

### LEGEND

	ASPHALT PAVING (IMPERVIOUS)		PROPERTY LINE		CONC RETAINING WALL
	CONCRETE PAVING (IMPERVIOUS)		EASEMENT LINE		SUBDRAIN (PERFORATED PIPE)
	NEW FLAGSTONE PAVING (IMPERVIOUS)		EX WOODEN RET WALL		STORM DRAIN PIPE
	NEW CONCRETE PAVERS (SEMI-PERVIOUS)		DRAINAGE DITCH/ BIO-SWALE		ELECTRICAL OVERHEAD LINE
	NEW WOOD DECK (PERVIOUS)		UNDISTURBED SOIL		ELECTRICAL UNDERGROUND
	PERVIOUS PAVING		COMPACTED FILL MATERIAL		COMMUNICATION OVERHEAD LINE
	PLANTED, LANDSCAPED AREA		GEOTEXTILE		COMMUNICATION UNDERGROUND
	GRAVEL OR DECOMPOSED GRANITE (PERVIOUS)		EROSION CONTROL BLANKET		JOINT TRENCH
	EROSION CONTROL BLANKET		TURF REINFORCING MAT		SANITARY SEWER
	BUILDING ADDITION		STRAW WATTLE		WATER LINE
	AREA DRAIN		RUNOFF FLOW DIRECTION		GAS LINE
	DRAINAGE INLET		SWALE FLOW DIRECTION		EDGE OF ROAD
	ROOF LEADER		STORMWATER LEVEL SPREADER		ROOF EAVE
	FIRE HYDRANT		BUBBLE-UP DRAINAGE EMITTER		EX FENCE
	JOINT POLE		POP-UP DRAINAGE EMITTER		NEW WIRE FENCE
	GAS METER, ELECTRIC METER		SUBDRAIN END CAP		NEW WOOD FENCE
	WATER METER		SUBDRAIN OR STORMWATER CLEANOUT		EXISTING GRADE ELEVATION CONTOUR
	EX TREE		SUBDRAIN OUTLET		FINISHED GRADE ELEVATION CONTOUR
	EX TREE DRIPLINE		HIDDEN FOUNDATION OR RETAINING WALL		FINISHED GRADE ELEVATION
			TREE PROTECTION FENCING		REMOVE EX TREE

### GENERAL NOTES:

- SITE SURVEY AND TOPOGRAPHIC BASE MAP PREPARED BY DMG ENGINEERING, INC., 30 OAKVUE COURT, PLEASANT HILL, CA 94523, (925) 781-0463, DATED 2-3-2021, BASIS OF ELEVATION: ELEVATIONS SHOWN ARE ON AN ASSUMED DATUM, NAIL 4 2-1/4" SHINER IN BROOKDALE AVENUE, ELEVATION = 100.00 FEET.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES OR IMPROVEMENTS HAS NOT BEEN VERIFIED BY THE ENGINEER AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF INFORMATION SHOWN ON THE DRAWINGS. THE CONSTRUCTION CONTRACTOR MUST NOTIFY UTILITY COMPANIES AT LEAST TWO WORKING DAYS BEFORE EXCAVATION AND REQUEST FIELD LOCATION OF ALL UNDERGROUND UTILITIES. CALL UNDERGROUND SERVICE ALERT (USA) AT 811 OR 800-227-2600. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE LOCAL UTILITY ENGINEER, AT THE SOLE EXPENSE OF THE CONTRACTOR. ANY PROPERTY DAMAGE OR DAMAGE TO CONSTRUCTED FACILITIES SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND OWNER AT THE SOLE EXPENSE OF THE CONTRACTOR.

