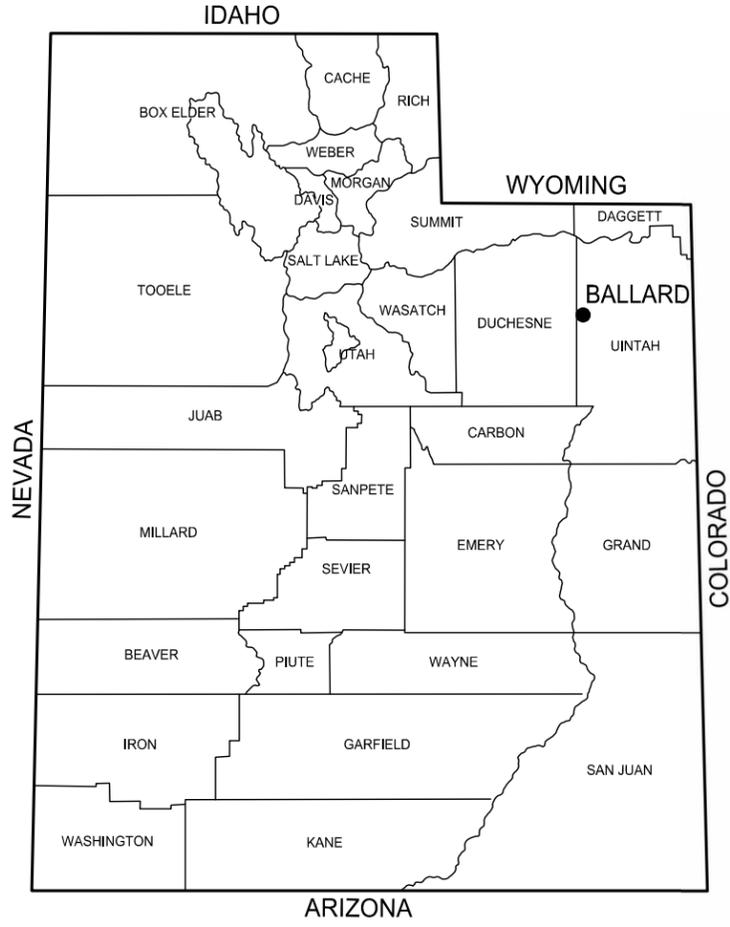


**KATIE ENTERPRISES, LLC**  
**THE RANCHES SUBDIVISION - PHASE 3+**  
**BALLARD, UTAH**  
**2023**

PROJECT NO.	SHEET NO.
2203-046	C-001
SUBMITTAL: <span style="color: red;">REVIEW - NOT FOR CONSTRUCTION</span>	



DRAFT FOR REVIEW ONLY

**APPROVAL**

RECOMMENDED FOR APPROVAL:	
ENGINEER	DATE
APPROVED:	
KATIE ENTERPRISES, LLC	DATE

INDEX TO SHEETS	
SHEET NO.	SHEET TITLE
C-001	TITLE
C-101	SITE PLAN
C-102 TO C-105	PLAN AND PROFILE
C-106	GRADING PLAN
C-301	TYPICAL SECTION
C-501 TO C-506	DETAILS

VICINITY MAP



**Jones & DeMille Engineering, Inc.**  
 CIVIL & STRUCTURAL ENGINEERING - SURVEYING  
 GIS - ENVIRONMENTAL - MATERIALS TESTING  
*- shaping the quality of life -*  
 1.800.748.5275 www.jonesanddemille.com

**GENERAL NOTES**

1. REQUEST ACCEPTANCE FROM ENGINEER PRIOR TO MAKING MODIFICATIONS TO DRAWINGS, SPECIFICATIONS, OR CONSTRUCTION SCHEDULE.
2. PERFORM CONSTRUCTION IN ACCORDANCE WITH LATEST VERSION (2017) OF APWA UTAH CHAPTER MANUAL OF STANDARD SPECIFICATIONS AND MANUAL OF STANDARD PLANS, INCLUDING AMENDMENTS, DDW RULES, INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FIRE CODE (IFC), INTERNATIONAL RESIDENTIAL CODE (IRC), AND/OR OWNER STANDARDS AND SPECIFICATIONS.
3. IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, STATE RULES, DRAWINGS AND SPECIFICATIONS, ADHERE TO MOST STRINGENT REQUIREMENTS.
4. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AND ARE BASED ON UTILITY MAPS AND FIELD SURVEY.
5. LOCATE AND PROTECT EXISTING UTILITIES AND ANY OBSTRUCTIONS DURING COURSE OF CONSTRUCTION. NOTIFY BLUE STAKES (811) AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES ON SITE. RESTORE UTILITIES DAMAGED DURING CONSTRUCTION TO CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITION PRIOR TO CONSTRUCTION.
6. NOTIFY ENGINEER OR PROJECT REPRESENTATIVE OF ANY CONFLICTS BETWEEN EXISTING FEATURES AND NEW CONSTRUCTION.
7. UNLESS DETAILED, SPECIFIED OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN APPLICABLE TYPICAL DETAILS AND GENERAL NOTES.
8. CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL AND SECURITY.
9. MEET UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY AND U.S. EPA REQUIREMENTS, RULES, AND REGULATIONS.
10. OBTAIN REQUIRED APPROVALS AND PERMITS AND PAY REQUIRED FEES PRIOR TO BEGINNING CONSTRUCTION.
11. FOR MATERIALS USED AND WORK PERFORMED IN UTAH DEPARTMENT OF TRANSPORTATION (UDOT) RIGHT-OF-WAY, CONFORM TO UDOT STANDARDS AND SPECIFICATIONS.
12. CONDUCT CONSTRUCTION OPERATIONS WITH NECESSARY SIGNS, BARRICADES, AND FLASHERS PLACED TO COMPLY WITH OSHA, UTAH STATE INDUSTRIAL COMMISSION, LOCAL SAFETY STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. NO FULL ROAD CLOSURES WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF OWNER. MAINTAIN TRAFFIC IN TWO DIRECTIONS AT ALL TIMES FOR ROADS AND ROAD CROSSINGS, UNLESS EXTENUATING CIRCUMSTANCES PROHIBIT. MAKE ROAD CLOSURE REQUESTS 1 WEEK BEFORE NEEDING TO CLOSE ROAD.
14. PROVIDE WRITTEN NOTIFICATION INCLUDING CONTACT INFORMATION, TO RESIDENTS AND BUSINESSES IMPACTED BY CONSTRUCTION. PROVIDE NOTICE MINIMUM OF 48 HOURS IN ADVANCE OF WORK BEING PERFORMED. MAINTAIN DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES UNLESS PARKING ARRANGEMENTS HAVE BEEN MADE WITH RESIDENTS AND BUSINESSES WHILE WORK IS COMPLETED ADJACENT TO OR ON THEIR PROPERTIES.
15. WORK WITH INDIVIDUAL PROPERTY OWNERS OR BUSINESS FOR ACCESS AND PERMISSION TO CONNECT TO UTILITY SERVICE AT PROPERTIES.
16. OBTAIN RIGHT OF INGRESS AND EGRESS SHOULD WORK OR PERSONNEL VENTURE ONTO PRIVATE PROPERTY WHICH IS NOT INCLUDED IN OWNER ACQUIRED RIGHTS-OF-WAY AND EASEMENTS.
17. OBTAIN COUNTY PERMIT BEFORE BEGINNING CONSTRUCTION FOR WORK LOCATED WITHIN 30 FEET OF GOVERNMENT SURVEY MONUMENT OR PUBLIC LAND SURVEY GOVERNMENT CORNER.

**SURVEY NOTES**

1. SUBJECT SITE WAS FIELD SURVEYED [DATE] BY JONES AND DEMILLE ENGINEERING.
2. ANY COORDINATES, IF SHOWN, ARE LOCAL COORDINATES UNLESS OTHERWISE INDICATED.
3. DISTANCES REFLECT GROUND MEASUREMENTS.

**UTILITY NOTES**

1. COORDINATE UTILITY CONNECTIONS AND SERVICES PRIOR TO COMMENCING CONSTRUCTION. STAGE CONSTRUCTION TO MITIGATE DELAYS OF SERVICES AND PERMITTING.
2. PROVIDE UTILITY PIPING AND APPURTENANCES IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND IN CONFORMANCE WITH APPROPRIATE JURISDICTIONAL SPECIFICATIONS AND DETAILS.
3. PROVIDE SUBMITTALS TO ENGINEER FOR REVIEW AND ACCEPTANCE FOR BEDDING, BACKFILL, PIPE, METERS, BOXES, VALVES, FIRE HYDRANTS, BLOWOFFS, VAULTS, MANHOLES, INLET BOXES, ETC. PROVIDE SUBMITTALS WITH SUFFICIENT INFORMATION TO SHOW THAT PROPOSED PRODUCTS AND MATERIALS CONFORM TO OWNER'S STANDARDS AND SPECIFICATIONS.
4. VERIFY RIM AND INVERT ELEVATIONS PRIOR TO FABRICATION OF MANHOLES, VAULTS, AND INLET BOXES.
5. WHEN WITHIN PAVED OR OTHER IMPROVED AREAS, ADJUST UTILITY MANHOLES, VALVE BOXES, AND OTHER BOXES AND CONSTRUCT CONCRETE COLLAR PER APWA OR OWNER SPECIFICATIONS.
6. PROVIDE TESTING RESULTS AS REQUIRED PER OWNER SPECIFICATION SUCH AS PRESSURE TESTING, DEFLECTION TESTING, AIR TESTING AND VIDEO INSPECTIONS.
7. CLEAN UTILITY LINES TO REMOVE DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. PROTECT DOWN-GRADE LINES FROM WASH-WATER DURING CLEANING PROCESS TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.
8. ALL UTILITY PIPES, APPURTENANCES, AND STRUCTURES WILL BE OF NEW MATERIAL. REUSED MATERIAL MAY BE PERMITTED AS INDICATED ON PLANS.

