE APPLICABLE TO THIS PROJECT. USE SIGNS SPECIFIED ON PLOT PLAN.
- SIGNS SHALL BE LOCATED 2'-6" BEHIND CURB WHERE THERE IS CURB & GUTTER.

06 SIGN BASE

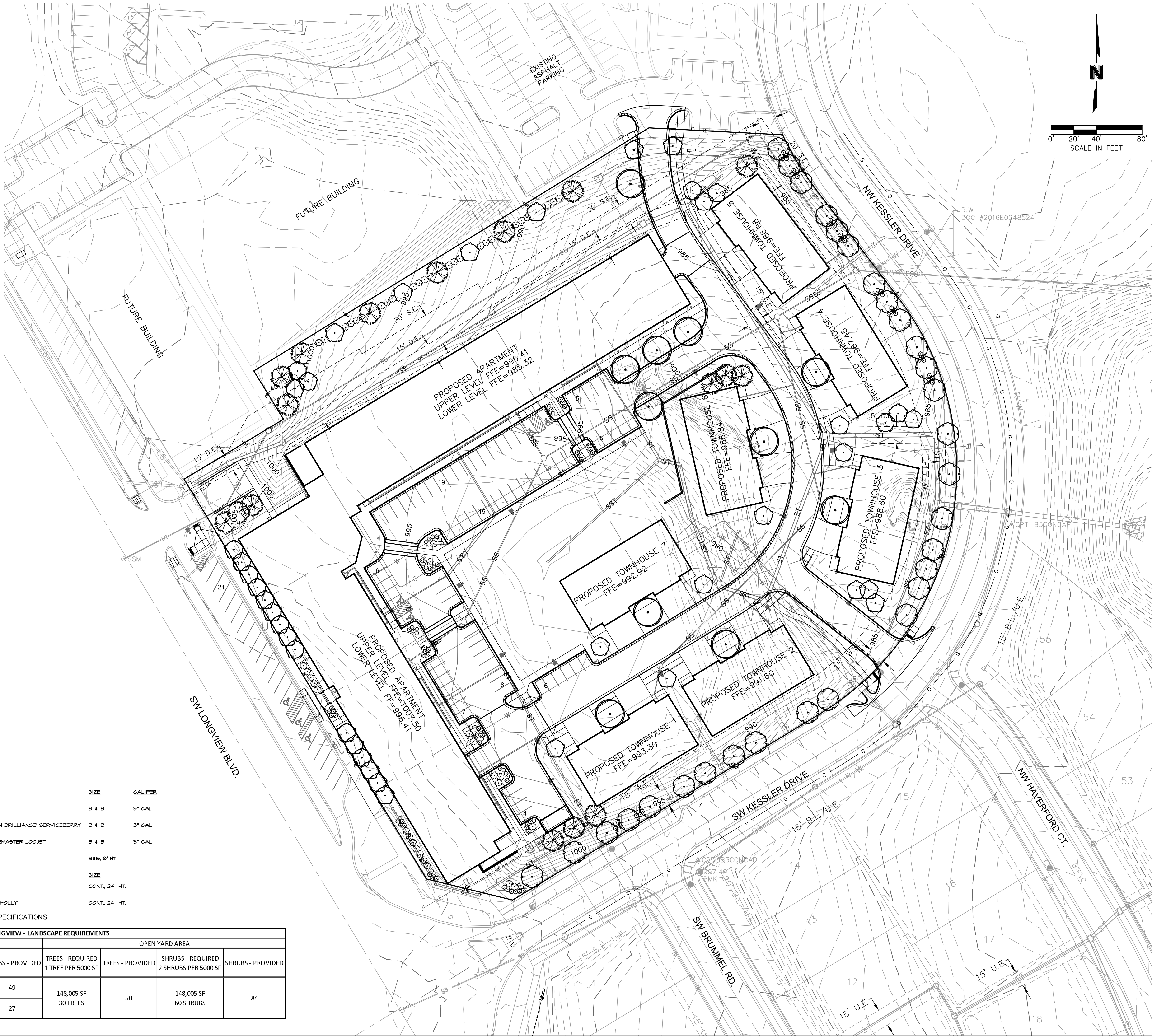
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DATE: Apr 18, 2018 4:49pm USER: rneiser

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME / COMMON NAME	SIZE	CALIPER
	30	ACER SACCHARUM 'AUTUMN BLAZE' / AUTUMN BLAZE MAPLE	B # B	3" CAL
	40	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / 'AUTUMN BRILLIANCE' SERVICEBERRY	B # B	3" CAL
	11	GLEDTISIA TRIACANTHOS INERMIS 'SHADEMASTER' TM / SHADEMASTER LOCUST	B # B	3" CAL
	17	PICEA ABIES / NORWAY SPRUCE	B#B, 8' HT.	
SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	SIZE	
	56	CORNUS STOLONIFERA / DOGWOOD	CONT., 24" HT.	
	102	ILEX CRENATA 'BENNETT'S COMPACTA' / BENNETT'S COMPACT HOLLY	CONT., 24" HT.	

TREE & SHRUB SPECIES AND QUANTITIES TO CONFORM TO PDP SPECIFICATIONS.

KESSLER RIDGE AT NEW LONGVIEW - LANDSCAPE REQUIREMENTS								
STREET FRONTAGE					OPEN YARD AREA			
	TREES - REQUIRED 1 TREE PER 30 LF	TREES - PROVIDED	SHRUBS - REQUIRED 1 SHRUB PER 20 LF	SHRUBS - PROVIDED	TREES - REQUIRED 1 TREE PER 5000 SF	TREES - PROVIDED	SHRUBS - REQUIRED 2 SHRUBS PER 5000 SF	SHRUBS - PROVIDED
SW KESSLER DR 969 LF FRONTAGE	33	33	49	49	148,005 SF 30 TREES	50	148,005 SF 60 SHRUBS	84
SW LONGVIEW BLVD 429 LF FRONTAGE	15	15	22	27				



LANDSCAPE PLAN
DEVELOPMENT PLANS

KESSLER RIDGE APARMENTS

drawn by: D.A.H.

checked by: N.D.H.

designed by: N.D.H.

QA/QC by: M.G.D.

project no.: 017-3697

date: 0000.00.00

STATE OF MISSOURI
JOHN F. HERRING
NUMBER
A-2007031555
04/12/2018
LANDSCAPE ARCHITECT

BY
NO. REV.
DATE
REVISIONS DESCRIPTION

2018
REVISIONS

OLSSON
ASSOCIATES

NO. Certificate of Authority #001892
301 E. BURLING ST. SUITE 100
NORTH KANSAS CITY, MO 64116
TEL 816.597.4320
FAX 816.597.1393
www.olssonassociates.com

KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI

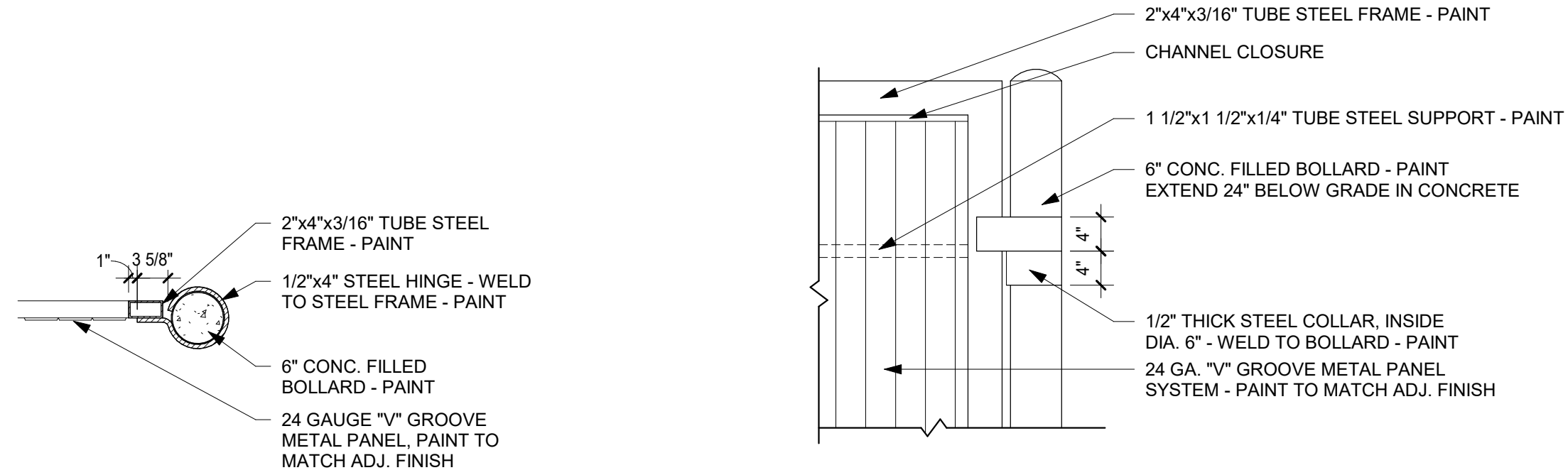
SHEET TITLE
ARCHITECTURAL SITE AMENITIES

PROJECT NUMBER: 16062

SHEET NUMBER:

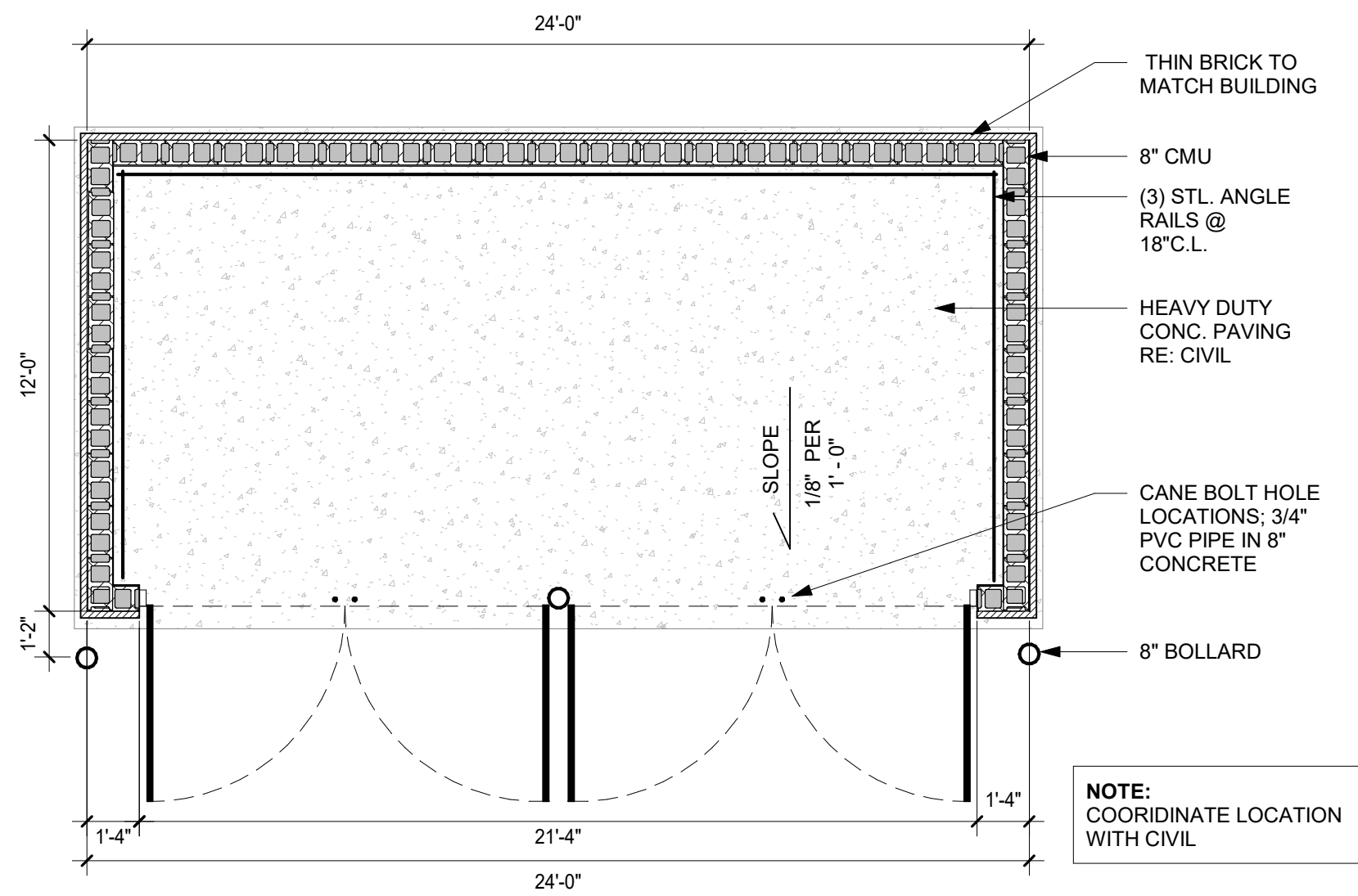
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DRAWN BY: SS CHECKED BY: EE

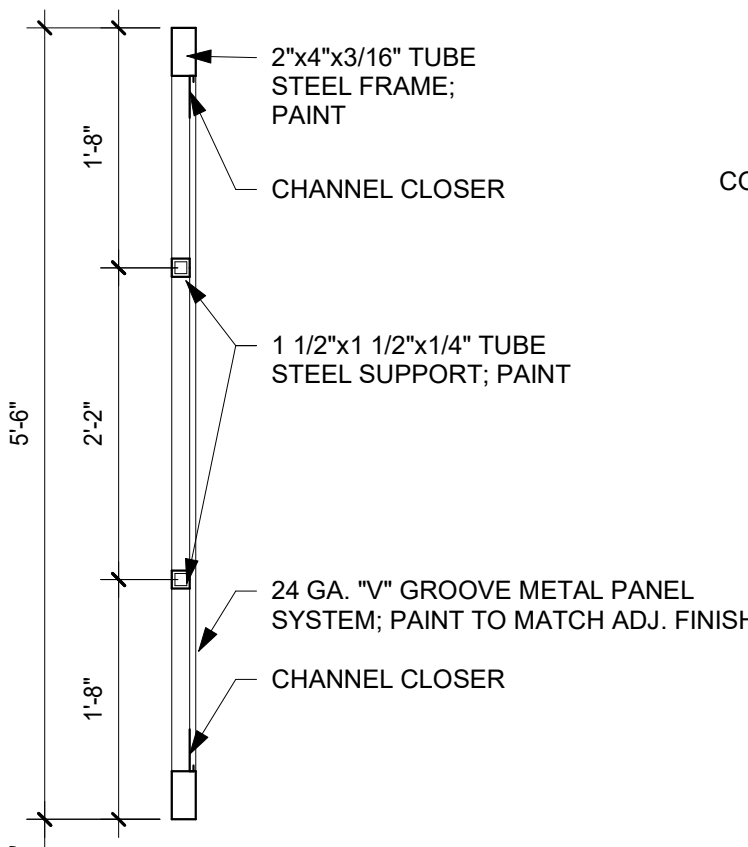


8 TRASH GATE CROSS SECTION
3/4" = 1'-0"

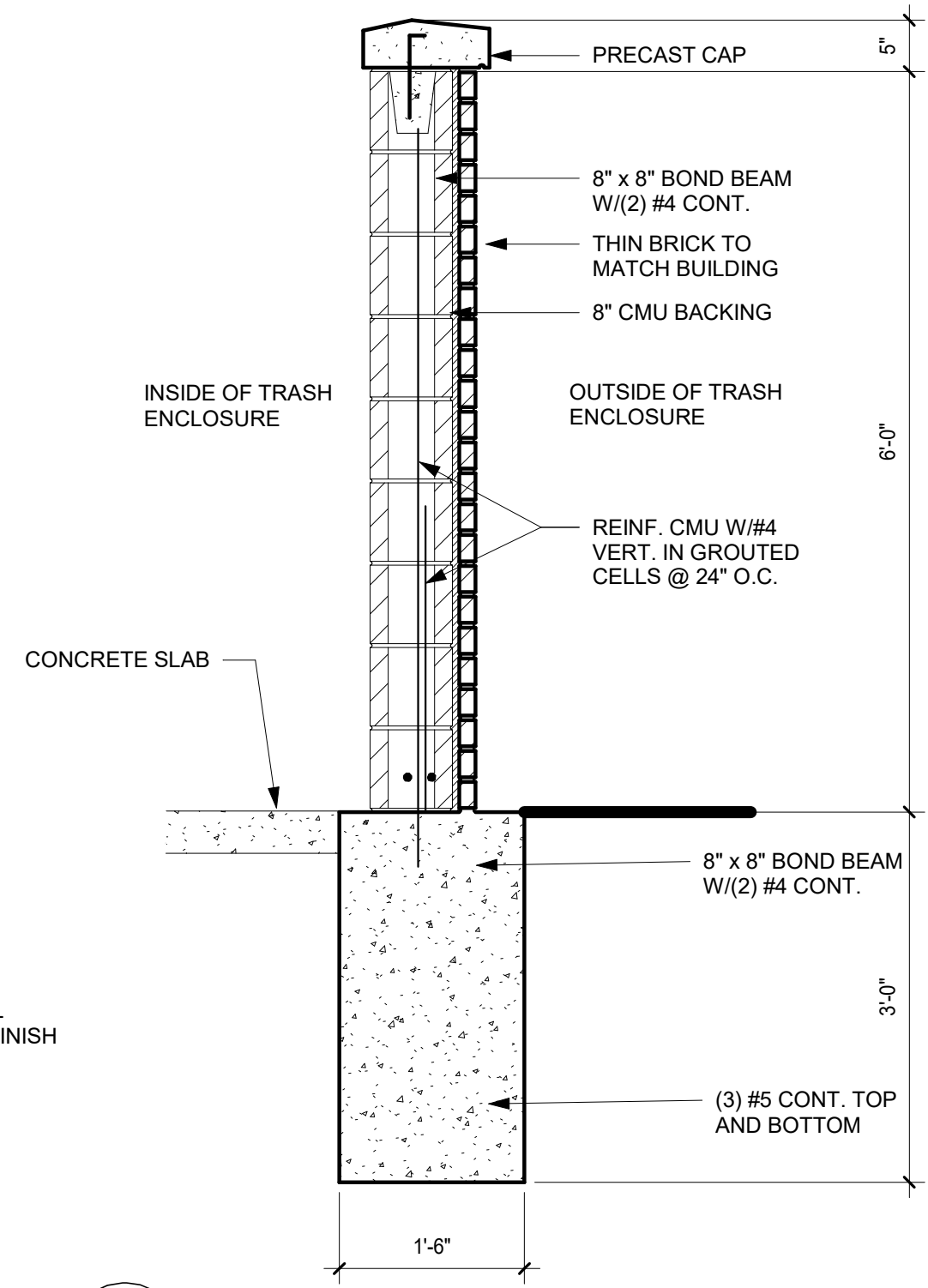
7 TRASH GATE DETAIL
3/4" = 1'-0"