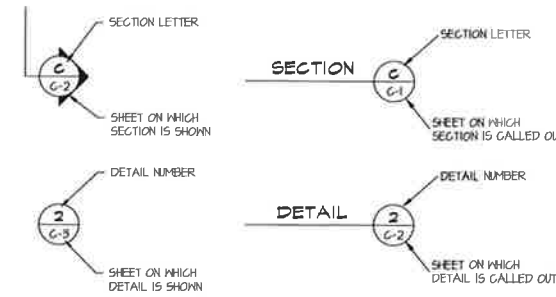
### EROSION CONTROL PLAN

AN APPROVED EROSION CONTROL PLAN IS REQUIRED FOR ALL PROJECTS INVOLVING EXCAVATION, DRILLING, OTHER EARTHWORK OR EXPOSED BARE SOIL. THE PLAN MUST BE SUBMITTED TO THE TOWN ENGINEER AND APPROVED PRIOR TO STARTING WORK. IMPLEMENT EROSION CONTROL MEASURES YEAR ROUND AS APPROPRIATE. REGULARLY MONITOR EROSION CONTROL MEASURES AND PROMPTLY REPAIR OR REPLACE ANY DAMAGED OR INEFFECTIVE EROSION CONTROL MEASURES AS REQUIRED BY THE EROSION CONTROL PLAN. A SIGNED COPY OF THE EROSION CONTROL PLAN MUST BE POSTED AT THE WORK SITE.

### RETAINING WALL AND FOUNDATION ELEVATIONS

BUILDING FOOTING, GRADE BEAM AND FOUNDATION WALL ELEVATIONS ARE SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. RETAINING WALL ELEVATIONS SHOWN ON THIS GRADING PLAN ARE BASED ON SURVEYED SITE TOPOGRAPHY. CONTACT THE ENGINEER IF ACTUAL SITE ELEVATIONS DIFFER FROM THE TOPOGRAPHY SHOWN ON THE GRADING PLAN. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL FOUNDATION AND RETAINING WALL ELEVATIONS WITH THE GRADING PLAN, ARCHITECTURAL PLANS, STRUCTURAL PLANS AND LANDSCAPE PLANS. CONTACT THE ENGINEER AND ARCHITECT TO RESOLVE ANY CONFLICTS BETWEEN WALL ELEVATIONS, FOUNDATION ELEVATIONS OR THE SITE TOPOGRAPHY.

### DETAIL AND SECTION DESIGNATIONS



### UTILITY CONNECTION NOTES:

1. THE PROPOSED ALIGNMENT FOR UTILITY SERVICE CONNECTIONS HAS NOT BEEN APPROVED BY SERVICE PROVIDERS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY SERVICE PROVIDERS TO DETERMINE UTILITY ROUTES AND REQUIRED SERVICE UPGRADE DETAILS. REVIEW ALL PROPOSED UTILITY ROUTES AND UPGRADE DETAILS WITH THE ENGINEER PRIOR TO CONSTRUCTION.

2. UTILITY SERVICES TO THE PROJECT SITE ARE PROVIDED BY:

- WATER: MARIN MUNICIPAL WATER DISTRICT
- SEWER: SAN RAFAEL SANITATION DISTRICT
- ELECTRIC POWER: PACIFIC GAS AND ELECTRIC (PG&E)
- GAS: PACIFIC GAS AND ELECTRIC (PG&E)
- TELEPHONE: AT&T
- CABLE: COMCAST

### DRAINAGE CONSTRUCTION REVIEW

THE CONTRACTOR SHALL CONTACT THE ENGINEER AND REQUEST REVIEW OF ALL SUBSURFACE DRAINAGE PIPING AND STORMWATER DRAINAGE PIPING AT LEAST 2 DAYS BEFORE PLACING BACKFILL MATERIAL.