**CONSTRUCTION NOTES**

1. NOTIFY OWNER, AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING PRIOR TO STARTING CONSTRUCTION ACTIVITIES. SCHEDULE MEETING THROUGH OWNER OR OWNER'S REPRESENTATIVE.
3. PROVIDE CONSTRUCTION SCHEDULE TO ENGINEER AND OWNER.
4. FIELD VERIFY EXISTING CONDITIONS. QUANTITIES, LENGTHS, VOLUMES, AND AREAS INDICATED ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR. VERIFY QUANTITIES AND DETERMINE MEASUREMENTS, AS NECESSARY.
5. VERIFY DIMENSIONS BEFORE STARTING WORK AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
6. OBTAIN APPROVAL FROM OWNER PRIOR TO CONSTRUCTION FOR USE OF STAGING AREAS (IF ANY) NOT SHOWN ON DRAWINGS. COORDINATE WITH OWNER TO IDENTIFY POTENTIAL USEABLE STAGING AREAS. RESTORE STAGING AREA TO PRECONSTRUCTION CONDITION.
7. PROTECT EXISTING IMPROVEMENTS DURING CONSTRUCTION AND REPLACE OR RESTORE IMPROVEMENTS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITY. RESTORE IMPROVEMENTS TO AS-GOOD-AS OR BETTER-THAN CONDITION THAT EXISTED PRIOR TO CONSTRUCTION. REPAIR IRRIGATION/SPRINKLERS WITHIN 24 HOURS FOLLOWING PLACEMENT OF IMPROVEMENTS.
8. PROPERLY BACKFILL, COMPACT, AND RESTORE PAVEMENT WITHIN STREET RIGHT-OF-WAY.
9. DISPOSE WASTE OFF SITE AT LANDFILL OR OTHER LEGAL DISPOSAL FACILITY.
10. REMOVE SURPLUS EXCAVATION FROM SITE. USE TOPSOIL OR OTHER NATIVE MATERIAL IN LANDSCAPE OR NATIVE GRADING. STOCKPILE TOPSOIL SEPARATELY FROM OTHER EXCAVATED MATERIALS. PLACE TOPSOIL IN LANDSCAPED AREAS IN 4 INCHES THICK MINIMUM AND GRADE TO DRAIN.
11. PERFORM CONSTRUCTION QUALITY CONTROL TESTING, INCLUDING SOILS, BACKFILL CONCRETE, UTILITIES, ETC.
12. PERFORM MATERIALS TESTING AND SUBMIT COPIES OF TEST RESULTS TO ENGINEER AND/OR OWNER AS REQUIRED PER SPECIFICATIONS. COORDINATE TESTING WITH INSPECTORS AND/OR ENGINEER. PERFORM DENSITY TESTING ON TRENCH BACKFILL, GRANULAR BORROW, AND UNTREATED BASE COURSE PLACEMENT FOR ROADWAY AND PRIOR TO ANY CONCRETE PLACEMENT WHERE NECESSARY. SEE SPECIFICATIONS FOR TESTING FREQUENCY.
13. PROVIDE SITE DUST CONTROL AND SUPPRESSION FOR DURATION OF PROJECT, INCLUDING WEEKENDS.
14. PROVIDE AND MAINTAIN ANY AND ALL TEMPORARY UTILITIES DURING CONSTRUCTION.
15. PROVIDE PAVEMENT MARKINGS, STRIPING AND SIGNAGE PER THE REQUIREMENTS OF THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

**CULINARY WATER NOTES**

1. PROVIDE JOINT RESTRAINTS ON FITTINGS AND VALVES WITH MECHANICAL JOINTS.
2. PROVIDE THRUST BLOCKS AND/OR LENGTH OF RESTRAINED JOINTS FOR WATER LINE FITTINGS IN ACCORDANCE WITH OWNER'S STANDARDS AND SPECIFICATIONS.
3. MAINTAIN 10 FOOT HORIZONTAL SEPARATION BETWEEN CULINARY WATER LINES AND SANITARY SEWER LINES.
4. WHERE CULINARY WATER LINE CROSSES OVER TOP OF SANITARY SEWER LINE, MAINTAIN VERTICAL SEPARATION OF 18 INCHES BETWEEN WATER LINE AND SEWER LINE. IF 18 INCHES VERTICAL SEPARATION CANNOT BE ACHIEVED OVER SEWER LINE, OBTAIN ACCEPTANCE FROM ENGINEER AND OWNER FOR PROPOSED APPROACH.
5. DO NOT HAVE JOINT IN CULINARY WATER LINE WITHIN 10 FEET OF SANITARY SEWER LINE CROSSING.
6. FLUSH, DISINFECT AND TEST CULINARY WATER LINES TO MEET MINIMUM REQUIREMENTS OUTLINED IN APWA STANDARDS, DIVISION OF DRINKING WATER RULES AND/OR OWNER'S STANDARD SPECIFICATIONS, ADHERE TO MOST STRINGENT REQUIREMENTS.

**SANITARY SEWER NOTES**

1. MAINTAIN 10 FOOT HORIZONTAL SEPARATION BETWEEN CULINARY WATER LINES AND SANITARY SEWER LINES.
2. WHERE CULINARY WATER LINE CROSSES OVER TOP OF SANITARY SEWER LINE, MAINTAIN VERTICAL SEPARATION OF 18 INCHES BETWEEN WATER LINE AND SEWER LINE. IF 18 INCHES VERTICAL SEPARATION CANNOT BE ACHIEVED OVER SEWER LINE, OBTAIN ACCEPTANCE FROM ENGINEER AND OWNER FOR PROPOSED APPROACH.
3. CUT PIPES OFF FLUSH WITH INSIDE WALL OF BOX OR MANHOLE AND APPLY GROUT AT CONNECTION OF PIPE TO PROVIDE SMOOTH FINISH. REMOVE JAGGED OR SHARP EDGES AT PIPE CONNECTIONS AND APPLY GROUT FOR SMOOTH FINISH.
4. USE NON-SHRINK GROUT WHEREVER GROUT IS REQUIRED FOR SANITARY SEWER FACILITIES.
5. REMOVE SILT AND DEBRIS FROM MANHOLES AND PIPE. MAINTAIN MANHOLES AND PIPES IN CLEAN CONDITION UNTIL FINAL ACCEPTANCE BY OWNER.
6. CLEAN MANHOLE LIDS AND OTHER COVERS TO REMOVE ASPHALT, CONCRETE, TAR OR OTHER ADHESIVES TO ALLOW ACCESS.

**STORM WATER NOTES**

1. FOLLOW IRC R401.3 FOR SITE DRAINAGE:
1. DIVERT SURFACE DRAINAGE TO STORM SEWER OR APPROVED POINT OF COLLECTION THAT DOES NOT CREATE HAZARD.
2. GRADE LOTS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
3. GRADE 6 INCHES OF FALL WITHIN FIRST 10 FEET OF FOUNDATION PERIMETER.
4. WHERE LOT LINES, SLOPES OR PHYSICAL BARRIERS PREVENT 6 INCHES OF FALL, CONSTRUCT DRAINAGE SWALES TO ENSURE DRAINAGE AWAY FROM STRUCTURE.
5. SLOPE IMPERVIOUS SURFACES WITHIN 10 FEET OF BUILDING FOUNDATION MINIMUM OF 2% AWAY FROM BUILDING.
2. USE NON-SHRINK GROUT WHEREVER GROUT IS REQUIRED FOR STORM DRAIN FACILITIES.
3. CUT PIPES OFF FLUSH WITH INSIDE WALL OF BOX OR MANHOLE AND APPLY GROUT AT CONNECTION OF PIPE TO PROVIDE SMOOTH FINISH. REMOVE JAGGED OR SHARP EDGES AT PIPE CONNECTIONS AND APPLY GROUTED TO PROVIDE SMOOTH FINISH.
4. APPLY GROUT BETWEEN GRADE RINGS. FOR EACH INLET BOX THAT IS LOCATED NEXT TO CURB, REMOVE PROTRUDING, JAGGED OR SHARP CONCRETE EDGES AND APPLY GROUT BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX. FINISH GROUT TO CREATE SMOOTH, BEVELED TRANSITION AT EDGES IN CLEANOUT AND INLET BOXES. APPLY GROUT AROUND ALL EDGES OF RESTRICTIVE ORIFICE PLATE.
5. REMOVE SNAP TIES, NAILS, REBAR AND OTHER PROTRUSIONS FROM BOX OR PIPE INSIDE SURFACE, AND FROM FORM WORK, PLASTIC AND CARDBOARD.
6. REMOVE SILT AND DEBRIS FROM INLET BOXES, COMBO BOXES, JUNCTION BOXES, AND PIPE. MAINTAIN BOXES AND PIPES IN CLEAN CONDITION UNTIL FINAL ACCEPTANCE BY OWNER.
7. CLEAN MANHOLE LIDS AND INLET GRATES TO REMOVE ASPHALT, CONCRETE, TAR OR OTHER ADHESIVES TO ALLOW ACCESS.
8. PLACE INLET, COMBINATION AND JUNCTION BOXES ON 12-INCH MINIMUM COMPACTED STABILIZATION MATERIAL.
9. REMOVE SILT AND DEBRIS FROM INLET BOXES, COMBO BOXES, JUNCTION BOXES, AND PIPE. MAINTAIN BOXES AND PIPES ARE IN CLEAN CONDITION UNTIL FINAL ACCEPTANCE BY OWNER.

