

## Rowley East Quarry Expansion Narrative

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Expand the existing 61 acre Rowley East Quarry to include approximately 100 acres of adjacent land for mining and accessory use. The proposed mine boundary includes approximately 161 acres.

Table 1 below lists the parcels included in this proposal.

<i>Table 1. Parcels in Proposal</i>	Parcel ID	Owner	Acres	Comment
<b>Existing Quarry</b>				
19130623003	(P1)	Rowley Family Trust	18.1	Currently in mine area
19130623004	(P2)	Rowley Family Trust	3.37	Currently in mine area
19130623002	(P3)	Rowley Family Trust	3.1	Currently in mine area
19130624004	(P6)	Rowley Family Trust	36.11	Currently in mine area
<b>Proposed Expansion</b>				
19130612404	(P5)	Granite Northwest, Inc.	27.01	Not proposed to be mined
				Stockpile area only/water source No mining or product processing
19130624003	(P4)	Rowley Family Trust	3.29	
19130613001	(P7)	Rowley Family Trust	120.85	Partially in proposed mine area

*See attached parcel map.*

Rowley East Quarry is a basalt quarry that has been mined since 1994. The current 61 acre site is owned by the Rowley Family Trust and the mining operations are performed under lease by Granite Construction Company. The quarry provides aggregate materials for local construction and consumers. The aggregate material is also incorporated in asphalt used to build and repair local roads, freeways, and construction projects.

Quality permitted reserves in the current mine are being diminished and this proposed expansion into adjacent undeveloped land will enable continued operations and the ability to provide aggregate resources to the surrounding areas for the foreseeable future. The proposed area has been designated under the Mineral Resource Overlay in the Yakima County Comprehensive Plan as an area of long term significance for the extraction of minerals. The proposed undeveloped mining areas to the east and south of the existing quarry contain steep slopes, are not suitable for agriculture, and do not currently provide a use.

Site and Operations Description

The existing quarry is east of Selah, WA on the south side of Interstate 82 at the East Selah Road exit. The current and proposed land lies above the 100 year floodplain of the Yakima River and consist of steep and rolling slopes with rocky outcrops. The eastern part of the existing quarry has been reclaimed as previously planned. Mining into the proposed expansion will proceed from the current central section being actively mined. The existing requirement for concurrent reclamation of the current mined area will be carried over into Phase 1 of the updated mining plan.

Attachment: G G

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The proposed expansion will not change current operational hours, employees, or traffic to and from the site; it will only expand the minable reserves for the quarry. Typically, the mine operates 7am to 5:30pm and occasionally operates during the night. The current mine is accessed from East Selah Road and this entrance will continue to be utilized in this proposal.

No new structures are proposed for this expansion. Facilities and operations on current quarry area will support the expansion area. Current parking onsite for employees and customers will also be sufficient after mine area is expanded.

### Mining Plan

Extraction and processing of the aggregate from the Rowley East Expansion site will be accomplished in four phases. Each phase will be brought to reclamation slope and vegetated concurrently. The eastern part of the quarry has been reclaimed. The current mined face in the south-central part of the operating quarry will be included into Phase 1. Mining into the expansion will be initiated from this operating area. Phases 1 through 3 will be developed with concurrent reclamation. This will leave phase 4 as a visual and acoustic buffer between operations and properties to the north (YCC 15.45.060 (3)).

Property boundary setback at least 25 feet, as according to YCC 15.45.060 (6)(c), except with the common boundary with the existing Rowley operation area. At no time will a crusher be within 500 feet of an existing residence not owned by one of the property owners (YCC 15.45.060 (6)(b)). All mining will remain above the water table. Clearing new land will only occur as needed for immediate mining in order to minimize erosion and visual impacts.

#### **Phase 1**

Phase 1 will progress south from the existing Rowley East Quarry operations, away from the interstate. When enough space in the pit floor is established, the crusher location will be relocated from the eastern part of the current stockpile area to south of the current stockpile area, closer to the operating face. Reclamation slopes of up to 1.5:1, as in the existing quarry, will be established along the permit boundary areas as mining progresses south into Phase 1. Terraced slopes will be created into the boundaries with Phase 2 and Phase 3 to ensure safe slope stability. The boundary between phases will not be mined to a vertical wall. As Phase 1 nears completion it will be concurrently reclaimed as mining enters Phase 2. This will entail a "rolling reclamation" and the reclaimed slopes in Phase 1 will be covered in stored topsoil and vegetated.

#### **Phase 2**

Phase 2 will be developed in the same manner as Phase 1. The crusher and stockpiles will be moved into the pit floor of Phase 1 provided there is adequate room. Mining will progress east into Phase 2. Reclamation slopes of up to 1.5:1, as in the existing quarry, will be established along the permit boundary areas as mining progresses east into Phase 2. Terraced slopes will be created into the boundary with Phase 3 to ensure safe slope stability. The boundary between phases will not be mined to a vertical wall. As Phase 2 nears completion it will be concurrently reclaimed as mining enters Phase 3.