### ESTIMATED EARTHWORK QUANTITIES

EXCAVATION	400 CY
FILL	270 CY
EXCESS	130 CY
MAX. EXCAVATION DEPTH	10 FT
MAX. FILL DEPTH	4 FT
DISTURBED AREA	.026 AC

### EARTHWORK NOTES:

- QUANTITIES ARE "IN-PLACE" ESTIMATES AND DO NOT INCLUDE AN ALLOWANCE FOR SHRINK OR SWELL. ESTIMATES ARE FOR PERMITTING PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY DETERMINING QUANTITIES FOR CONSTRUCTION PURPOSES.
- LEGALLY DISPOSE OF EXCESS MATERIAL OFF-SITE.
- SITE GRADING IS NOT PERMITTED BETWEEN OCTOBER 15 AND APRIL 15 UNLESS PERMITTED IN WRITING BY THE BUILDING OFFICIAL/ DIRECTOR OF PUBLIC WORKS.

### GREEN BUILDING STANDARDS

- THE GRADING AND DRAINAGE PLAN SHOWN ON THE DRAWINGS COMPLIES WITH CALIFORNIA GREEN BUILDING CODE STANDARDS SECTION 4.106.3 REQUIRING MANAGEMENT OF SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR MANAGING STORMWATER DRAINAGE DURING CONSTRUCTION TO PREVENT FLOODING OF ADJACENT PROPERTY, PREVENT EROSION AND RETAIN RUNOFF ON THE SITE AS REQUIRED BY CALIFORNIA GREEN BUILDING CODE STANDARDS SECTION 4.106.2.

### INDEX OF DRAWINGS

DRAWING NO.	DESCRIPTION
C-1	COVER SHEET
C-2	CONCEPTUAL GRADING AND DRAINAGE PLAN

### ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATE
ASTM	AM. SOCIETY OF TESTING MATERIALS
BM	BENCH MARK
BPD	BACKWATER PREVENTION DEVICE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COM	COMMUNICATION
COM/OH	COMMUNICATION OVERHEAD
COM/UG	COMMUNICATION UNDERGROUND
CONC	CONCRETE
CY	CUBIC YARDS
DI	DRAINAGE INLET
DIA	DIAMETER
E	ELECTRICAL
E/OH	ELECTRICAL OVERHEAD
E/UG	ELECTRICAL UNDERGROUND
EG	EXISTING GROUND
EL or ELEV	ELEVATION
EX	EXISTING
FD	FLOOR DRAIN
FF	FINISHED FLOOR ELEVATION
FL	FLOW LINE
FG	FINISHED GRADE ELEVATION
FT	FEET or FOOT
G	NATURAL GAS
GALV	GALVANIZED
GM	GAS METER
GPM	GALLONS PER MINUTE
H	HEIGHT OF EXPOSED WALL FACE
HB	HOSE BIB
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
INV	INVERT ELEVATION
JP	JOINT UTILITY POLE
JT	JOINT UTILITY TRENCH
LLFF	LOWER LEVEL FINISHED FLOOR ELEV
LPFF	LOW POINT FINISHED FLOOR ELEV
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MLFF	MAIN LEVEL FINISHED FLOOR ELEV
M/M/D	MARIN MUNICIPAL WATER DISTRICT OVERHEAD
OH	OVERHEAD
PG&E	PACIFIC GAS AND ELECTRIC
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
RIM	ELEV AT MH COVER OR DI GRATE
RL	ROOF LEADER
ROW	RIGHT-OF-WAY
S	SLOPE
SCH	SCHEDULE
SIM	SIMILAR
SDMH	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SDR	STANDARD DIMENSION RATIO
TC	TOP OF CURB ELEVATION
TH	TOP OF WALL ELEVATION
TYP	TYPICAL
UCS	UNIFORM CONSTRUCTION STANDARDS, MARIN COUNTY
ULFF	UPPER LEVEL FINISHED FLOOR ELEV
VB	VALVE BOX
W	WATER
WM	WATER METER
WV	WATER VALVE

### STORMWATER PLAN SUMMARY

	EXISTING SITE	PROPOSED SITE DEVELOPMENT PLAN
IMPERVIOUS SURFACES	304 SF	6,360 SF
CONCRETE PAVERS (PERVIOUS)	11,085 SF	2,220 SF
LANDSCAPE (PERVIOUS)	11,344 SF	2,814 SF
TOTAL LOT AREA	11,344 SF	11,344 SF

### STORMWATER NOTES:

- IMPERVIOUS SURFACES INCLUDE ROOF AND WALKWAYS, FOR DRAINAGE PURPOSES. IMPERVIOUS AREA INCLUDES ROOF EAVE OVERHANG AREA.
- CONCRETE PAVERS INCLUDE PATIOS AND PARKING.
- NEW OR REPLACEMENT IMPERVIOUS AREA IS 6,360 SF.