**MATERIALS NOTES**

1. ALL MATERIALS WILL CONFORM TO CITY'S SPECIFICATIONS AND STANDARDS UNLESS OTHERWISE INDICATED.
2. WHERE INDICATED, SUBMIT CONSTRUCTION DOCUMENTS TO ENGINEER OR OWNER AS CONSTRUCTION RECORD. ALL SUBMITTALS MUST BE COMPLETED AND SUBMITTED TO ENGINEER PRIOR TO PROJECT TERMINATION.
3. **EARTHWORK**
1. EARTHWORK VOLUMES SHOWN ARE THE DIFFERENCE BETWEEN EXISTING GROUND AND PROPOSED FINISHED GRADE DIGITAL TERRAIN MODELS, AND DOES NOT ACCOUNT FOR NEITHER EXISTING NOR PROPOSED TOPSOIL, CONCRETE, ASPHALT, BASE, OR OTHER MATERIAL DEPTHS. EARTHWORK QUANTITIES SHOWN ARE FOR PLANNING AND PERMITTING PURPOSES ONLY. VERIFY IMPORT AND EXPORT QUANTITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OR PROJECT REPRESENTATIVE OF ANY CONFLICTS BETWEEN EXISTING FEATURES AND NEW CONSTRUCTION.

TOTAL CUT VOLUME = \_\_ CUBIC YARDS  
 TOTAL FILL VOLUME = \_\_ CUBIC YARDS

2. SUBMIT LAB REPORTS AS CONSTRUCTION RECORD PER AASHTO T180 (D) FOR A-1 SOILS AND AASHTO T90 (D) FOR ALL OTHER SOILS ENCOUNTERED ON SITE, AS CLASSIFIED PER AASHTO M145.
3. SUBMIT FIELD REPORTS AS CONSTRUCTION RECORD PER ASTM D6938 FOR EVERY TYPE OF SOIL WORKED, PER DAY.
4. WITHIN RIGHT-OF-WAY AND OTHER TRAVELED AREAS OR UNDER STRUCTURES, COMPACT BACKFILL, EMBANKMENT, IMPORTED FILL AND PAVEMENT MATERIALS TO 95 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY. IN OTHER NON-TRAVEL AREAS, COMPACT FILLS AND EMBANKMENT MATERIALS TO 90 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY.
5. USE ONLY IMPORT MATERIAL SPECIFIED IN ATLAS GEOTECHNICAL REPORT, DATED MAY 26, 2022.

FILL TYPE	PLASTICITY INDEX (%)	PERCENT FINES (%)	MAXIMUM PARTICLE SIZE	PURPOSE
SITE GRADING FILL	<15	<35	4 INCHES	GRANULAR BACKFILL, FILL BENEATH FLOOR SLABS AND OTHER FLATWORK
STRUCTURAL FILL	<15	<15	3 INCHES	STRUCTURAL FOOTINGS

**BEDDING MATERIAL**

1. USE EXCAVATED SOIL OR IMPORTED SOIL WITH 3/4-INCH MAXIMUM GRADATION FOR PIPE BEDDING.
2. COMPACT BEDDING AND BACKFILL IN 6-INCH LIFTS TO DENSITY INDICATED ABOVE.

**5. CONCRETE**

1. SUBMIT CONCRETE MIX DESIGN AS CONSTRUCTION RECORD.
2. SUBMIT LAB REPORTS AS CONSTRUCTION RECORD PER ASTM C31 AND C39 FOR EVERY CLASS AND EVERY 50 CUBIC YARDS PLACED, PER DAY. TEST ONE CYLINDER AT 7-DAYS. TEST 3 CYLINDERS AT 28-DAYS.
3. USE CONCRETE FORMS COMPLYING WITH AMERICAN CONCRETE INSTITUTE (ACI) STANDARDS. CONSTRUCT FORMS ACCORDING TO ACI 381.
4. USE CONCRETE REINFORCEMENT COMPLYING WITH ASTM A615 FOR STEEL AND ASTM A1064 FOR WELDED WIRE. USE ANNEALED 16-GAGE TIE WIRE.
5. USE CONCRETE ACCORDING TO THE FOLLOWING CLASSIFICATIONS.

CLASS	MIN WATER/CEMENT RATIO	MIN CHRYSTAL COEFFIC (SAGGAC. Y.)	SILBP (INCHES)	AIR CONTENT (PERCENT)	MIX DESIGN COMPRESSIVE STRENGTH (PSI)	28-DAY MIN COMPRESSIVE STRENGTH (PSI)
	MAX RATIO (L/BLE)					
S3	0.45	7.0	1.5-5	5.0-7.5	4520	5000
S2	0.45	6.5	1.5-5	5.0-7.5	5070	4500
AA	0.44	6.0	1.5-5	5.0-7.5	5210	4000
A	0.45	5.0	1.5-5	4.5-7.5	3910	3000
B	0.62	4.0	2-5	3.0-6.0	3250	2500
C	0.71	4.0	2-5	3.0-6.0	2610	2000

6. USE CLASS AA CONCRETE FOR ALL SIDEWALK, CURB, GUTTER, VALLEY GUTTER, SPANDRELS, COLLARS AND CONCRETE PAVING WITHIN EXISTING OR PROPOSED PUBLIC RIGHT-OF-WAY.
7. USE CLASS A CONCRETE FOR ALL SIDEWALK, CURB, GUTTER, VALLEY GUTTER, SPANDRELS, COLLARS AND CONCRETE PAVING TO REMAIN WITHIN THE SUBJECT PARCEL.

**6. AGGREGATE, BASE COURSE AND STRUCTURAL FILL**

1. SUBMIT LAB REPORTS AS CONSTRUCTION RECORD PER AASHTO T180, T11 AND T27 FOR SUBGRADE AND AGGREGATE BASE MATERIAL.
2. SUBMIT FIELD REPORTS AS CONSTRUCTION RECORD PER ASTM D6938 FOR EVERY TYPE OF SOIL WORKED, PER DAY.
3. SUBMIT MIX DESIGNS AS CONSTRUCTION RECORD.
4. USE MATERIAL COMPLYING WITH AASHTO M145, A-1-a THROUGH A-1-b FOR ALL SUBGRADE COURSES.
5. USE MATERIAL COMPLYING WITH THE FOLLOWING SPECIFICATIONS FOR ALL AGGREGATE BASE COURSE.

PERCENT PASSING BY DRY WEIGHT AGGREGATE		
SEIVE	TYPE 1	TYPE 2 (UNFINISHED SURFACES)
1 1/2 INCH	100%	100%
1 INCH	96-100%	95-100%
3/4 INCH	70-85%	70-85%
3/8 INCH	43-50%	43-50%
3/16 INCH	33-35%	33-35%
NO. 4	40-55%	40-55%
NO. 10	25-40%	25-40%
NO. 200	7-13%	10-14%

KATIE ENTERPRISES, LLC

THE RANCHES SUBDIVISION

GENERAL NOTES

REVIEW - NOT FOR CONSTRUCTION

PROJECT DESIGN ENGINEER

DATE

APPROVAL

RECOMMENDATION

PROJECT MANAGEMENT REVIEW

DATE

APPROVAL

RECOMMENDATION

SCALE: #####

DWG NAME: H:\JD\Proj\2203-046.dwg\Title\_2203-046.dwg

UPDATED: 2/29/2024

PLOTTED: 2/29/2024

PROJECT DESIGN ENGINEER

DATE

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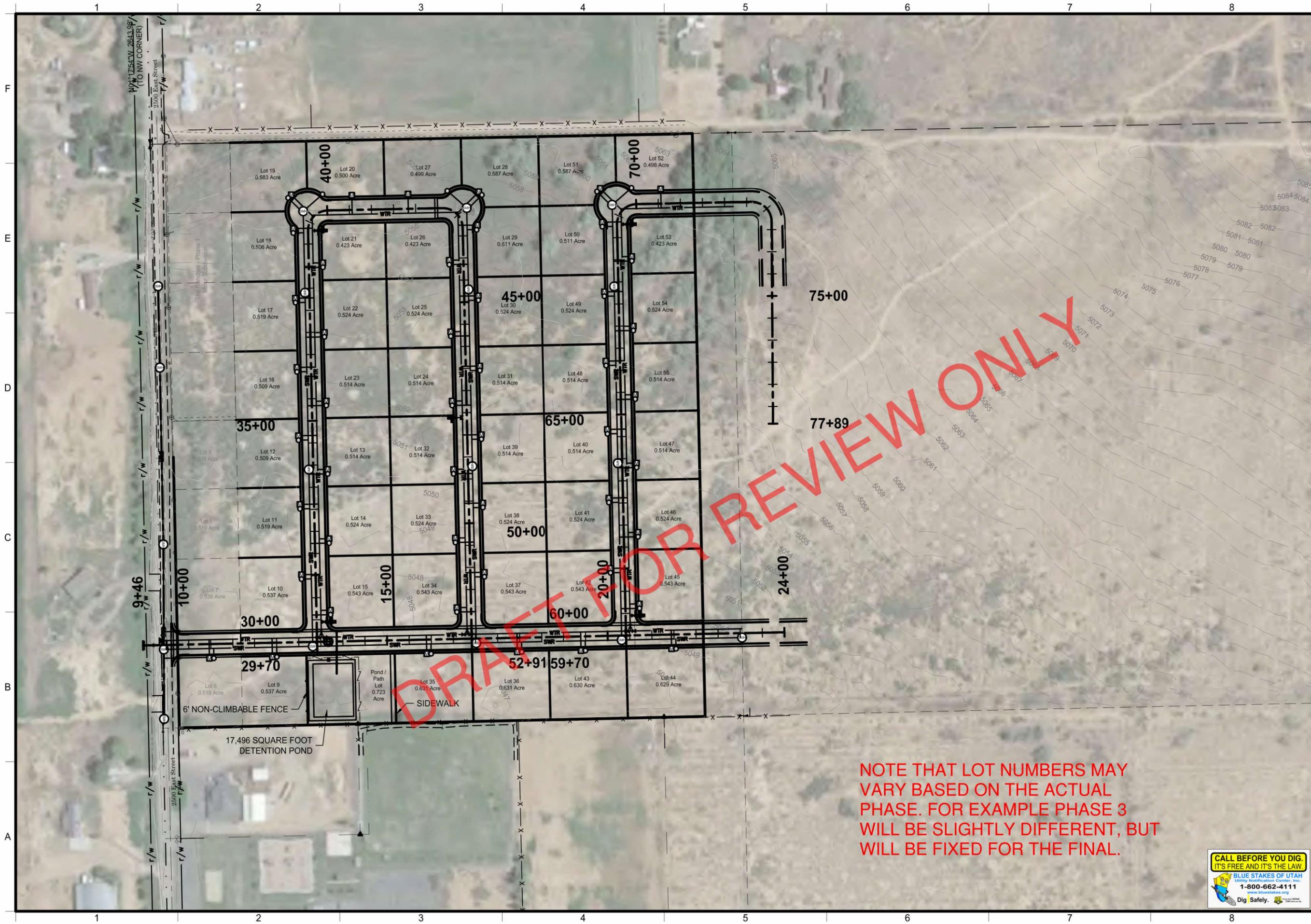
PROJECT MANAGEMENT REVIEW