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## Phase 3

Phase 3 will be developed in the same manner as Phase 1. The crusher and stockpiles may be moved into the pit floor of Phase 2 provided there is adequate room. Mining will progress north and northeast into Phase 3. Reclamation slopes of up to 1.5:1, as in the existing quarry, will be established along the permit boundary areas as mining progresses. Terraced slopes will be created into the boundary with Phase 5 to ensure safe slope stability. The boundary between phases will not be mined to a vertical wall. During Phase 3 “rolling reclamation” will occur.

## Phase 4

Phase 4 will be developed in a similar manner to Phase 1. However, mining will not proceed until reclamation is initiated on all previous Phases. The crusher and stockpiles will be located in the existing Rowley East Quarry, west of Phase 4. Mining will progress east into Phase 5. As the pit floor is established, the crusher and stockpiles will be moved to the east, closer to the working face. Upon completion of Phase 5, the final reclamation slope of up to 1.5:1, as in the existing quarry, along the eastern boundary and the pit floor will be reclaimed.

## Mining and Blasting Protocol

Any blasting will be completed according to rules and guidelines established in YCC 15.45.060 (7) (b, c). All blasting will occur between the hours of 9:00 am and 4:00 pm, Monday through Friday. Blasting will not occur on New Year’s Day, the Fourth of July, Labor Day, Thanksgiving, or Christmas Day. The current blasting notification plan for the existing quarry will continue to be implemented to notify emergency response agencies and residences within one-half mile of the site of a blasting event. This notice will also include the Selah-Moxee Irrigation District, WSDOT regional office, Yakima County Planning Department, and the WSY, PNSN Seismology Lab. A blasting vibration monitoring plan has been developed to collect vibration data during blasting events. Vibration sensors known as geophones are placed in the vicinity of the Selah-Moxee Irrigation Tunnel. A formal blasting vibration monitoring plan has been included as part of this proposal. Parcel 1 and Parcel 11 from Table 1 above are parcels being used to place the permanent geophones (vibration sensors) as described in the blasting vibration monitoring plan.

Mining will continue in the expansion area in the same fashion as in the current quarry. This includes loosening the resource rock using a crawler tractor and controlled blasting. The loosened rock will then be pushed to the lower portion of the slope using a bladed crawler tractor, where it will be picked up with an articulated front end loader. The excavated material will then be processed in the on-site rock crusher to the size distribution of the final marketable products and then stockpiled. Water mist will be sprayed onto the conveyors via water bars or nozzles to minimize fugitive dust emissions during the processing. Water will be brought in via a water truck from an existing facility north of Interstate 82. No on-site water resources will be developed.

## Crusher Placement

When processed inventory is running low, a portable crusher is mobilized to the site to crush material until the stockpile inventory is full. The current crushing location is along the northwest border of the existing quarry. The crushing will remain at the current location until mining into phase 1 of the

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expansion creates a pit floor large enough to relocate the crusher. As the pit floor moves further south and east into the expansion, the crusher will be located in that area behind the cover of the Phase 4 along the northern border of the site. This will provide a shorter turnaround for equipment loading the crusher and contain the operation within the pit behind the cover of the northern slope.

### Reclamation

As mining progresses into new areas, topsoil will first be removed and stored onsite for reclamation purposes. Final reclamation slopes of up to 2V:1H will be established through the mining process to produce a ridge and floor structure, similar to the existing and surrounding landforms. This will maintain a side slope of up to 2V:1H and a flat surface north of the ridge. The configuration will support the native dry vegetation as is found in the local ecological community.

“Rolling reclamation” will occur as final slopes are reached and mining progresses. Topsoil will be spread on the final slopes and will be vegetated with native grasses and shrubs to match the existing and surrounding areas. If needed, additional topsoil will be brought onsite or amendments added to onsite soils in order to complete reclamation. Areas of rock outcrops and variable slopes will be used to mimic surrounding land features.

After completion of Phase 4 following the preceding phases, the crusher and stockpiles will be removed. All equipment associated with the quarry operation will be removed. Final reclamation of the entire excavation will be completed within two years of the cessation of mining.

### Illumination

No new illumination is proposed in the existing mine area. Current lighting in the stockpile and scale area will continue to be utilized. When a crusher is operating in the mine, associated lights will be directed down at the ground or away from the interstate or other public roads and into the quarry area. No direct lighting or glare will be directed toward drivers on the interstate or public roads. As mining progresses into the expansion, lighting will be further concealed by the Phase 4 slope separating the pit floor from the interstate.