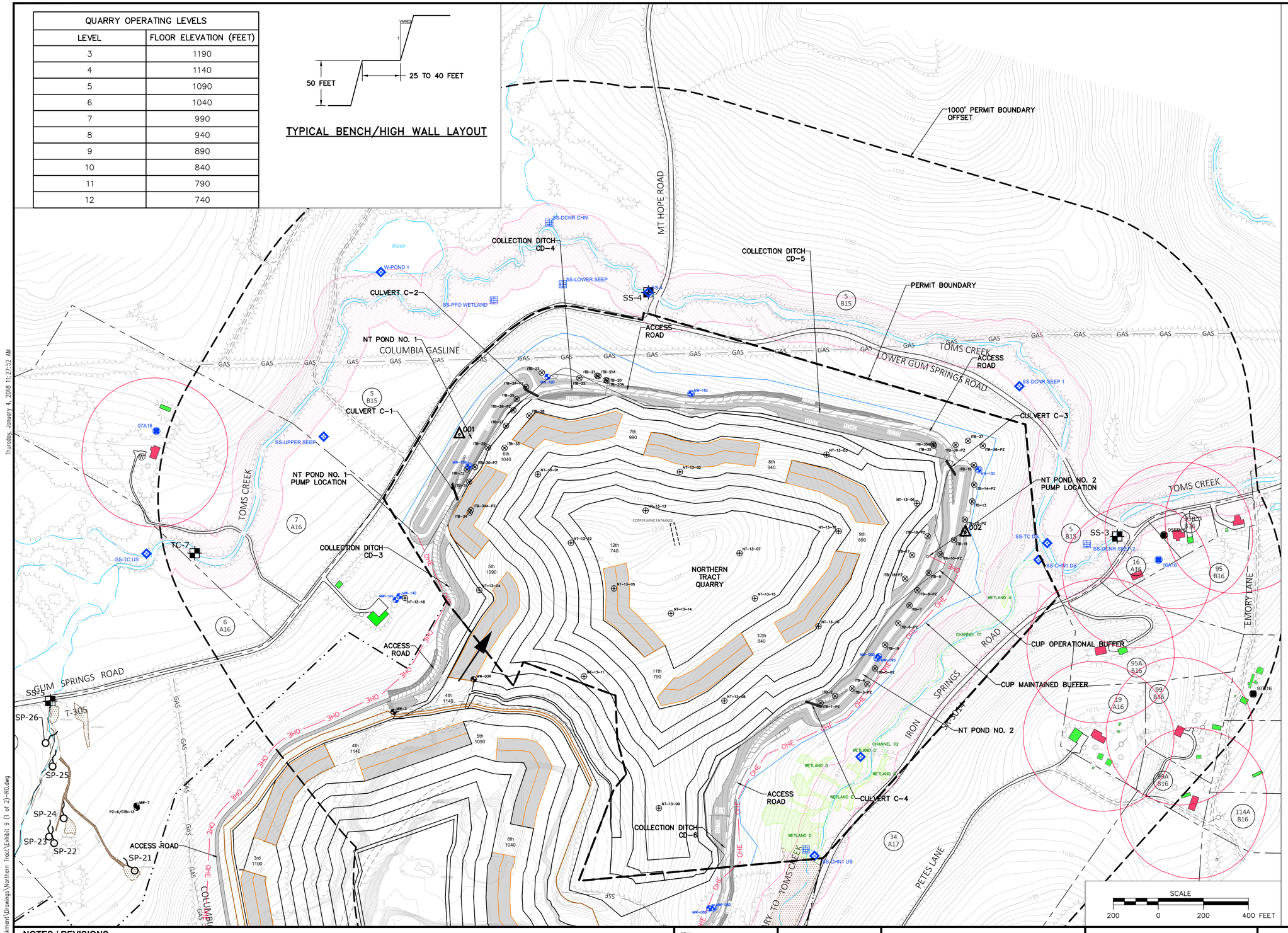
QUARRY OPERATING LEVELS	
LEVEL	FLOOR ELEVATION (FEET)
3	1190
4	1140
5	1090
6	1040
7	990
8	940
9	890
10	840
11	790
12	740