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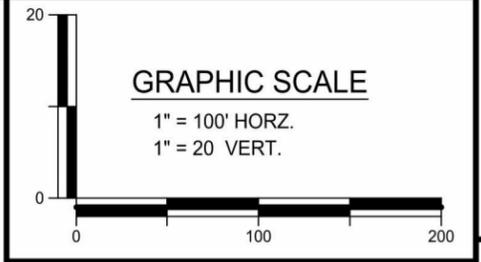
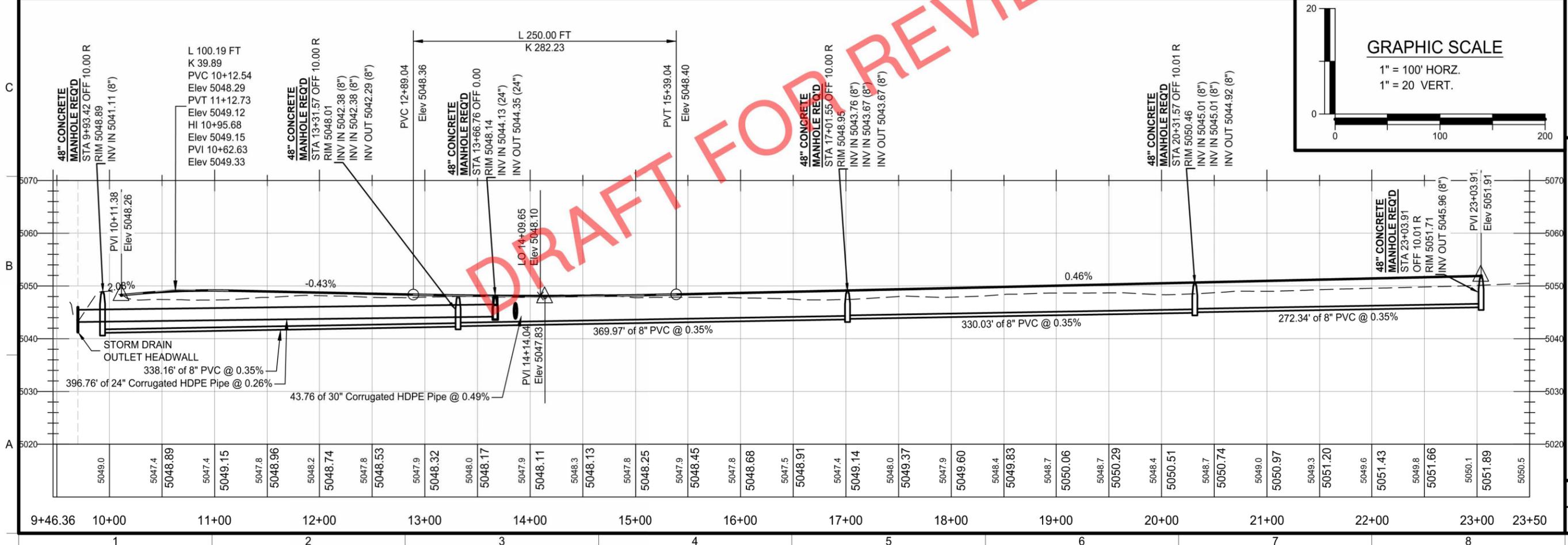
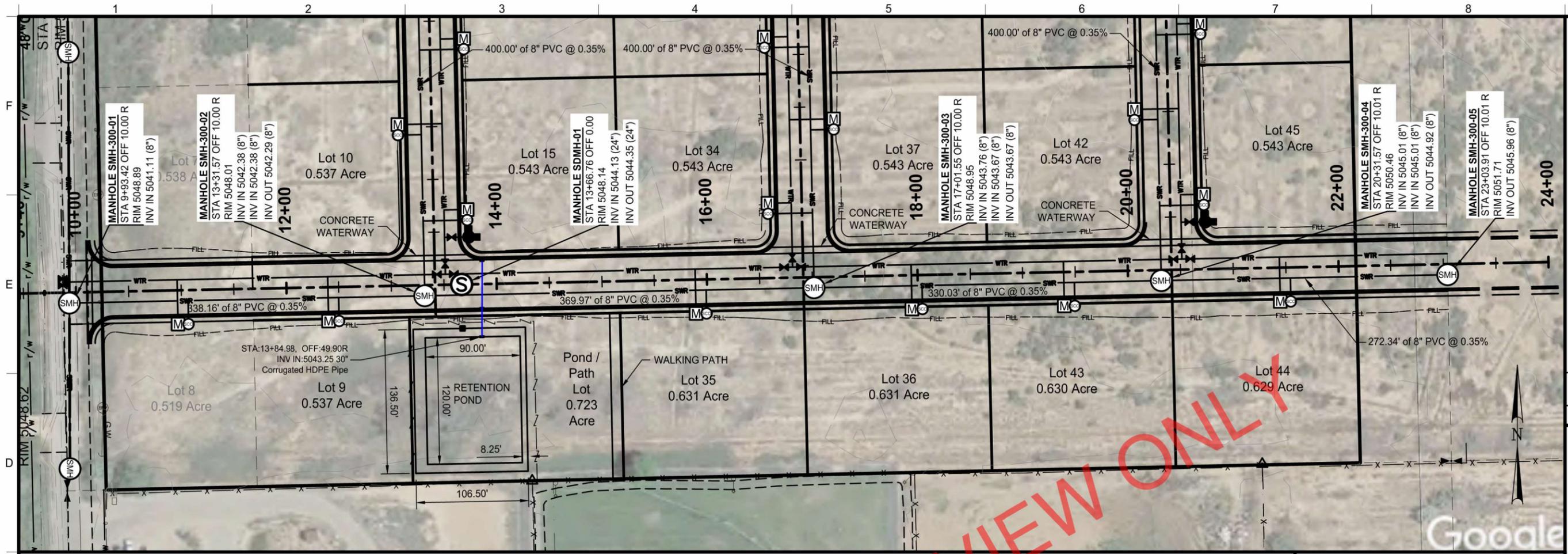




NOTE THAT LOT NUMBERS MAY VARY BASED ON THE ACTUAL PHASE. FOR EXAMPLE PHASE 3 WILL BE SLIGHTLY DIFFERENT, BUT WILL BE FIXED FOR THE FINAL.



<b>KATIE ENTERPRISES, LLC</b> THE RANCHES SUBDIVISION SITE PLAN		SUBMITTAL: <b>REVIEW - NOT FOR CONSTRUCTION</b> PROJECT NUMBER: <b>2203-046</b>	APPROVAL RECOMM: [Signature] APPROVED: [Signature]	PROJECT DESIGN ENGINEER: [Signature] QUALITY MANAGEMENT REVIEW: [Signature]	DATE: [Date] DATE: [Date]
<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL & STRUCTURAL ENGINEERING - SURVEYING GIS - ENVIRONMENTAL - MATERIALS TESTING 1-800-748-5275 www.jonesanddemille.com		DWG NAME: H:\JD\Proj\2203-046\dwg\SP_2203-046.dwg SCALE: 1" = 200' UPDATED: 2/29/2024 PLOTTED: 2/29/2024	REMARKS REVISIONS		