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ISSUED FOR REVIEW  
NOT FOR CONSTRUCTION

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BROOKDALE APARTMENTS

APN 011-074-04 & 011-074-05  
55 BROOKDALE AVENUE  
SAN RAFAEL, CALIFORNIA

### REVISIONS

NO.	DATE	DESCRIPTION
1	1/28/21	ISSUED FOR REVIEW

DESIGNED BY: G. DEARTH  
DRAWN BY: E. HAYDEN  
APPROVED BY:  
SCALE: NA  
DATE: 1/28/2021  
PROJECT NO.: 662.001

**COVER SHEET**

REVISION: 0  
SHEET NO: 1 OF 2  
DRAWING: C-1

**DESIGN REVIEW NOTES**

**STORMWATER DRAINAGE PLAN**

1. THE CONCEPTUAL STORMWATER DRAINAGE PLAN IS DESIGNED TO COMPLY WITH THE CITY REQUIREMENTS FOR ON-SITE STORMWATER MANAGEMENT AND CONTROL OF STORMWATER RUNOFF TO MINIMIZE OFF-SITE IMPACTS AND IMPROVE STORMWATER QUALITY.
2. THE EXISTING IMPERVIOUS AREA ON THE SITE TOTALS 304 SQ FT.
3. THE PROPOSED DEVELOPMENT PLAN INCLUDES 6,360 SQ FT OF IMPERVIOUS AREA. THE TOTAL LOT AREA IS 11,394 SQ FT. THE PROPOSED TOTAL IMPERVIOUS AREA AMOUNTS TO 56 PERCENT OF THE LOT AREA.
4. THE PROPOSED DEVELOPMENT PLAN MINIMIZES THE USE OF IMPERVIOUS HARDSCAPE. CONCRETE PAVERS WILL BE USED FOR PARKING AREAS AND PATIOS.
5. RUNOFF FROM 4,750 SQ FT OF THE PROPOSED NEW IMPERVIOUS AREA WILL BE COLLECTED IN A PIPED DRAINAGE SYSTEM AND DIRECTED TO THREE BIO-RETENTION BASINS. THE IMPERVIOUS AREA DIRECTED TO THE BIO-RETENTION BASIN INCLUDES THE ENTIRE ROOF AREA OF THE THREE APARTMENT BUILDINGS. RUNOFF FROM REMAINING IMPERVIOUS AREA WILL SHEET FLOW TO LANDSCAPE AREAS.
6. AREA DRAINS IN LANDSCAPE AND HARDSCAPE AREAS ARE LIMITED TO LOCATIONS WHERE THEY ARE NECESSARY TO PREVENT WATER PONDING THAT COULD DAMAGE THE BUILDINGS.
7. THE BIO RETENTION BASINS ARE DESIGNED TO CAPTURE THE 10-YEAR STORM AND INFILTRATE IT INTO THE GROUND IN ACCORDANCE WITH MCSTOPPP GUIDELINES. THE SURFACE AREA OF THE BASINS AND DETAILS OF CONSTRUCTION COMPLY WITH MCSTOPPP GUIDELINES.
8. A FOUNDATION DRAINAGE AND RETAINING WALL BACK DRAINAGE SYSTEM WILL BE CONSTRUCTED USING PERFORATED PVC PIPE. THE SYSTEM WILL OUTLET TO THE GROUND SURFACE AT A SUITABLE LOCATION. PERMANENT EROSION CONTROL WILL BE INSTALLED AT THE OUTLET LOCATION.