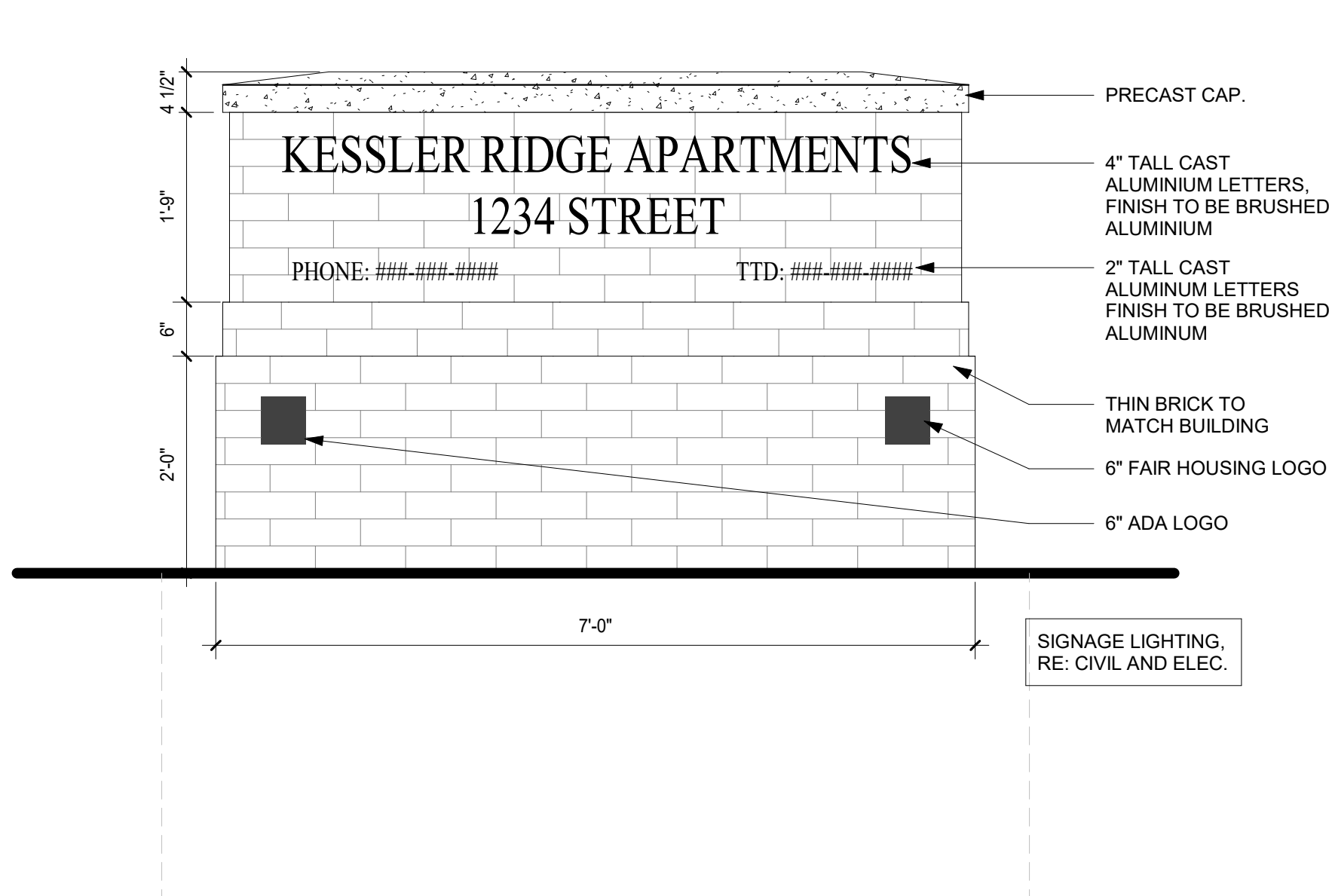
5 TRASH ENCLOSURE PLAN1
1/4" = 1'-0"



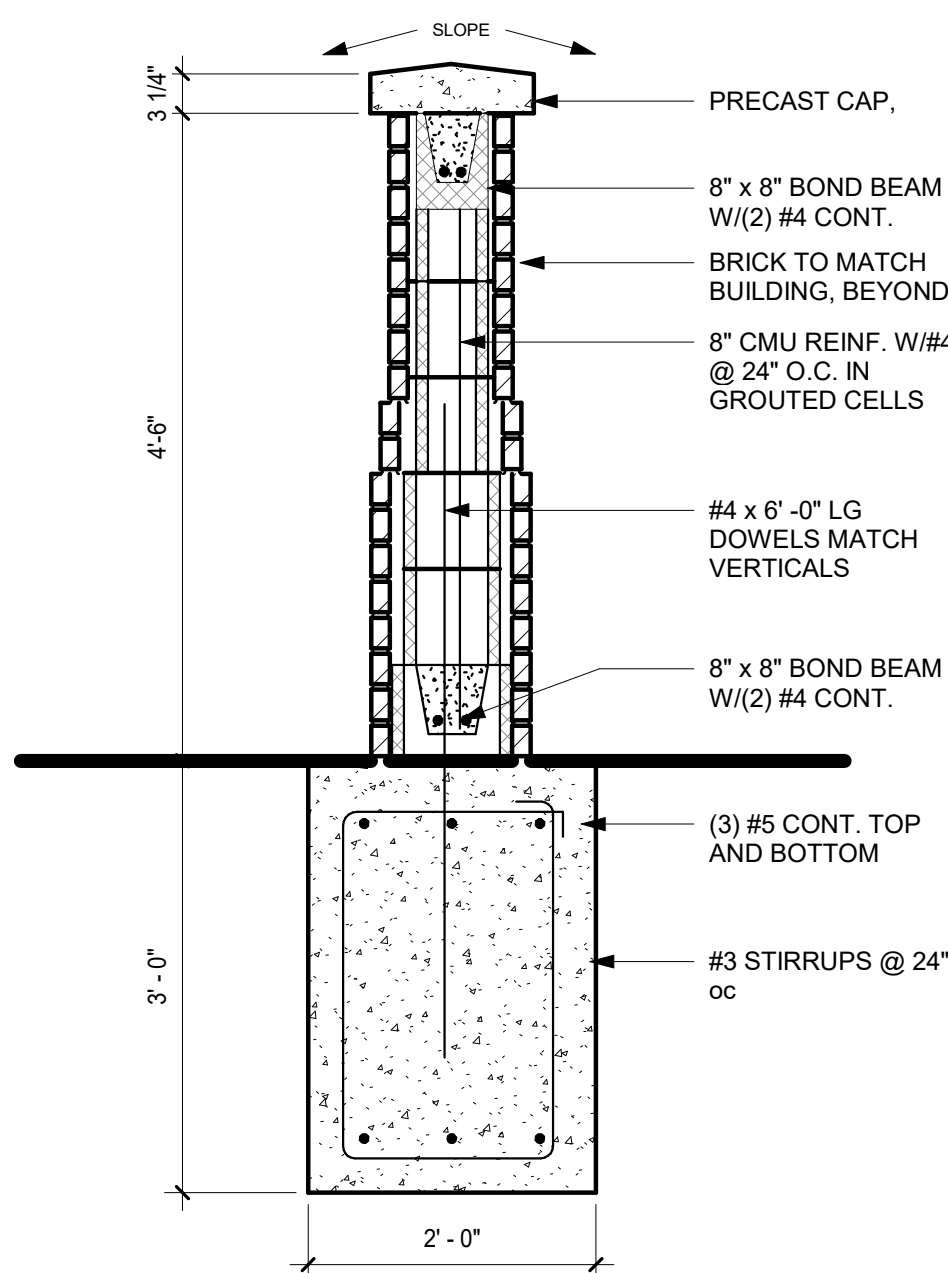
3 TRASH GATE SECTION
3/4" = 1'-0"



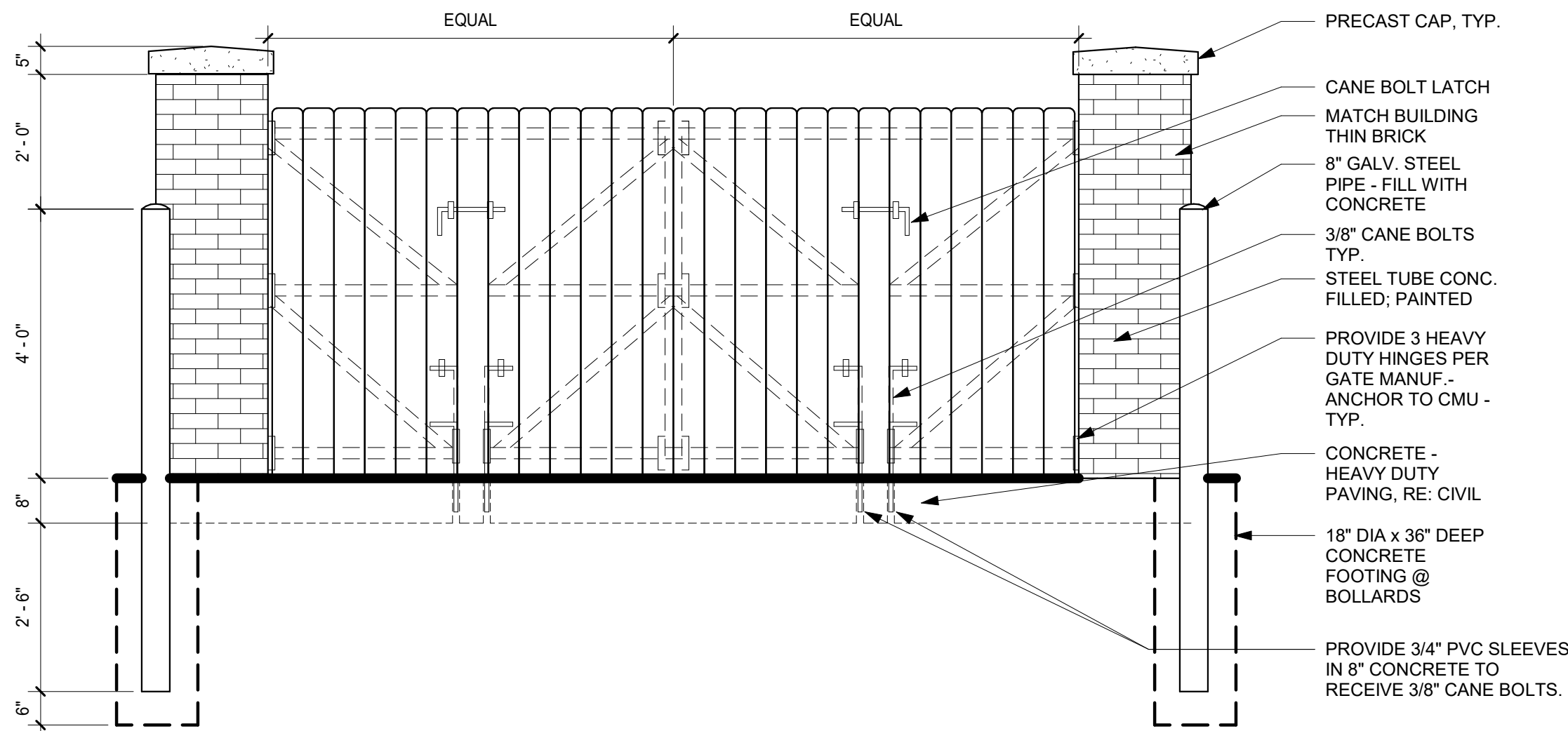
2 TRASH ENCLOSURE WALL SECTION
3/4" = 1'-0"