**KATIE ENTERPRISES, LLC**  
 THE RANCHES SUBDIVISION  
 PLAN AND PROFILE  
 PROJECT NUMBER: 2203-046

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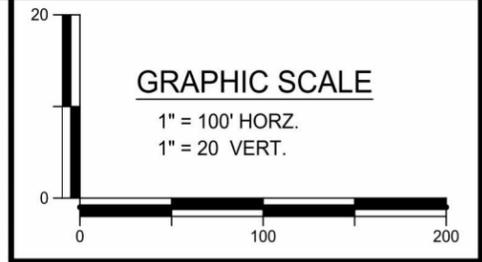
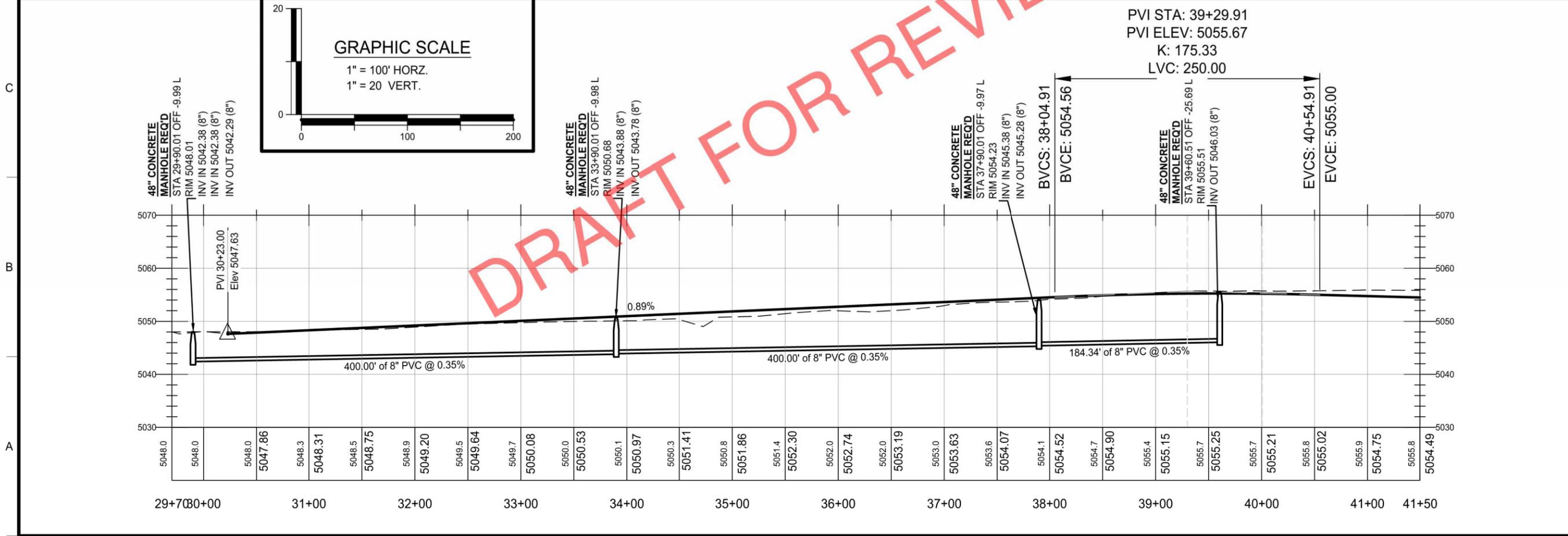
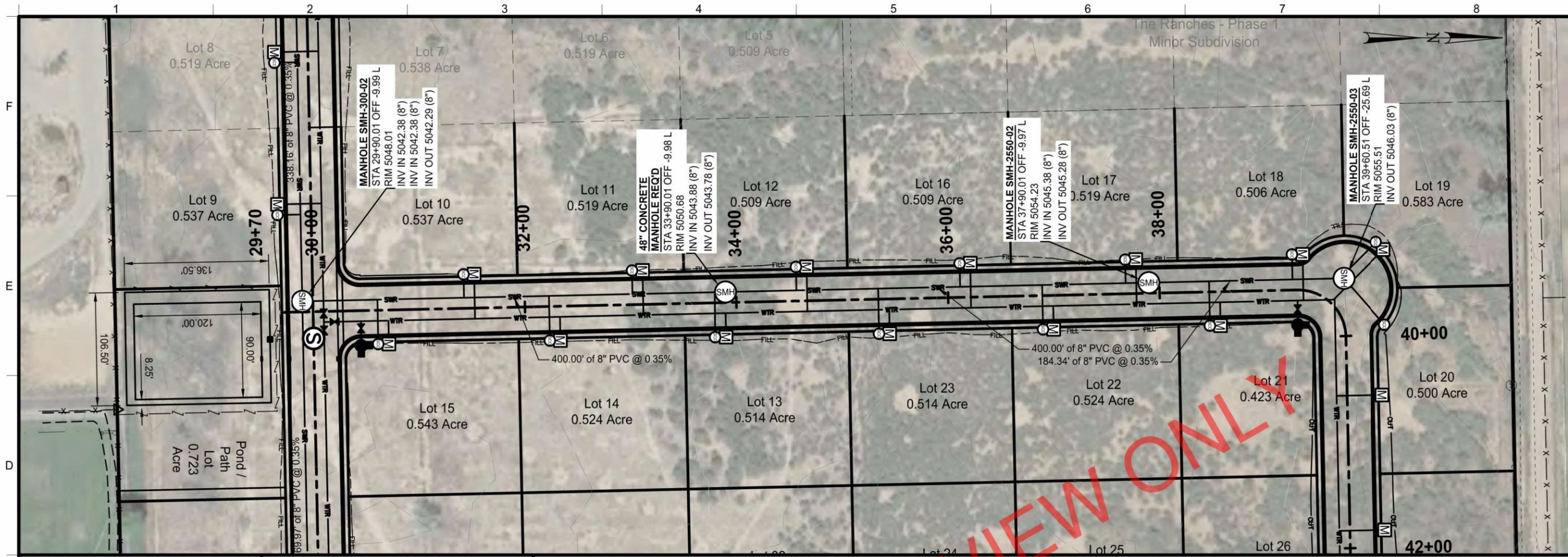
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 PROJECT DESIGN ENGINEER: [Name] DATE: [Date]  
 APPROVAL RECOMM: [Signature] DATE: [Date]  
 PROJECT MANAGEMENT REVIEW: [Signature] DATE: [Date]

REVISIONS

NO.	DATE	REMARKS

SCALE: 1" = 100'  
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 UPDATED: 2/29/2024  
 PLOTTED: 2/29/2024

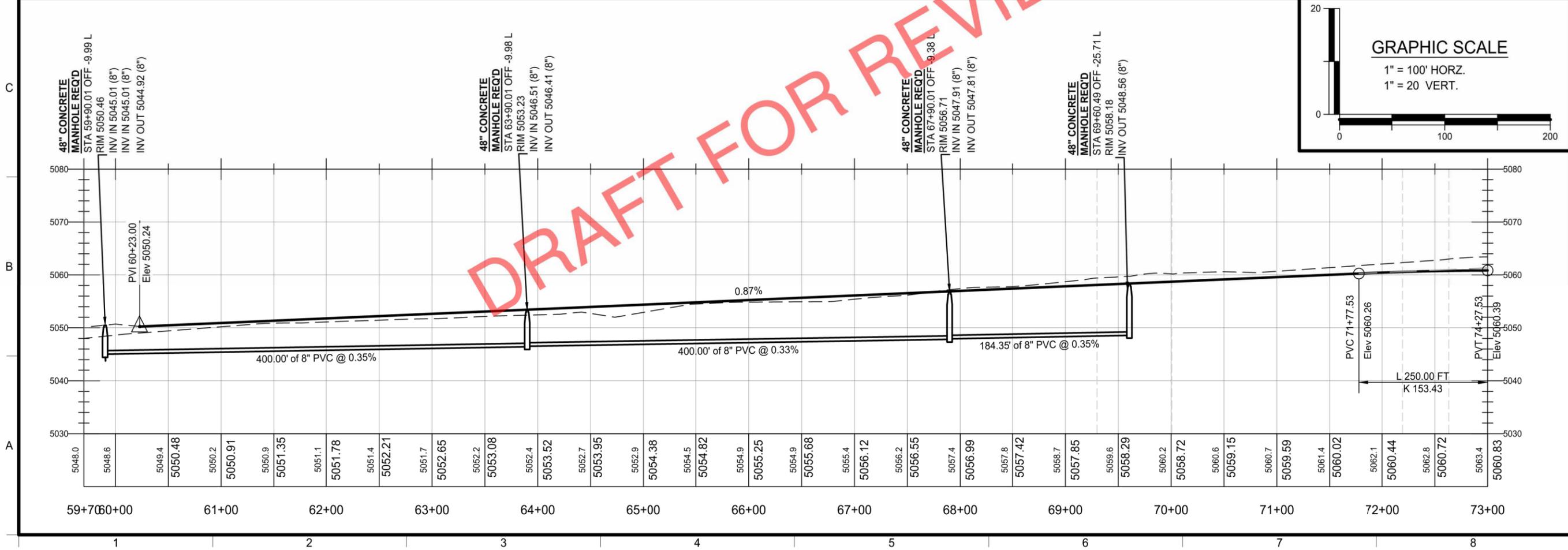
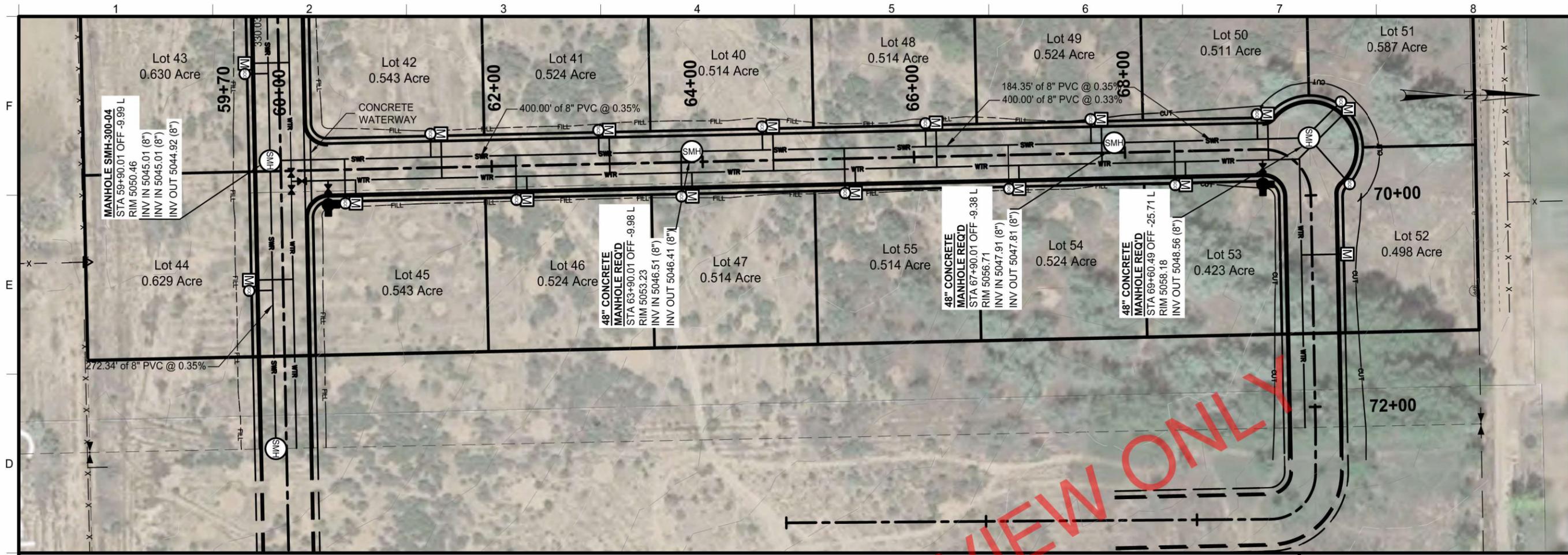
UNTAH COUNTY  
 SHEET NO. C-102