**EXCAVATION & GRADING PLAN**

1. SITE GRADING WILL BE COMPLETED IN CONFORMANCE WITH THE PROJECT GEOTECHNICAL REPORT AND THE APPROVED SITE GRADING PLAN.
2. EXCESS EXCAVATED MATERIAL WILL BE LEGALLY DISPOSED OF AT AN OFF-SITE LOCATION TO BE DETERMINED BY THE CONSTRUCTION CONTRACTOR.

**EROSION CONTROL**

1. EROSION CONTROL MEASURES WILL BE INCORPORATED INTO THE PROJECT DURING CONSTRUCTION AND IMPLEMENTED BY THE CONSTRUCTION CONTRACTOR. STRAW MATS WILL BE PLACED AROUND THE DOWN-SLOPE PERIMETER OF THE DISTURBED AREA. EXCAVATED AREAS AND SOIL STOCKPILES WILL BE COVERED WITH PLASTIC TARPS TO MINIMIZE EROSION. AREAS DISTURBED DURING CONSTRUCTION WILL BE RESTORED BY SEEDING AND INSTALLATION OF EROSION CONTROL BLANKET AND STRAW MATS.
2. PERMANENT EROSION CONTROL WILL BE PROVIDED BY LANDSCAPING THE ENTIRE DISTURBED AREA AT THE COMPLETION OF THE WORK IN ACCORDANCE WITH THE LANDSCAPING PLANS.

**STORMWATER POLLUTION PREVENTION**

1. SPECIFICATIONS WILL BE INCLUDED ON THE PROJECT DRAWINGS OUTLINING CONSTRUCTION PRACTICES THAT MUST BE FOLLOWED TO PREVENT STORMWATER POLLUTION. CONSTRUCTION WORKERS WILL BE ADVISED OF REQUIRED CONSTRUCTION MEASURES FOR AVOIDING STORMWATER POLLUTION. THESE MEASURES WILL INCLUDE PROCEDURES FOR MATERIAL STORAGE, USE AND DISPOSAL OF HAZARDOUS MATERIALS (PAINT, SOLVENTS, ADHESIVES, ETC.), WASTE DISPOSAL PROCEDURES, CONCRETE WASHOUT REQUIREMENTS AND OTHER CONSTRUCTION PRACTICES.