6 MONUMENT SIGN FRONT ELEVATION
3/4" = 1'-0"



4 MONUMENT SIGN SECTION
3/4" = 1'-0"



1 TRASH ENCLOSURE GATE ELEVATION1
1/2" = 1'-0"

**KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI**

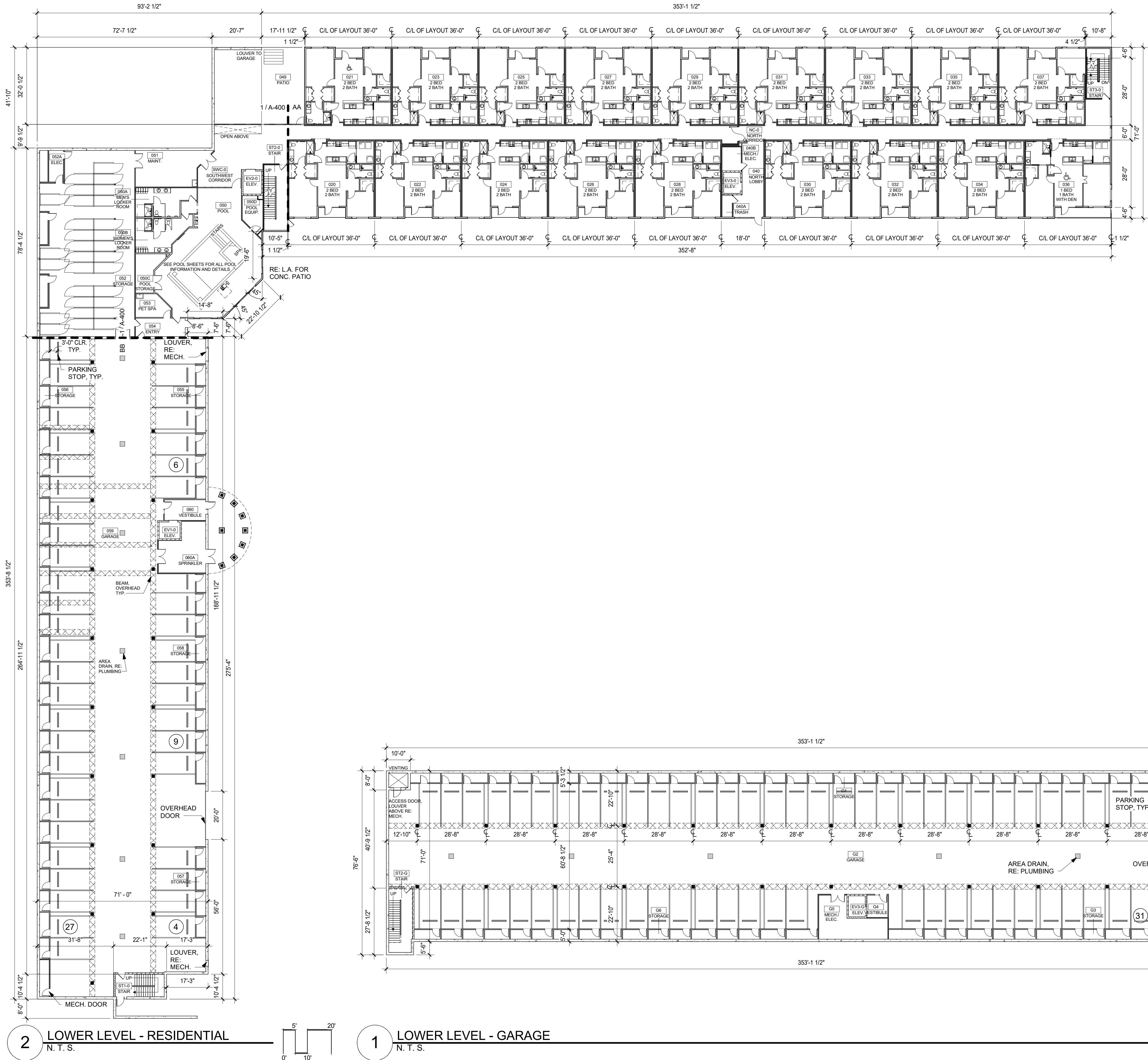
SHEET TITLE
LOWER LEVEL PLANS

PROJECT NUMBER: 16062

SHEET NUMBER:

A-101

DRAWN BY: AD CHECKED BY: EE



**KESSLER RIDGE
APARTMENTS**
LEE'S SUMMIT, MISSOURI

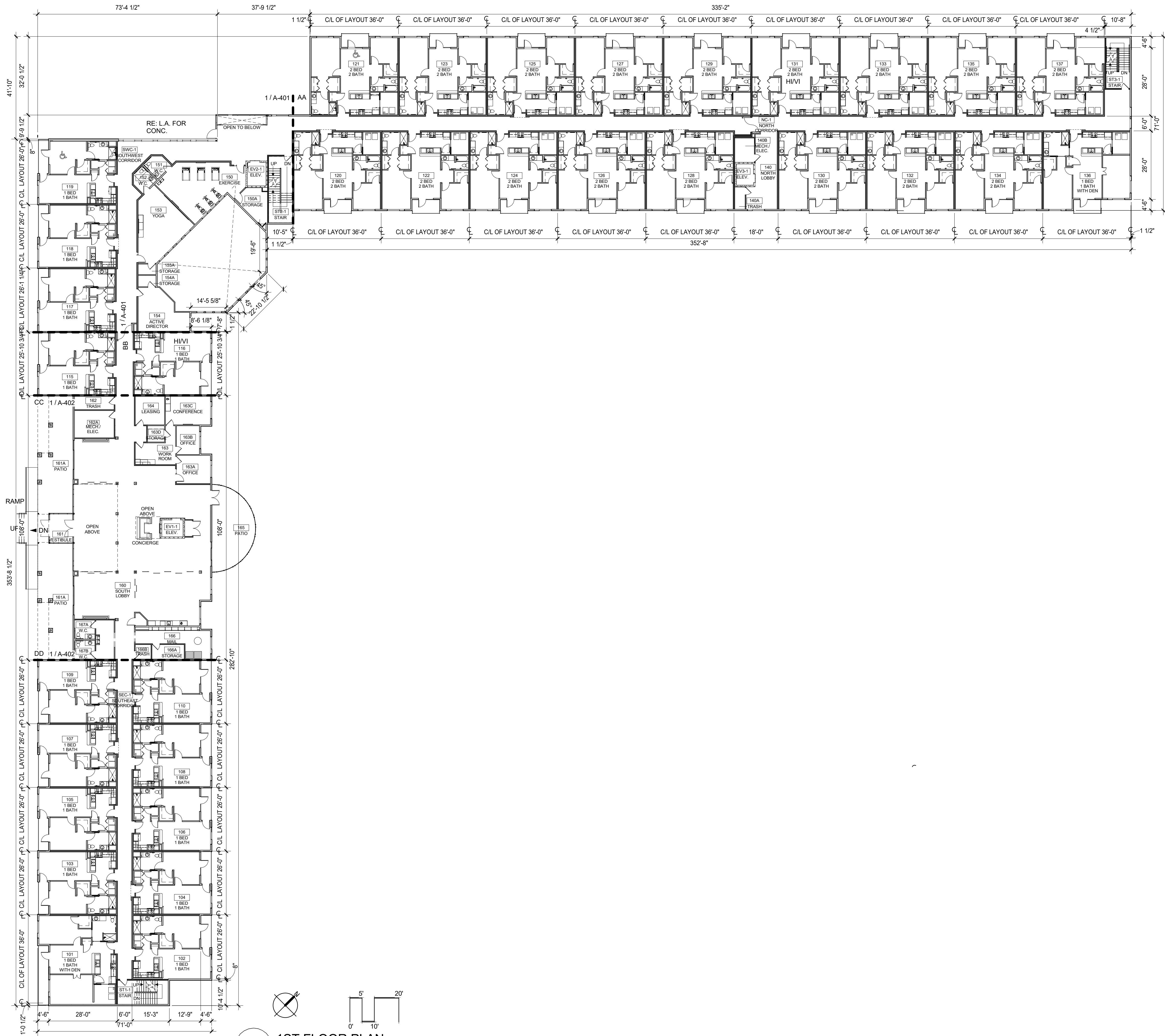
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1ST FLOOR PLAN

PROJECT NUMBER: 16062

SHEET NUMBER:

A-102

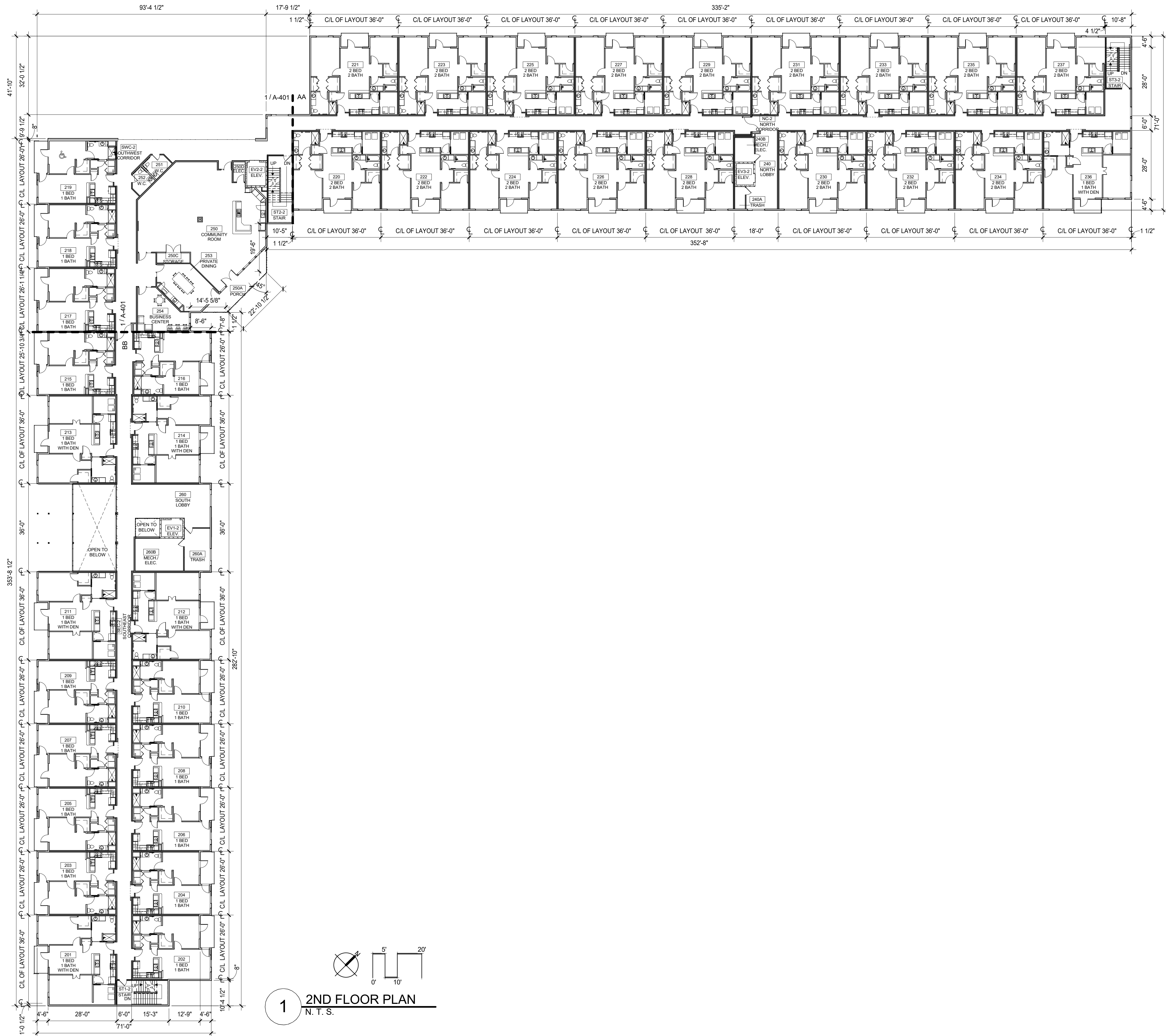
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KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI

SHEET TITLE
2ND FLOOR PLAN
PROJECT NUMBER: 16062
SHEET NUMBER:

A-103

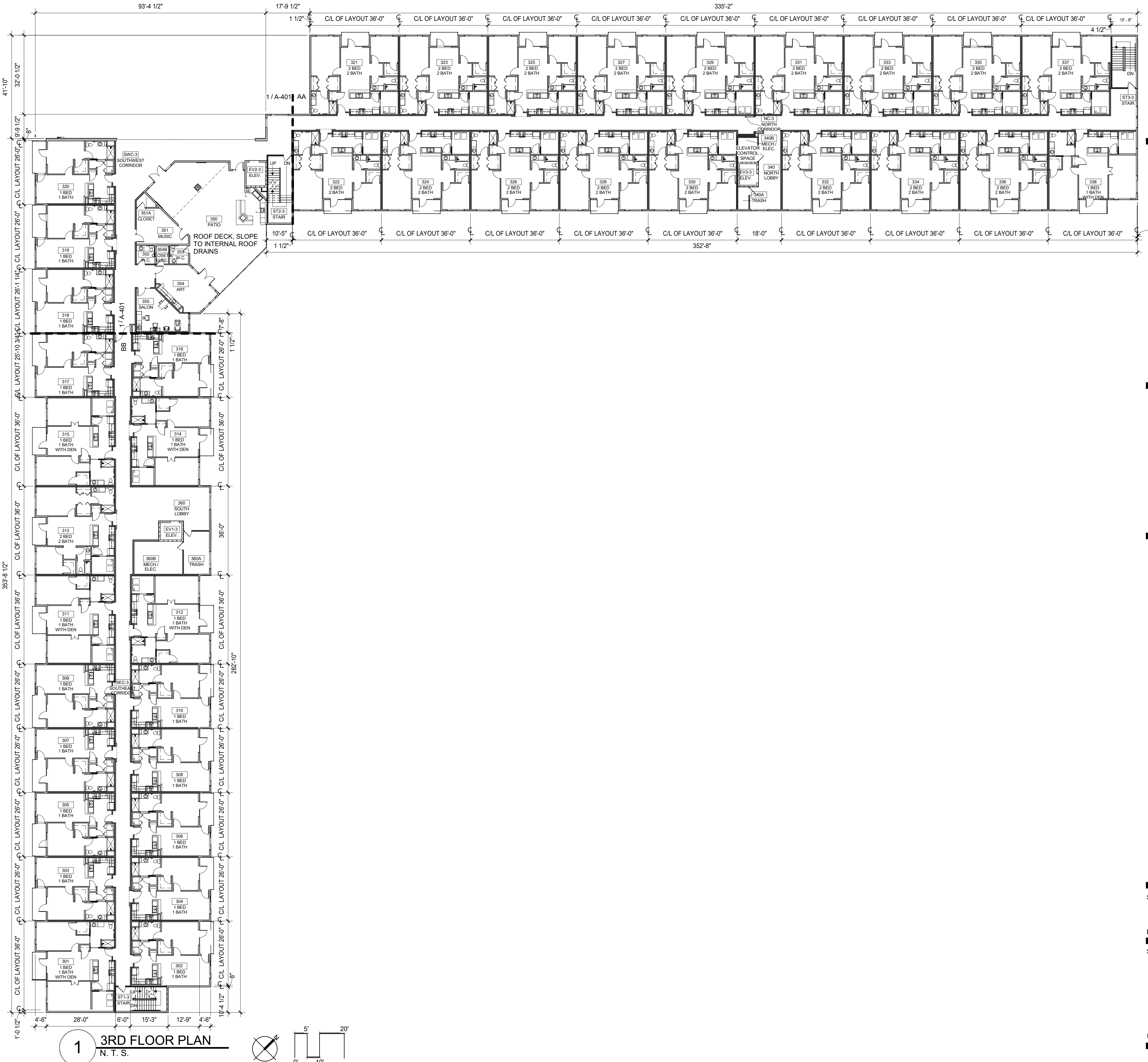
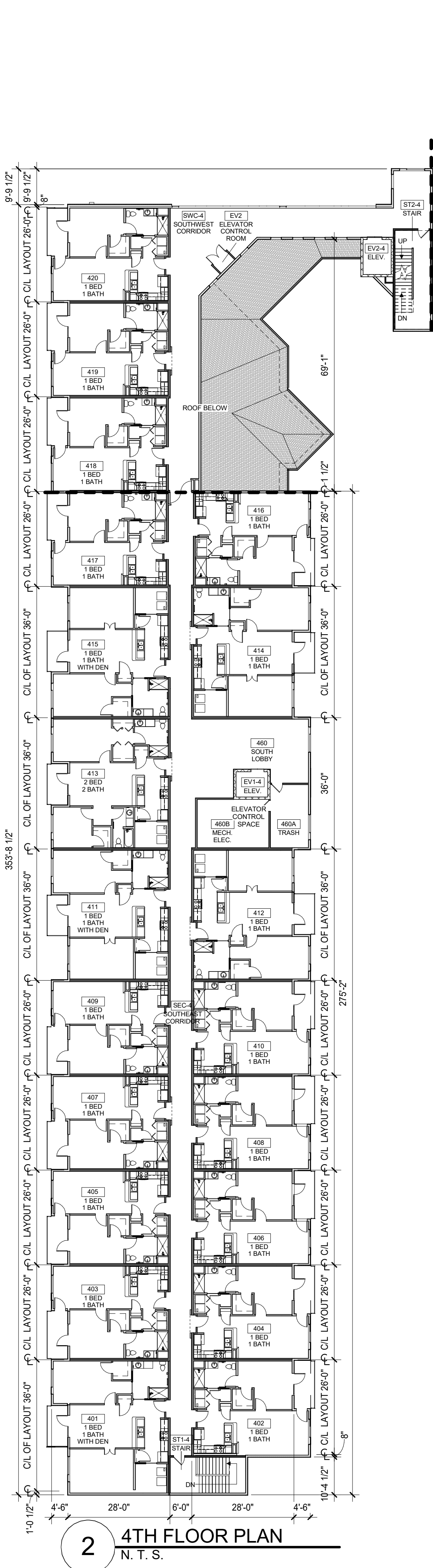


**KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI**

SHEET TITLE
3RD & 4TH FLOOR PLANS
PROJECT NUMBER: 16062
SHEET NUMBER:

A-104

DRAWN BY: AD CHECKED BY: EE



KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI

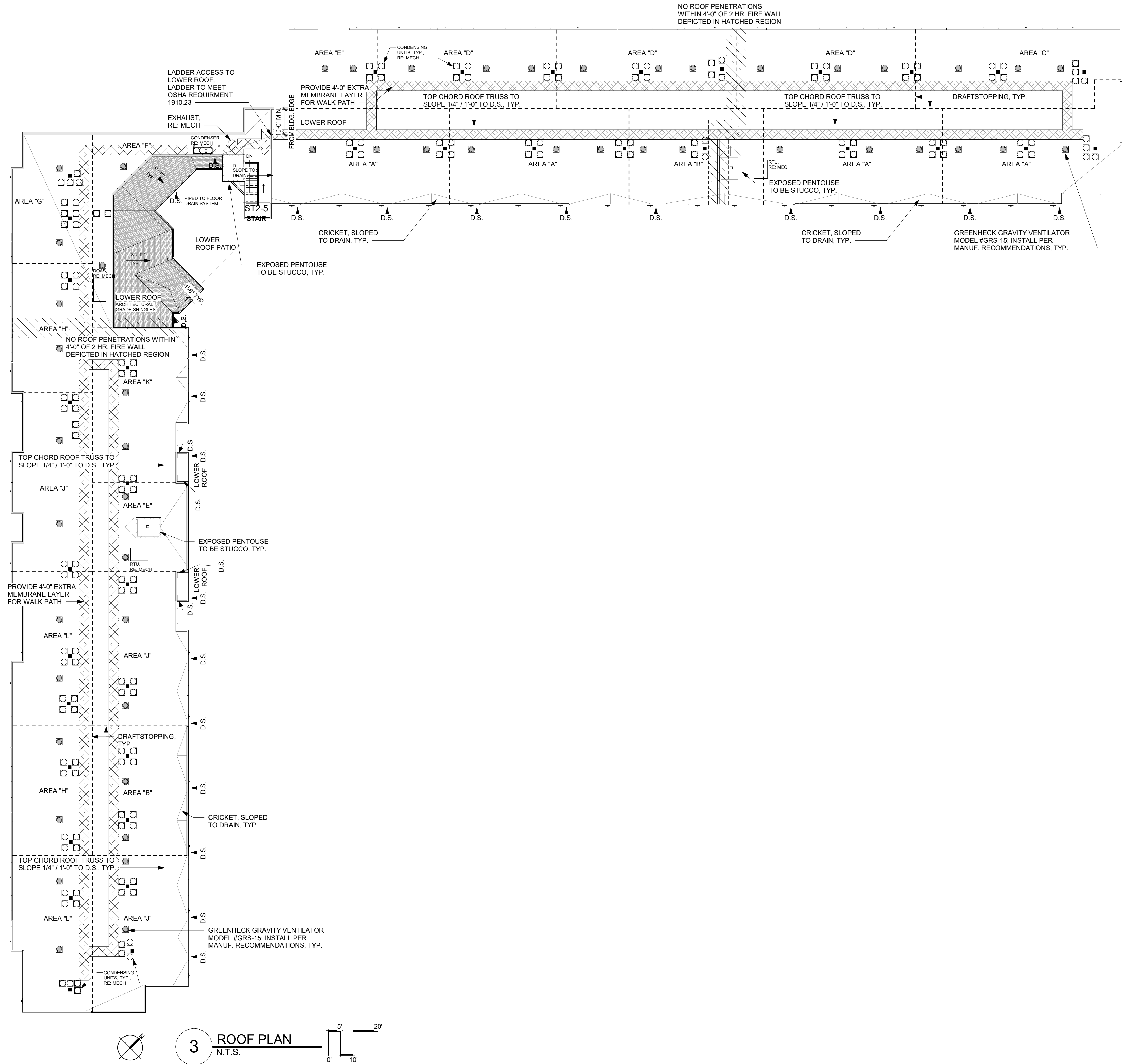
SHEET TITLE
ROOF PLAN

PROJECT NUMBER: 16062

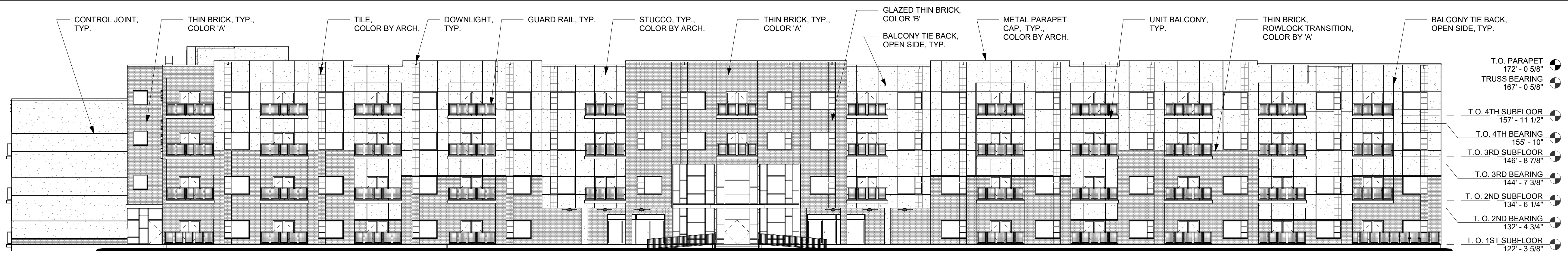
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A-105

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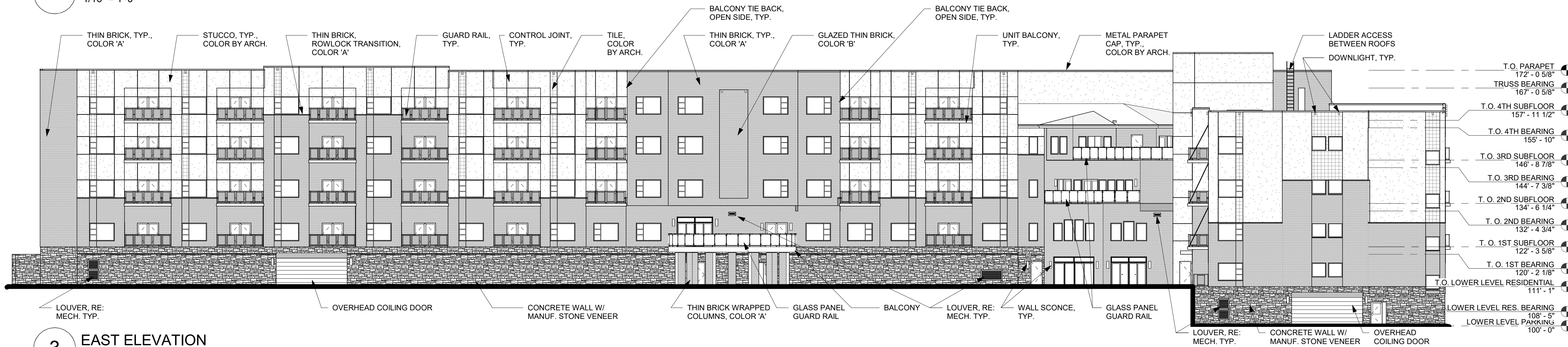


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C:\Users\jrd\Documents\16062 - Kessler Ridge - Control.dwg



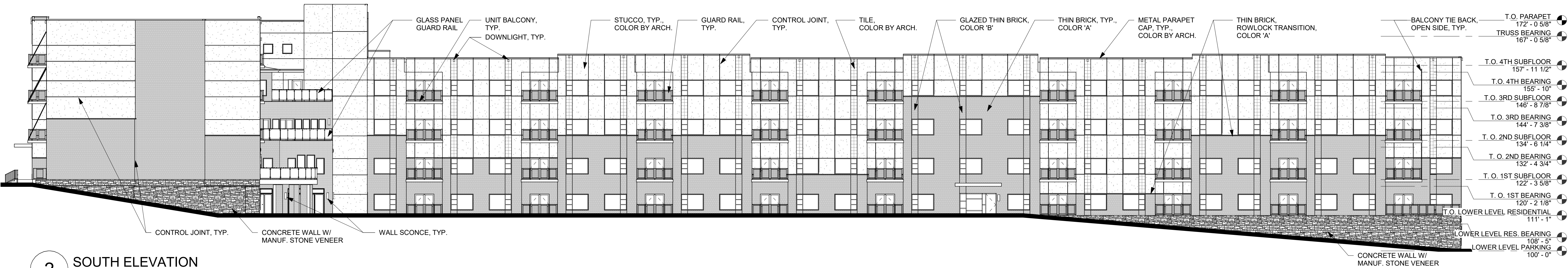
4 WEST ELEVATION

1/16" = 1'-0"



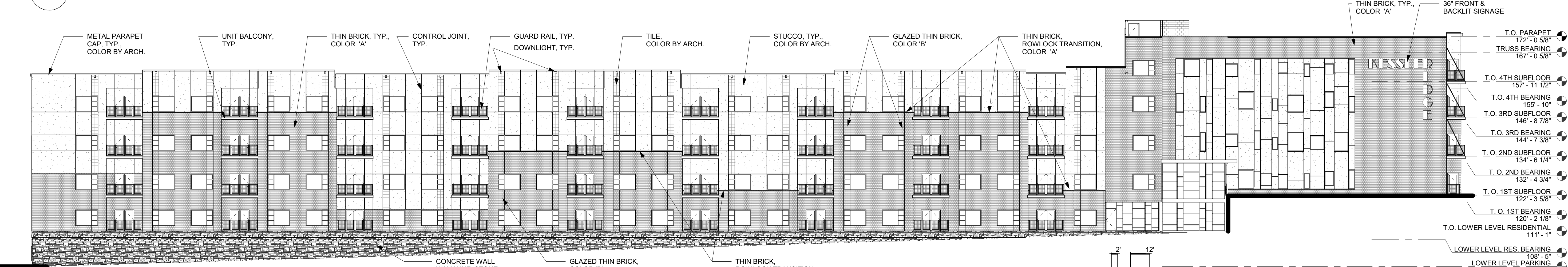
3 EAST ELEVATION

1/16" = 1'-0"



2 SOUTH ELEVATION

1/16" = 1'-0"



1 NORTH ELEVATION

1/16" = 1'-0"

PRINTS ISSUED

FINAL DEVELOPMENT PLAN - 04/20/2018

REVISIONS:

rosemann & ASSOCIATES P.C.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING
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Kansas City, MO 64108-1404
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KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI

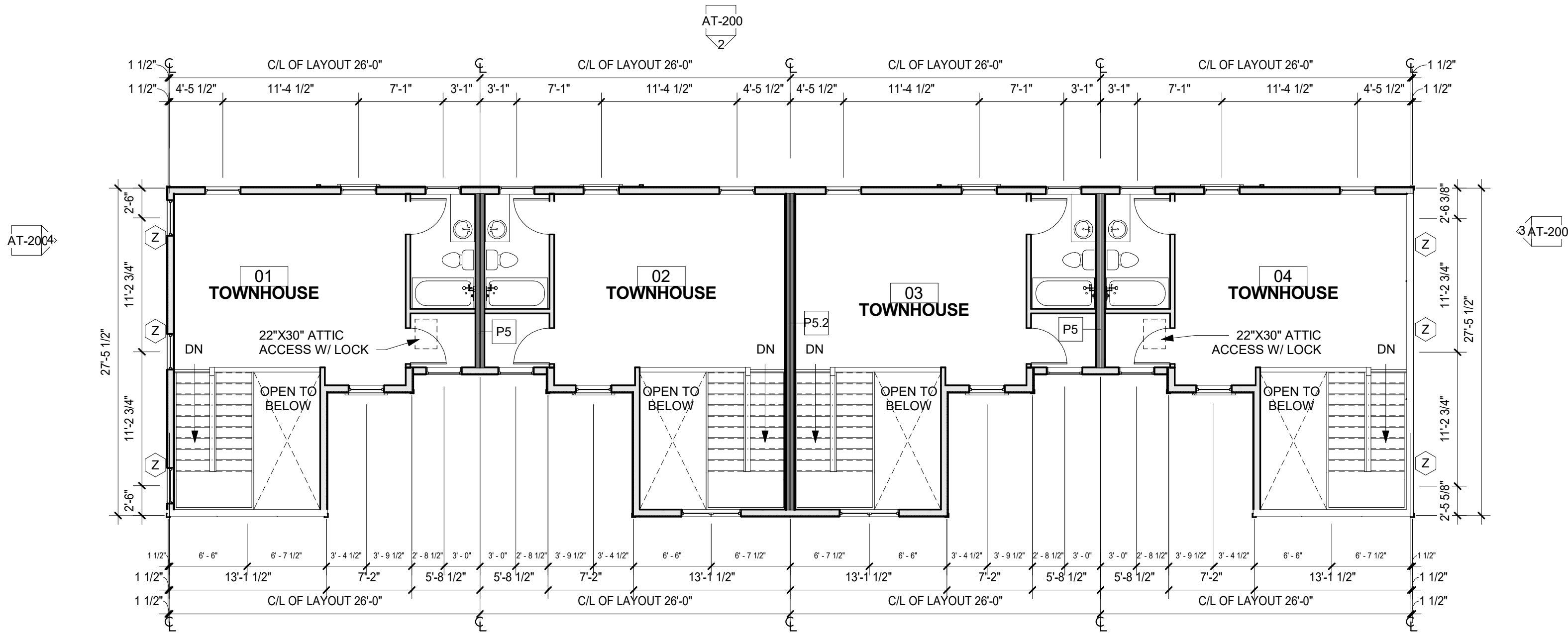
SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER: 16062