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<b>THE RANCHES SUBDIVISION</b> PLAN AND PROFILE		PROJECT NUMBER: 2203-046		DWG NAME: H:\JD\Proj\2203-046\dwg\PP_2203-046.dwg SCALE: 1" = 100' DATE: _____
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION		SHEET NO. C-103		UINTAH COUNTY





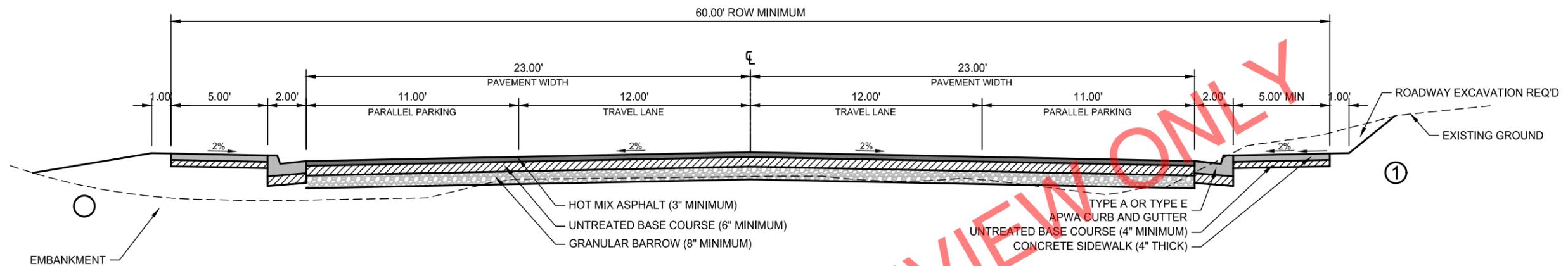
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<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL & STRUCTURAL ENGINEERING - SURVEYING GIS - ENVIRONMENTAL - MATERIALS TESTING 1.800.748.5275 www.jonesanddemille.com		PROJECT DESIGN ENGINEER APPROVED _____ DATE _____ PROJECT MANAGEMENT REVIEW APPROVED _____ DATE _____	DWG NAME: H:\JD\Proj\2203-046\dwg\PP_2203-046.dwg SCALE: 1" = 100' UPDATED: 2/29/2024 PLOTTED: 2/29/2024
<b>KATIE ENTERPRISES, LLC</b> THE RANCHES SUBDIVISION PLAN AND PROFILE REVIEW - NOT FOR CONSTRUCTION		PROJECT NUMBER: <b>2203-046</b>	
SHEET NO. <b>C-105</b>		COUNTY <b>UINTAH</b>	



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GRADING PLAN		GIS - ENVIRONMENTAL - MATERIALS TESTING	
PROJECT NUMBER: 2203-046	DATE:	DATE:	DATE:
REVISIONS:	NO.	DATE	DATE
REVISIONS:	REVISIONS		
SCALE: 1" = 200'	DWG NAME: H:\JD\Proj\2203-046\dwg\GR_2203-046.dwg	UPDATED: 2/29/2024	PLOTTED: 2/29/2024
APPROVAL:	PROJECT DESIGN ENGINEER	DATE:	DATE:
RECOMMENDATION:	QUALITY MANAGEMENT REVIEW	DATE:	DATE:
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION	PROJECT NUMBER: 2203-046	SHEET NO. C-106	

# BALLARD CITY TYPICAL STREET CROSS SECTION STANDARDS



① SEE CUT / FILL SLOPE TABLE BELOW

SLOPE TABLE			
CUT		FILL	
0.5:1	ROCK CUT		
2:1	>10'	2:1	>10'
3:1	5'-10'	3:1	5'-10'
4:1	0'-5'	6:1	0'-5'

### NOTES:

1. ASPHALT, BASE, AND SUB-BASE DEPTHS TO BE DETERMINED BY PAVEMENT DESIGN, NATIVE SUBGRADE BEARING CAPACITY, AND EXPECTED TRAFFIC, AS APPROVED BY BALLARD CITY.
2. SEE BALLARD CITY CODE AND APWA STANDARD DRAWING FOR DESIGN STANDARDS.
3. ROADWAY DESIGN TO CONFORM W/ AASHTO AND MUTCD STANDARDS.
4. PARK STRIP WIDTH MAY DECREASE UPON DESIGN WITH APPROVAL OF BALLARD CITY.
5. RIGHT-OF-WAY (ROW) WIDTH INCREASE MAY BE REQUIRED DUE TO SLOPES FOR CONSTRUCTING ROADWAY AS DIRECTED BY BALLARD CITY.

**LOCAL/RESIDENTIAL STREETS**



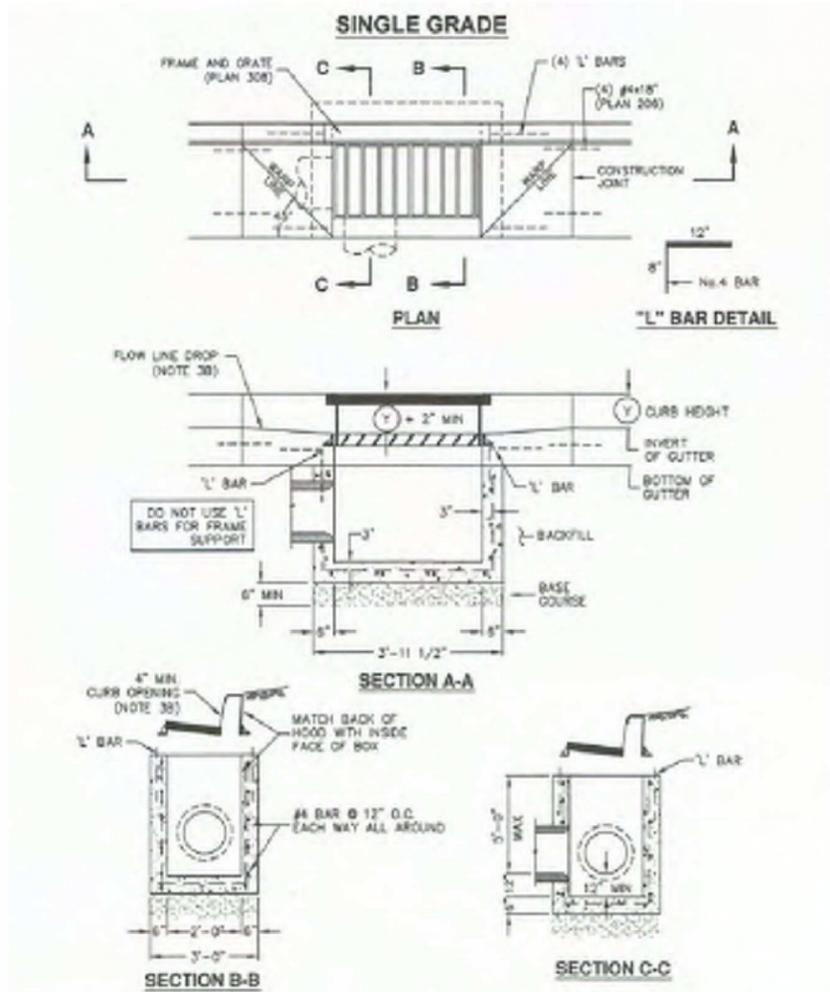
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KATIE ENTERPRISES, LLC  
 THE RANCHES SUBDIVISION  
 TYPICAL SECTION