TYPICAL BENCH/HIGH WALL LAYOUT



LEGEND

- EXISTING TOPOGRAPHIC MAJOR CONTOUR (25' CONTOUR INTERVAL)
- EXISTING TOPOGRAPHIC MINOR CONTOUR (5' CONTOUR INTERVAL)
- PROPERTY BOUNDARY
- EXISTING PERMIT BOUNDARY
- PROPOSED PERMIT BOUNDARY
- PROPOSED 1000' PERMIT BOUNDARY OFFSET
- CUP MAINTAINED BUFFFER
- CUP OPERATIONAL BUFFFER
- EXISTING ROAD
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRICAL LINES
- PROPOSED OVERHEAD ELECTRICAL LINES
- 300-FOOT DWELLING BARRIER
- WATERS OF THE UNITED STATES
- STREAM
- LOCAL GROUNDWATER FLOW DIRECTION
- REGIONAL GROUNDWATER FLOW DIRECTION
- DIRECTION OF MINING
- WETLANDS (DELINEATED BY SKELLY & LOY 12/16/2015)
- WETLANDS (DELINEATED BY AECOM 1/2011 AND 5/2012)
- OCCUPIED STRUCTURE
- UNOCCUPIED STRUCTURE
- EXISTING ROAD – 100' BUFFER
- STREAM – 100' BUFFER
- ITB-XX SOIL BORINGS
- NT-XX ROCK BORINGS
- MW-3 MONITORING WELL OR PIEZOMETER
- 95BB16 EXISTING PRIVATE WATER SUPPLY WELL

WATER SAMPLING LOCATION LEGEND

- MW-12D BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- MW-11D BACKGROUND AND PROPOSED GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- SS-13 EXISTING STREAM SAMPLE LOCATION
- SP-3 EXISTING SPRING/SEEP LOCATION
- 001 NPDES DISCHARGE LOCATION
- BACKGROUND SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- BACKGROUND AND LONG TERM SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- 07A16 BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)
- 15A16 BACKGROUND AND LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)

NOTES:

1. THE MINE PLAN DEPICTED FOR THE NORTHERN TRACT IS SUBJECT TO CHANGE BASED UPON ENCOUNTERED FIELD CONDITIONS. THE CONFIGURATION OF THE ACCESS RAMPS AND HIGHWALLS ASSOCIATED WITH DEVELOPING THE MINE MAY DIFFER FROM WHAT IS SHOWN BASED ON FIELD CONDITIONS. IF CHANGES TO THE CONFIGURATIONS IMPACT THE EROSION AND SEDIMENTATION CONTROL (E&SC) DESIGNS, A REVISED EXHIBIT 9 OPERATION MAP AND REVISED E&SC DESIGNS AND CALCULATIONS SHALL BE SUBMITTED TO THE PADEP FOR APPROVAL.
2. NT POND NOS. 1 AND 2 MAY ULTIMATELY BE BREACHED AS THE QUARRY FOOTPRINT ADVANCES INTO THE FOOTPRINT OF THE PONDS. WRITTEN APPROVAL FROM THE PADEP IS REQUIRED PRIOR TO BREACHING ANY POND.
3. BENCH WIDTHS SHOWN REPRESENT THE APPARENT WIDTH WHICH IS BASED ON A VARIABLE INTERSECTION ANGLE BETWEEN THE SECTION LINE AND THE QUARRY FACE.
4. QUARRY RECLAMATION WILL BE ACHIEVED AND BONDED BY ELIMINATING HIGH WALLS USING A COMBINATION OF PARTIAL BACKFILL AND BLASTING (35 DEGREES), CAPPING THE AREAS WITH OVERBURDEN SOILS, AND VEGETATING THE AREAS WITH THE APPROVED PERMANENT SEED MIX. (SEE DRAWING NO. 43). THE QUARRY WILL BE ALLOWED TO NATURALLY FILL WITH WATER, AS AN UNMANAGED WATER IMPOUNDMENT, TO AN APPROXIMATE ELEVATION OF 1020 FEET.

NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		4				
		3				
		2				
		1				

SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ROBERT M. SHUSKO ENGINEER 057023-E 12-22-17

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SKELLY AND LOY ENGINEERING - ENVIRONMENTAL CONSULTANTS

SGI

PROJECT NUMBER: 152596A	DRAWN BY: AJM / DATE: 5/23/2017
FILE NAME: Exhibit 9 (1 of 2)-R0.dwg	CHECKED BY: RMS/MDW / DATE: 12/22/2017

SPECIALTY GRANULES LLC

CHARMIAN - NORTHERN TRACT QUARRY

EXHIBIT 9

OPERATIONS MAP (SHEET 2 OF 2)

SCALE: AS SHOWN | DRAWING NO. 10 | REV 0

R:\2015\152596 - SGI Disposal Embankment\Drawings\Northern Tract\Exhibit 9 (1 of 2)-R0.dwg

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