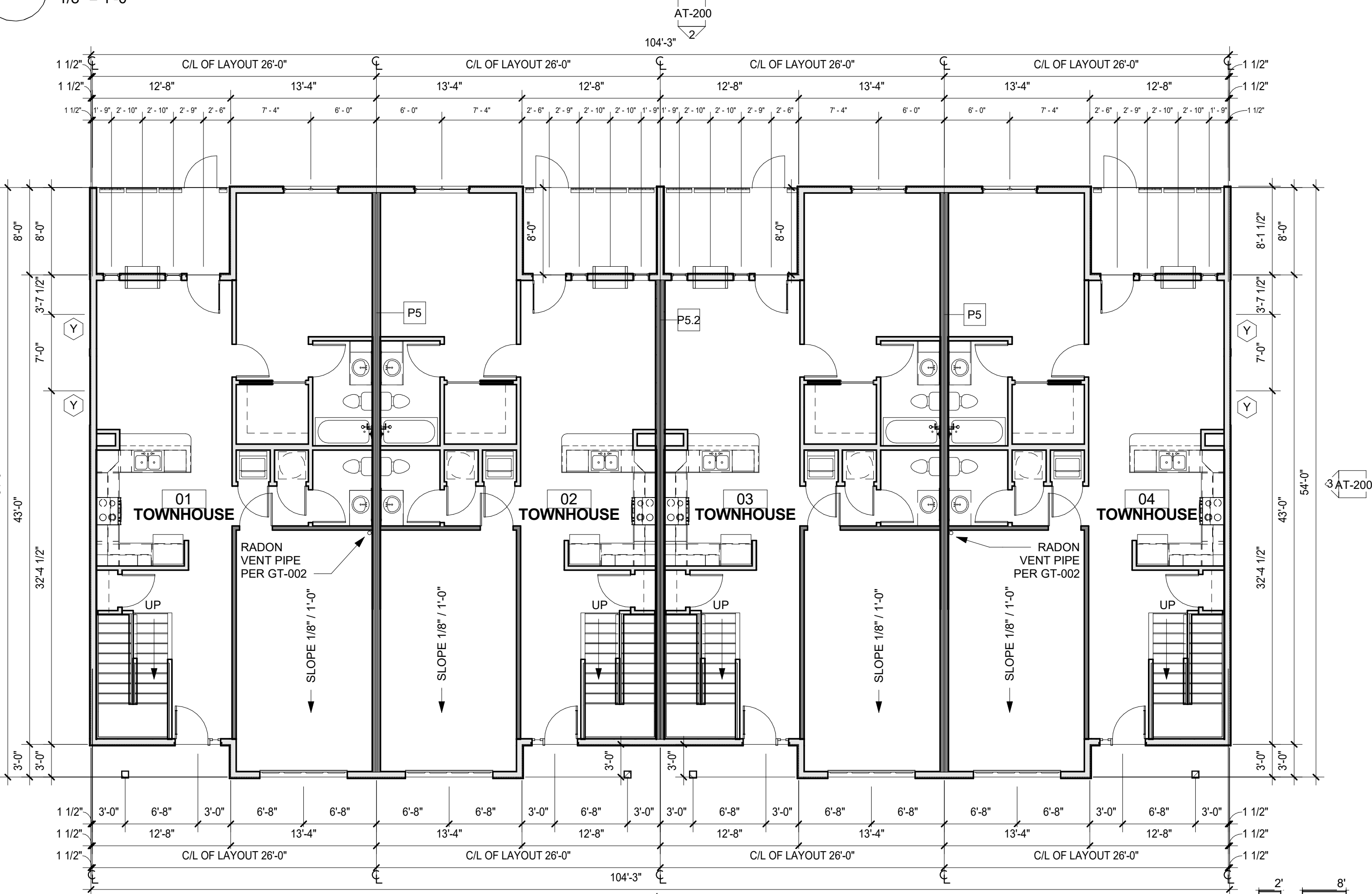
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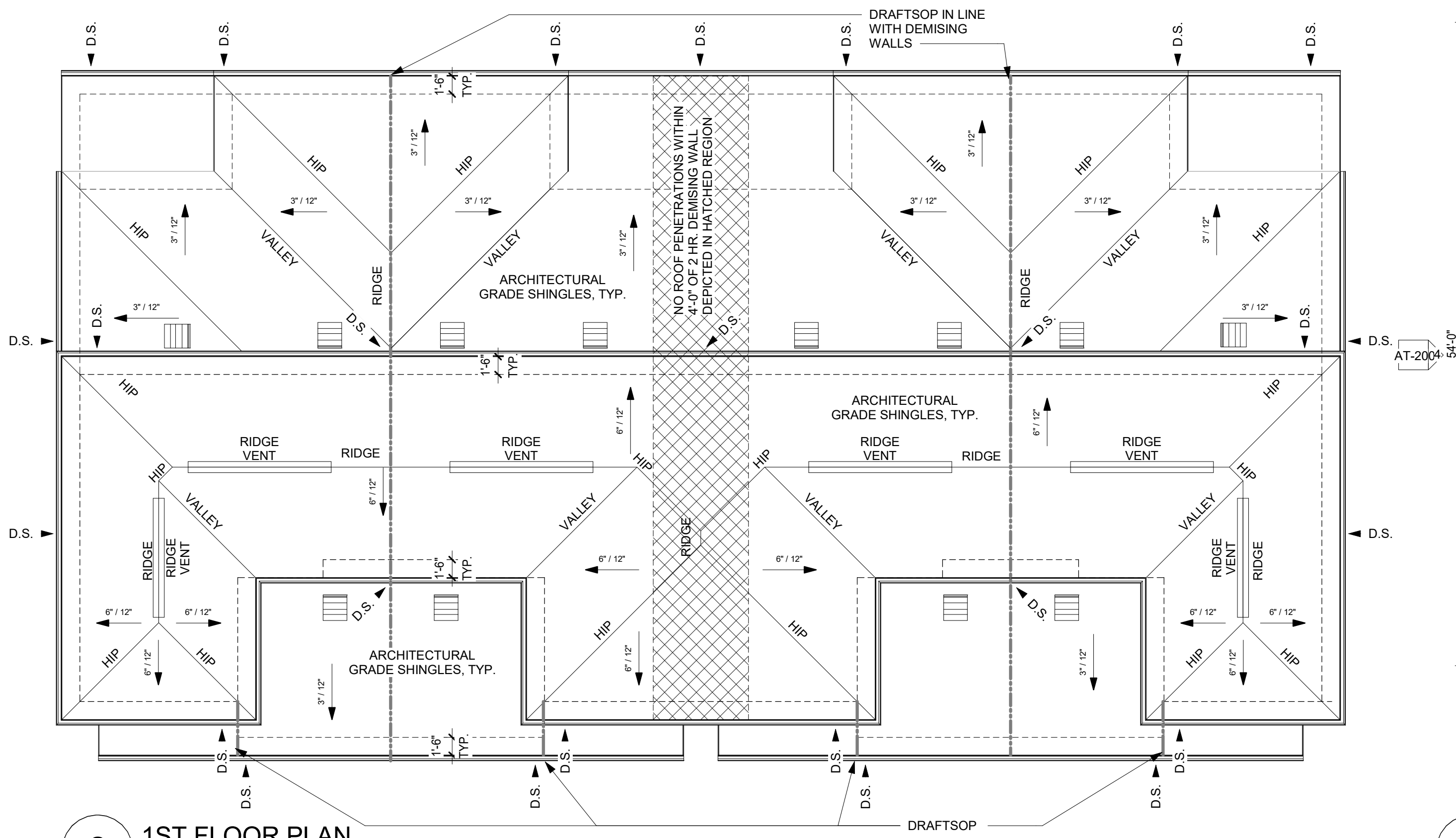
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3 TOWNHOUSE - 2ND FLOOR PLAN
1/8" = 1'-0"



1 TOWNHOUSE - 1ST FLOOR PLAN
1/8" = 1'-0"



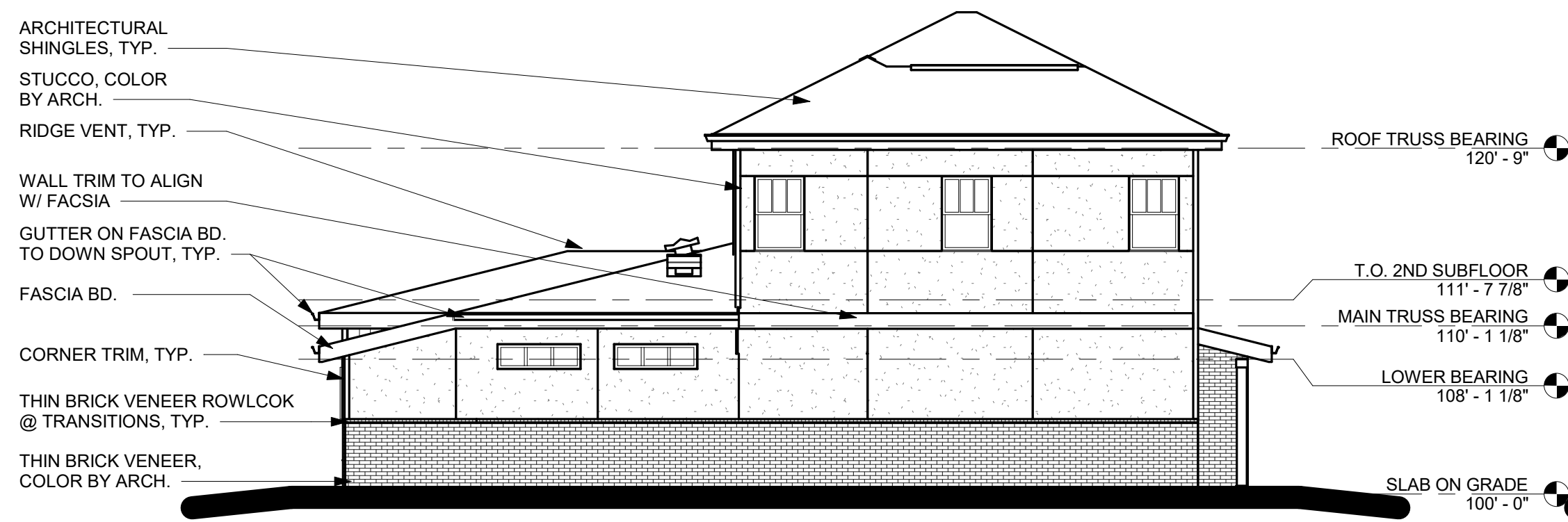
2 1ST FLOOR PLAN
1/8" = 1'-0"

**KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI**

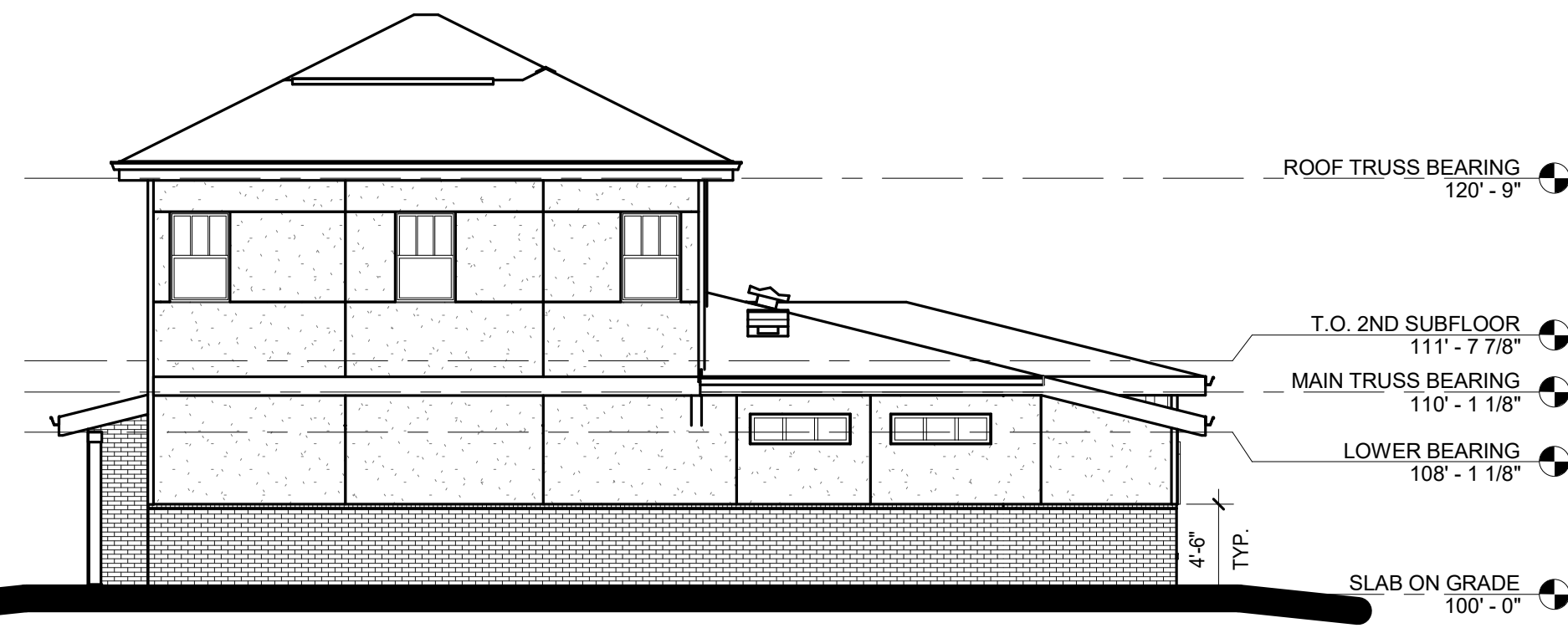
SHEET TITLE
TOWNHOUSE BUILDING PLANS
PROJECT NUMBER: 16062
SHEET NUMBER:

AT-101

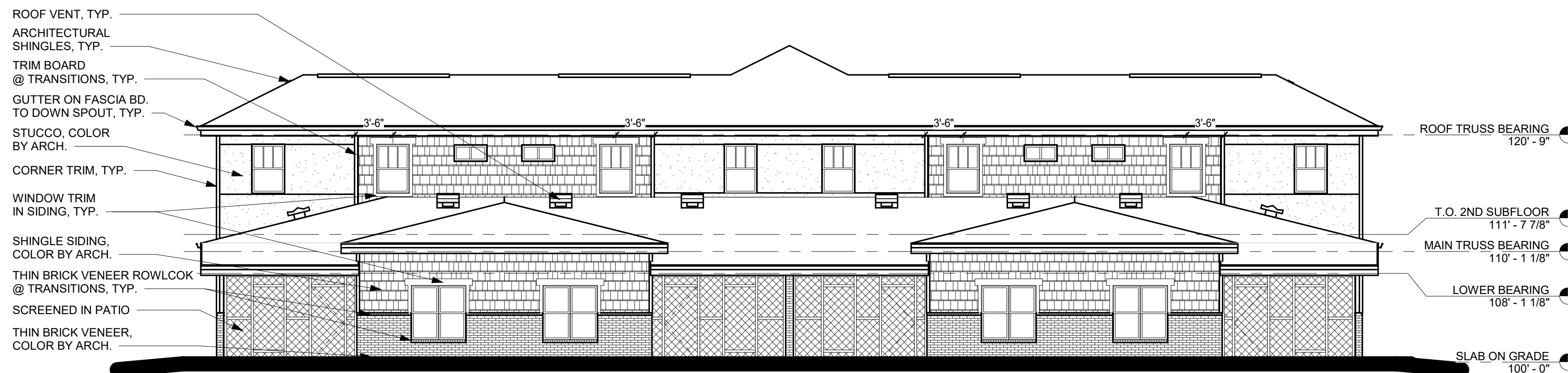
DRAWN BY: AD CHECKED BY: EE



4 TOWNHOUSE - LEFT ELEVATION
1/8" = 1'-0"



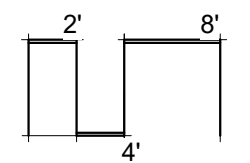
3 TOWNHOUSE - RIGHT ELEVATION
1/8" = 1'-0"



2 TOWNHOUSE - REAR ELEVATION
1/8" = 1'-0"



1 TOWNHOUSE - FRONT ELEVATION
1/8" = 1'-0"



KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI

SHEET TITLE
TOWNHOUSE BUILDING
ELEVATIONS

PROJECT NUMBER: 16062

SHEET NUMBER:

AT-200

DRAWN BY: AD CHECKED BY: EE

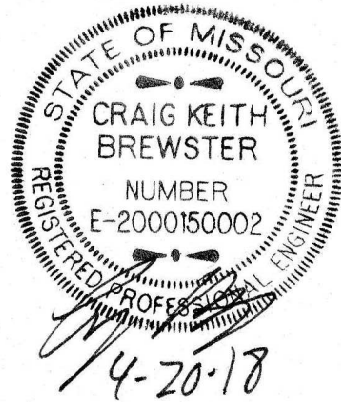
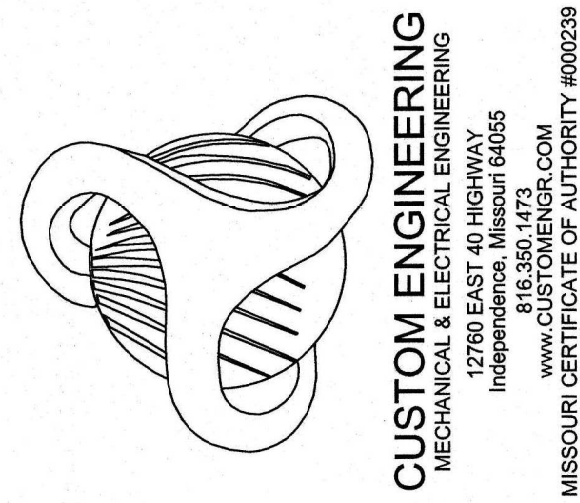
LUMINAIRE SCHEDULE						
SYMBOL	LABEL	DESCRIPTION	MANUFACTURE	CATALOG NUMBER	LUMENS	WATTAGE
■	PL	SITE LED LIGHT WITH 20' POLE	US ARCHITECTURAL	QSR/4810/PLED-IV-RAL-8019/DBZ	18040	160
■	BL	6" SQUARE BOLLARD LED LIGHT	WILLIAMS	OSA6S-L20/830-AC-FT-DBR-AB-UNV	1039	27.5
●	Y	BULLET SHAPE ALUMINUM FLOOD LED LIGHT	RAB LIGHTING	HSLED13B	780	13

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	2.3 fc	10.2 fc	0.1 fc	102.0:1	23.0:1
Calc Zone #2	+	4.4 fc	10.2 fc	0.2 fc	51.0:1	22.0:1
Calc Zone #3	+	2.9 fc	8.3 fc	0.5 fc	16.6:1	5.8:1
Calc Zone #4	+	2.1 fc	8.0 fc	0.1 fc	80.0:1	21.0:1
Calc Zone #5	+	2.8 fc	14.9 fc	0.1 fc	149.0:1	28.0:1
Calc Zone #6	+	1.6 fc	3.5 fc	0.3 fc	11.7:1	5.3:1



PRINTS ISSUED
DATE - 4/20/2018- CITY SUBMITTAL

REVISIONS:



KESSLER RIDGE
APARTMENTS
LEE'S SUMMIT, MISSOURI

SHEET TITLE
SITE PHOTOMETRIC
LIGHTING PLAN

PROJECT NUMBER: 16062

SHEET NUMBER:

E-002

DRAWN BY: AAS CHECKED BY: CKB