UNTAH COUNTY  
 SHEET NO. C-301

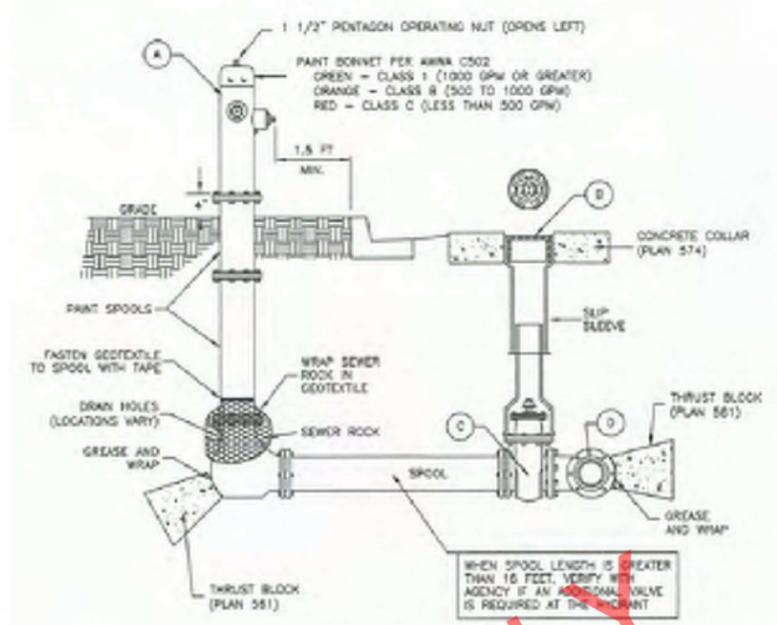
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 APPROVAL RECOMM: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PROJECT NUMBER: 2203-046  
 SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION  
 UPDATED: 2/29/2024  
 PLOTTED: 2/29/2024





APWA Utah Chapter  
**Catch basin**  
 Plan 315.1  
 September 2010

1. **GENERAL**
  - A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
2. **PRODUCTS**
  - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
  - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
  - C. Concrete: Class 4000, APWA Section 03 30 04.
  - D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
3. **EXECUTION**
  - A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
  - B. Curb Face Opening: Make opening at least 4-inches high. Provide at least a 2-inch drop between the "warp line" in the gutter flow-line and the top of the grate at the curb face opening.
  - C. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
  - D. Backfill: Place backfill against the basin wall. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.



**LEGEND**

No.	SYMBOL	DESCRIPTION
(A)	[Symbol]	FIRE HYDRANT AWWA C502
(B)	[Symbol]	VALVE BOX WITH LID 2-PIECE CAST IRON
(C)	[Symbol]	DATE VALVE WITH 1/2" X 2" NUT AWWA C509
(D)	[Symbol]	THRUST BLOCK WITH 125 # FLANGE AWWA C110

\* FURNISHED BY UTILITY AGENCY

APWA Utah Chapter  
**Fire hydrant with valve**  
 Plan 511  
 February 2011

1. **GENERAL**
  - A. Before backfilling, secure inspection of installation by ENGINEER.
  - B. Additional requirements are specified in APWA Section 33 11 00.
2. **PRODUCTS**
  - A. Hydrant: Dry barrel, AWWA C502.
  - B. Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04.
  - C. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
  - D. Backfill: APWA Section 31 05 13. Maximum particle size 2-inches.
    - 1) Sewer Rock: ASTM Size No. 3 (2" to 1") or larger.
    - 2) Other Type of Common Fill: CONTRACTOR's choice.
  - E. Geotextile: Stabilization-separation fabric, APWA Section 31 05 19.
3. **EXECUTION**
  - A. Installation:
    - 1) Provide at least 1 cubic yard of sewer rock around drain hole at base of hydrant spool. Wrap geotextile around sewer rock and tape geotextile to hydrant spool to prevent sitting of sewer rock.
    - 2) Paint fire hydrant to agency's fire hydrant paint code.
    - 3) Apply non-oxide grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
    - 4) Notify fire department as soon as hydrant is placed in service.
  - B. Thrust Blocks:
    - 1) Before pouring concrete, wrap pipe system with polyethylene sheet to prevent bonding of concrete to pipe system.
    - 2) Not required for flange or welded pipe systems.
  - C. Backfill: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

A1 CATCH BASIN DETAIL

SCALE NOT TO SCALE

A5 FIRE HYDRANT DETAIL

SCALE NOT TO SCALE

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KATIE ENTERPRISES, LLC  
 THE RANCHES SUBDIVISION  
 DETAILS

UINTAH COUNTY

SHEET NO. C-502

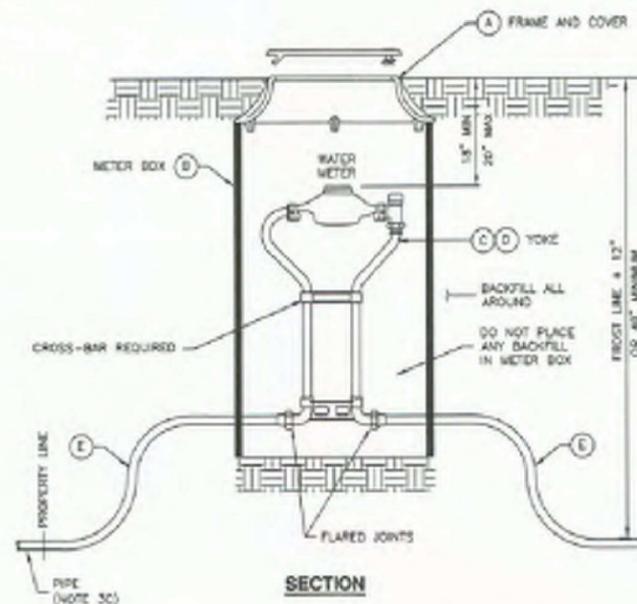
REVISIONS

NO.	DATE	DESCRIPTION

APPROVAL RECORD

APPROVED	DATE	REVIEW

PROJECT DESIGN ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PROJECT NUMBER: 2203-046  
 SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION  
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 UPDATED: 2/29/2024  
 PLOTTED: 2/29/2024

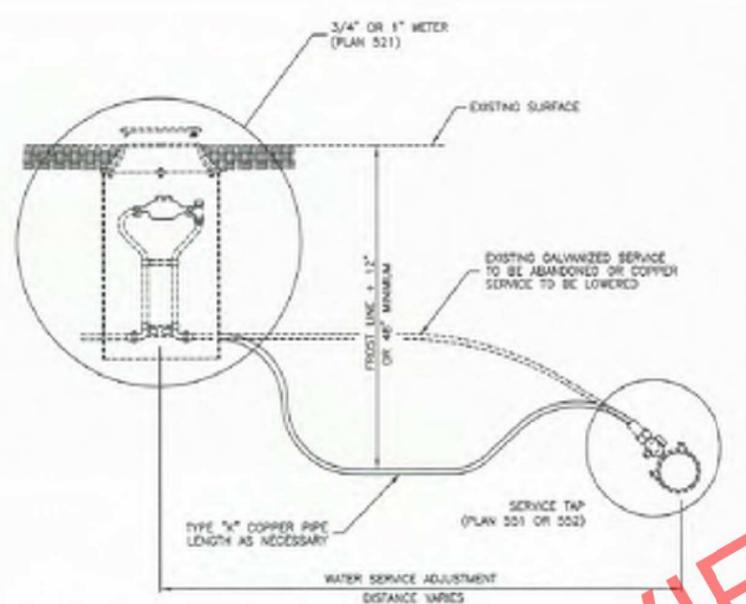


LEGEND		
No.	ITEM	DESCRIPTION
(A)	FRAME AND COVER	CAST IRON COVER
(B)	METER BOX (18" TO 21" DIAMETER) (30" TO 36" DEEP)	CORRUGATED PE, PVC, DWP OR MATERIAL ACCEPTABLE TO AGENCY
(C)	3/4" METER YOKE	OPTIONAL BACKFLOW PROTECTION PER AGENCY REQUIREMENTS
(D)	1" METER YOKE	OPTIONAL BACKFLOW PROTECTION PER AGENCY REQUIREMENTS
(E)	COPPER PIPE	TYPE K (SOFT)

\* FURNISHED BY UTILITY AGENCY

**APWA** Utah Chapter  
**3/4" and 1" meter**  
 Plan 521  
 August 2001

- GENERAL**
  - In street surfaces or other vehicular traffic areas (like driveway approaches), install the same type of meter box as required for 1 1/2" and 2" service meters. See Plan 522.
  - Before backfilling, secure inspection of installation by ENGINEER.
- PRODUCTS**
  - Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
  - Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
  - Castings: Grey iron class 35 minimum per ASTM A48, coated with asphalt based paint or better.
- EXECUTION**
  - Meter Placement:
    - All meters are to be installed in the park strip or within 7 feet of the property line (street side).
    - Do not install meters under driveway approaches, sidewalks, or curb and gutter.
  - Meter Box: Set box so grade of the frame and cover matches the grade of the surrounding surface.
  - Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
  - Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
  - Base Course and Backfill Placement: Compaction is 95 percent or greater relative to a modified proctor density. APWA Section 31 23 26. Maximum lift thickness before compaction is 8-inches.



**APWA** Utah Chapter  
**Water service line**  
 Plan 541  
 August 2001

- GENERAL**
  - Before backfilling, secure inspection of installation by ENGINEER.
- PRODUCTS**
  - Fittings: Provide brass fittings and nipples. Do not use galvanized materials.
  - Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
- EXECUTION**
  - Backfill: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density. APWA Section 31 23 26.

A3 WATER SERVICE DETAIL  
 SCALE NOT TO SCALE

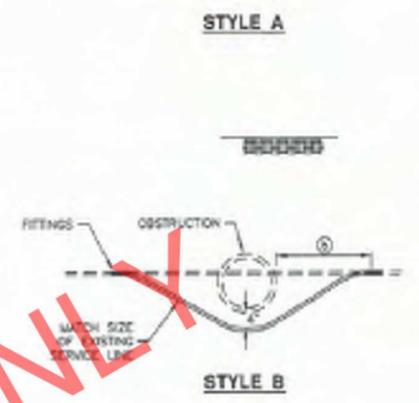
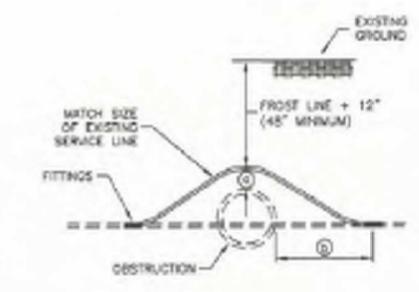


TABLE OF DIMENSIONS		
	OBSTRUCTION	
	SEWER MAIN	OTHER
(A)	18" MIN.	12" MIN.
(B)	10'-0" MIN.	12" MIN.