**UTILITY PLAN**

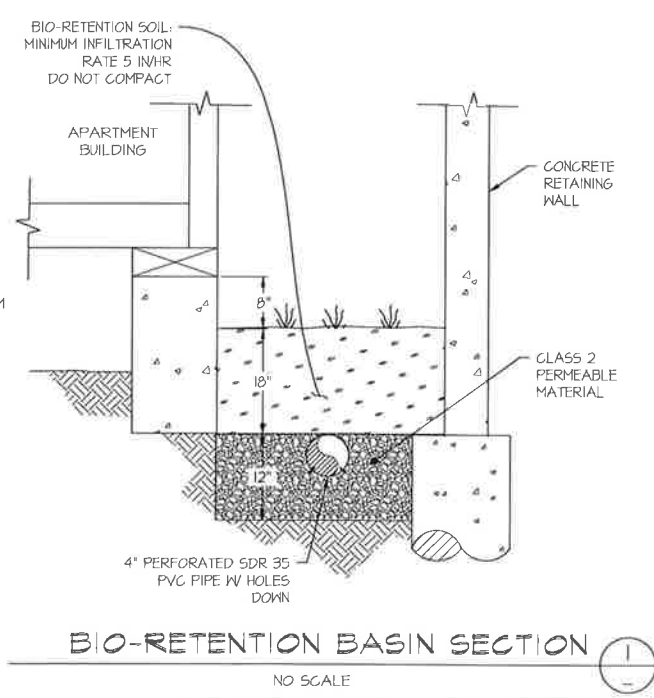
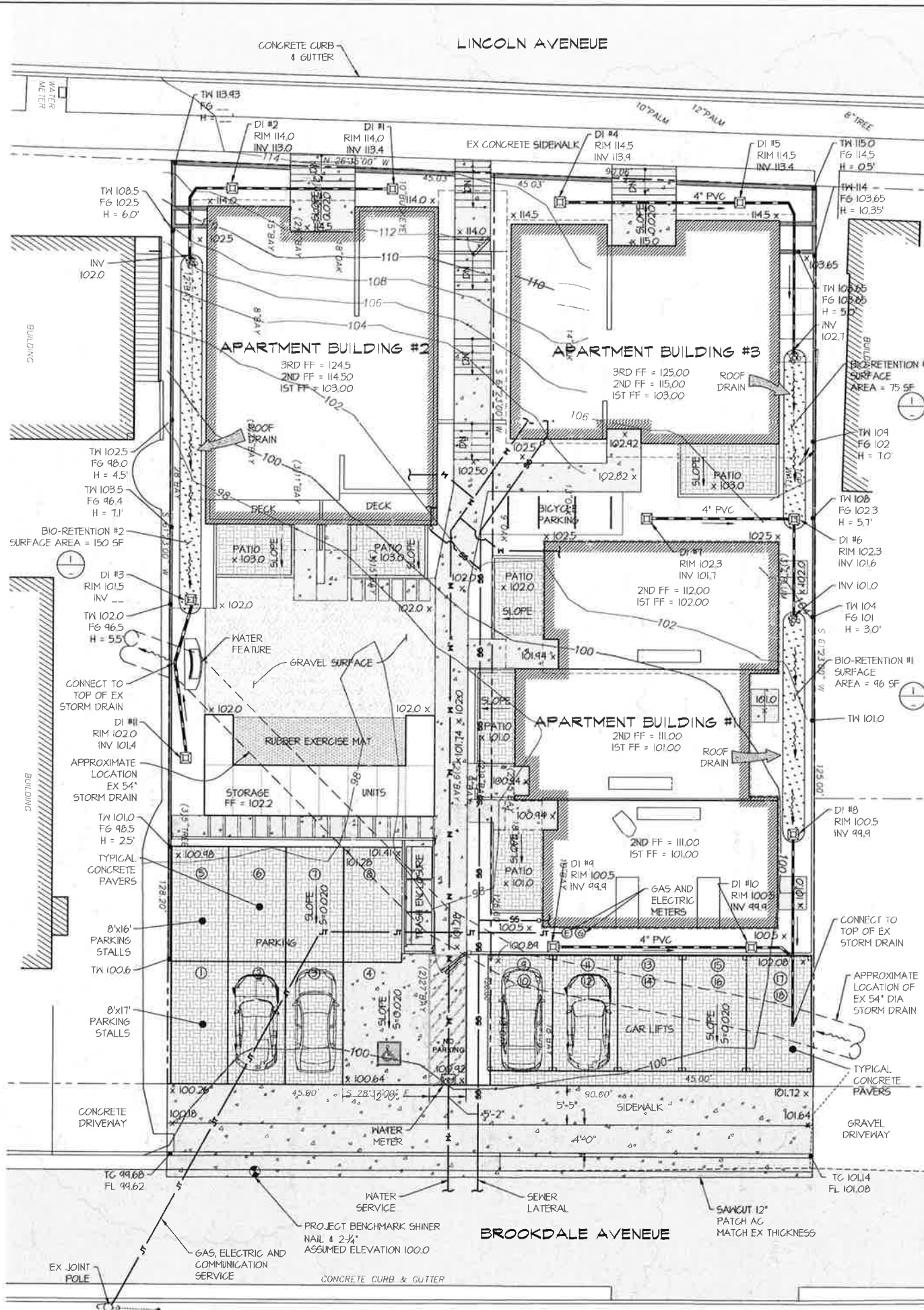
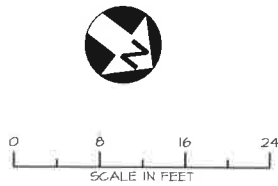
1. WATER: WATER SERVICE WILL BE PROVIDED BY A NEW SERVICE CONNECTION TO THE EXISTING WATER MAIN IN BROOKDALE AVENUE AND AN APPROPRIATELY SIZED METER AS SHOWN ON DRAWING C-2. ALL WATER SYSTEM IMPROVEMENTS WILL BE COMPLETED IN CONFORMANCE WITH MARIN MUNICIPAL WATER DISTRICT STANDARDS.
2. ELECTRIC POWER: ELECTRIC SERVICE WILL BE LOCATED UNDERGROUND FROM THE NEAREST JOINT POLE AS SHOWN ON DRAWING C-2. ALL ELECTRIC POWER SYSTEM IMPROVEMENTS WILL BE COORDINATED WITH PACIFIC GAS AND ELECTRIC (PG&E) AND COMPLETED IN CONFORMANCE WITH PG&E STANDARDS.
3. COMMUNICATION: PHONE AND CABLE TV SERVICE WILL BE LOCATED UNDERGROUND FROM THE NEAREST JOINT POLE AS SHOWN ON DRAWING C-2. ALL COMMUNICATION SYSTEM IMPROVEMENTS WILL BE COORDINATED WITH AT&T AND COMCAST. THE WORK WILL BE COMPLETED IN CONFORMANCE WITH THEIR STANDARDS.
4. NATURAL GAS: GAS SERVICE WILL BE PROVIDED WITH A NEW SERVICE LINE AND METER AS SHOWN ON DRAWING C-2. ALL GAS SYSTEM IMPROVEMENTS WILL BE COORDINATED WITH PACIFIC GAS AND ELECTRIC (PG&E) AND COMPLETED IN CONFORMANCE WITH PG&E STANDARDS.
5. NATURAL GAS: ALL GAS SYSTEM IMPROVEMENTS WILL BE COORDINATED WITH PACIFIC GAS AND ELECTRIC (PG&E) AND COMPLETED IN CONFORMANCE WITH PG&E STANDARDS.
6. SANITARY SEWER: A NEW SEWER LATERAL AND BACK FLOW PREVENTION DEVICES AT EACH BUILDING WILL BE CONSTRUCTED AS SHOWN ON DRAWING C-2. THE LATERAL WILL CONFORM TO SAN RAFAEL SANITATION DISTRICT STANDARDS.