**APWA** Utah Chapter  
**Water service line loop**  
 Plan 542  
 March 2001

- GENERAL**
  - Before backfilling, secure inspection of installation by ENGINEER.
- PRODUCTS**
  - Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
  - Piping: Match existing pipe, fittings, coupling sizes and materials.
  - Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04.
  - Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A815.
  - Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
  - Grease: Non-oxide poly-FM.
- EXECUTION**
  - Thrust Blocks: Not required for flange or welded pipe systems. Before pouring thrust block concrete, wrap pipe system with plastic sheet to prevent bonding of concrete to pipe system.
  - Fittings: Use copper to copper flare fittings or copper to iron pack joint coupling with locking split clamp on iron pipe side and flare on copper side. All couplings to be brass.
  - Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
  - Steel Spool: Weld in place and provide slip on flange except when fitting in pipe system could move. Epoxy line per AWWA C210, C213, and coated per AWWA C208, or C214.
  - Location: Loop water mains over top of sewer lines.
  - Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

A6 WATER SERVICE LINE LOOP DETAIL  
 SCALE NOT TO SCALE

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 THE RANCHES SUBDIVISION

UNTAH COUNTY  
 SHEET NO. C-503

REVISIONS

NO.	DATE	REVISIONS

APPROVAL

APPROVED	DATE	PROJECT DESIGN ENGINEER
APPROVED	DATE	QUALITY MANAGEMENT REVIEW

REVIEW - NOT FOR CONSTRUCTION

PROJECT NUMBER: 2203-046

DWG NAME: H:\JD\Proj\2203-046(dw)\DT\_2203-046.dwg

SCALE: VARIES

UPDATED: 2/29/2024  
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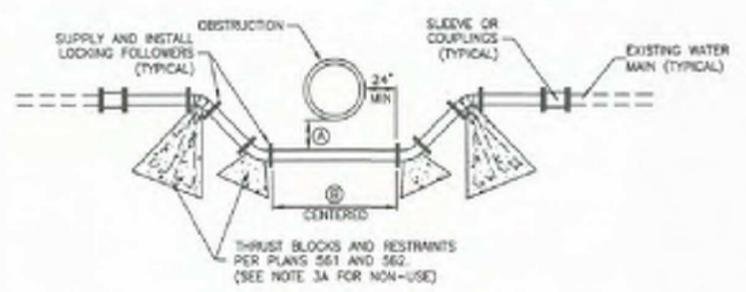


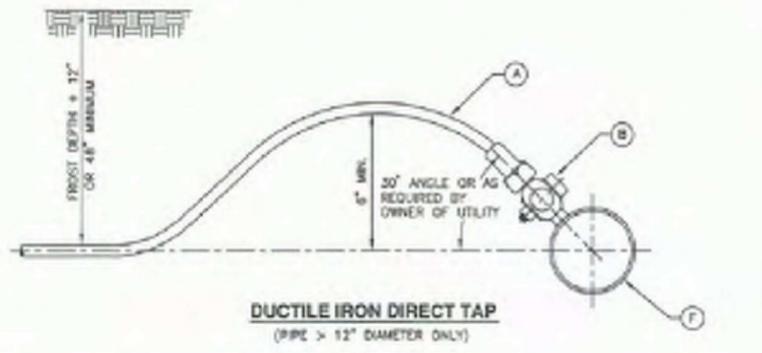
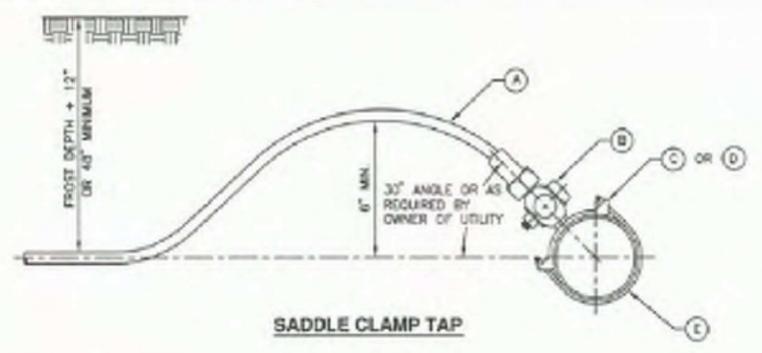
TABLE OF DIMENSIONS		
DESTRUCTION	Ø	Ø
SEWER	18" MIN	20" MIN
OTHER	12" MIN	O.D. + 45"



Water main line loop  
Water main line loop

Plan 543.1  
March 2011

- GENERAL**
  - A. Before backfilling, secure inspection of installation by ENGINEER.
- PRODUCTS**
  - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
  - B. Piping: Match existing pipe, fittings, coupling sizes and materials.
  - C. Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04.
  - D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
  - E. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
  - F. Grease: Non-oxide poly-FM.
  - G. Couplings: Brass.
- EXECUTION**
  - A. Thrust Blocks: Not required for flanged or welded pipe systems. Before pouring thrust block concrete, wrap pipe system in plastic sheet to prevent bonding of concrete to pipe system.
  - B. Fittings: Use copper to copper flare fittings or copper to iron pack joint coupling with locking split clamp on iron pipe side and flare on copper side.
  - C. Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
  - D. Steel Spool: Weld in place and provide slip on flange except when fitting in pipe system could move. Epoxy line per AWWA C210, C213, and coated per AWWA C208, or C214.
  - E. Location: Loop water mains over top of sewer lines.
  - F. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.



LEGEND		
No.	ITEM	DESCRIPTION
A	COPPER PIPE	TYPE K - SOFT
B	CORPORATION STOP	BRASS
C	SERVICE SADDLE CLAMP	(D.I., C.I., A.C.) **
D	SERVICE SADDLE CLAMP	(P.V.C.)
E	WATER MAIN PIPE	(D.I., C.I., A.C., P.V.C.)
F	WATER MAIN PIPE	(DUCTILE IRON (D.I.) ONLY)

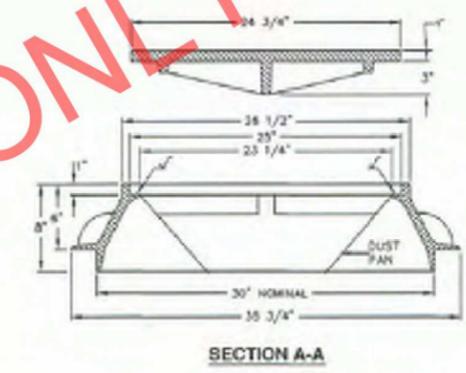
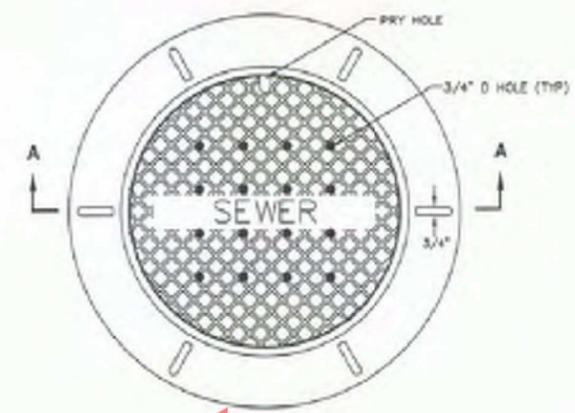
\* FURNISHED BY UTILITY AGENCY  
\*\* D.I. & C.I. PIPE MAY BE DIRECT TAPPED



3/4" and 1" Service taps  
3/4" and 1" Service taps

Plan 551  
February 2011

- GENERAL**
  - A. Before backfilling around taps, secure inspection of installation by ENGINEER.
- PRODUCTS**
  - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
  - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
  - C. Tape: Teflon tape is required on all taps.
- EXECUTION**
  - A. Tapping: Place taps a minimum of 36-inches apart. Use a tapping tool which is sized corresponding to the size of the service line to be installed. No taps within 36-inches of end of pipe.
  - B. PVC or AC Pipe: A service saddle clamp is required on all PVC and AC pipe taps unless specified otherwise.
  - C. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.



30" Frame and cover  
30" Frame and cover

Plan 402  
April 1997

- GENERAL**
  - A. The frame and cover fits the manhole in Plan 411.
- PRODUCTS**
  - A. Castings: Grey iron class 35 minimum, ASTM A48, coated with asphalt based paint or better (except on machined surfaces).
    - 1) Cast the heat number on the frame and cover.
    - 2) Give the frame and cover a machine finish so the cover will not rock.
    - 3) √ designates machined surface.
    - 4) Cast the words "SEWER" on the cover in upper case flush with the surface finish.
- EXECUTION**
  - A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

A1 WATER MAIN LINE LOOP DETAIL  
SCALE NOT TO SCALE

A3 3/4" AND 1" SERVICE TAP DETAIL  
SCALE NOT TO SCALE

A6 30" FRAME AND COVER DETAIL  
SCALE NOT TO SCALE

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KATIE ENTERPRISES, LLC  
THE RANCHES SUBDIVISION

DETAILS  
PROJECT NUMBER: 2203-046  
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UINTAH COUNTY  
SHEET NO. C-504

REVISIONS  
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