**RETAINING WALL CONSTRUCTION NOTES**

1. ALL RETAINING WALLS WILL BE REINFORCED CONCRETE CONSTRUCTION SUPPORTED BY SPREAD FOOTINGS OR DRILLED PIERS AS DETERMINED BY THE PROJECT GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER.

**EXISTING UTILITY LOCATION**

CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONTACT THE ENGINEER TO REVIEW UTILITY LOCATION AND ANY CONFLICTS WITH THE PROPOSED WORK PRIOR TO STARTING WORK. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE ASSUMED LOCATIONS BASED ON VISIBLE FEATURES AND MAY NOT INCLUDE ALL EXISTING UTILITIES.



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**NOT FOR CONSTRUCTION**

ISSUED FOR CONSTRUCTION

APR 01-11-074-04 & 011-074-05  
 55 BROOKDALE AVENUE  
 SAN RAFAEL, CALIFORNIA

REVISIONS		
NO.	DATE	DESCRIPTION
1	1/22/21	ISSUED FOR REVIEW

DESIGNED BY: G. DEARTH  
 DRAWN BY: E. HAYDEN  
 APPROVED BY:  
 SCALE: 1" = 8'-0"  
 DATE: 1/28/2021 PROJECT NO: 6622001

**CONCEPTUAL GRADING AND DRAINAGE PLAN**

REVISION: 0  
 SHEET NO: 2 OF 2  
 DRAWING: C-2

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