

APPRAISER CERTIFICATION BOARD

May 11, 2023

Agenda Item 4

APPRAISER CERTIFICATION BOARD

MEETING MINUTES

Nevada Department of Taxation
Carson City Large Conference Room
1550 College Parkway
Carson City, Nevada

&

Via Zoom

September 8, 2022
9:00 a.m.

Meeting started at 9:27 am

Members Present:

Kelson Powell, Chair
Jayme Jacobs, Vice Chair
Sorin Popa
Jana Seddon
Shannon Silva

Members of the Public Present and via Zoom:

Darrell Prawalsky – Clark County
Kim Hildebrand – Nye County
Justin Zimmerman – Nye County

Dept. of Taxation Staff Present:

Jeffrey Mitchell
Hector Sepulveda
Christina Griffith
Chali Spurlock
Denesa Johnston
Cheryl Erskine
Yvonne Nevarez-Goodson

I. Public Comment

No public comment.

II. Introductions

No new introductions.

III. Review and Consideration for Approval of the June 15, 2022, Appraiser Certification Board Meeting Minutes

Board member Silva moved to approve the Minutes. Board member Seddon seconded the motion. All members voted in favor of the motion.

IV. Discussion of Hours on Certificate

The Department of Taxation's Deputy Director of Local Government Services, Jeffrey Mitchell, informed the Board that pursuant to NAC 361.567, the Department does not award any contact hours for any portion of the course during which the person taking the course takes an examination.

Board member Seddon stated that she agreed with the current practice not to award credit hours for testing time.

Deputy Director Mitchell mentioned that the Board has a good record of the hours that have been approved for all the standard IAAO courses.

V. Consent Agenda Items

1. Review and Consideration for Approval of Continuing Education Credit Hours Reviewed and Submitted by the Department of Taxation Local Government Services Deputy Director
 - a) LGS – Excel for Appraisers, Hours on Certificate
 - b) McKissock – Appraisal of Industrial and Flex Buildings, Hours on Certificate

Board member Seddon moved to approve the courses. Board member Popa seconded the motion. All members voted in favor of the motion.

VI. Briefing to and from Appraiser Certification Board and Department Staff

Deputy Director Mitchell introduced the Department's Chief Deputy Executive Director, Yvonne Nevarez-Goodson, and mentioned that he would be transitioning away from his role with Boards and Commissions.

Chief Deputy Nevarez-Goodson gave a brief overview of her role for the Department and the Board.

VII. Schedule Date and Review Agenda Topics for the Next Appraiser Certification Board Meeting

Deputy Director Mitchell mentioned that there was nothing pressing to be scheduled before the Board, and that upcoming matters would be in the normal course of business. He anticipated that the next meeting would be scheduled for December.

VIII. Public Comment

Vice Chair Jacobs mentioned that they will be having an IAAO course in December and it will be a local class.

Board member Seddon mentioned that a couple of Assessors have asked her about testing in Southern Nevada, and to her knowledge the Department of Taxation should have a minimum of four testing dates, two in Northern Nevada and two in Southern Nevada.

Deputy Director Mitchell stated that the Department is required to provide testing quarterly, and if the Assessors have a specific request for testing, they can submit that request in writing. The Department will review the requests for scheduling and budgetary constraints and determine whether it can provide the additional training. Deputy Director Mitchell further stated that the Department is required by regulation to conduct at one annual training session in Southern Nevada.

Vice Chair Jacobs mentioned that typically there has been testing twice a year in Clark County, in the Spring and Fall.

The meeting was adjourned at 9:49 a.m.

May 11, 2023

Agenda Item 5

1. a) Northern Nevada Real Estate Overview



Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER, TITLE, TITLE OF COURSE, VENDOR/PROVIDER
Northern NV Real Estate Overview
Appraisal Institute

1. Course Summary: overview of local market

2. What are the hours of instruction? 5

3. What is the completion date? 10/14/22

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- Mass Appraisal Concepts and Applications
IAAO Standards
Residential, Commercial/Industrial Appraisal
Unitary/Centrally Assessed Property Appraisal
Legal Documents (Deeds, Titles, Leases, etc.)
Nevada Statutes or Regulation, Appraisal or Assessment Standards
College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects
GIS, Mapping, CAMA
Laws Relating to Real Estate, Water or Mining
Professional Ethics
Other

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
Syllabus or Course Material - flyer attached

SIGNATURE, Requestor Signature, Date 9/27/22

For Department Use Only

Table with 4 columns: NUMBER OF CREDIT HOURS GRANTED, NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT, MILESTONE APPLIED TO, TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services, Title, Date

2022 Northern Nevada Real Estate Overview

10.14.22

Atlantis Casino Resort Spa

Reno, NV



Northern Nevada
Branch Chapter

Overview Description: This half-day program will provide an overview of the local real estate market and discuss the trends, changes and impact on the real estate development in Northern Nevada. Industry experts will provide their insights and offer panel discussions focusing on the retail, single family, industrial, multi-family and office sectors.

SPEAKERS

Retail Panel

Moderator: Julie Ott, MAI—Carter-Ott Appraisal, Inc.

Panelists

Gigi Chisel—Lewis Management Corporation
Amanda Lavi, CCIM—Colliers
Shawn S. Smith, CCIM, CLS, CRRP—Kidder Matthews
Doug Wiele—Foothill Partners

Single Family Residential Panel

Moderator: Daniel R. Brauning, SRA, AI-RRS

Panelists

Nick Abe—RE/MAX Professionals
Mike Richardson—Bay Equity
Mike Wood—RE/MAX Professionals

Industrial Panel

Moderator: Benjamin W. Gregg, MAI, MRICS—Newmark Valuation

Panelists

Chris Fairchild, CCIM, SIOR—Colliers
Bradley J. Elgin—Stark Accelerators
Paul Kinne—Panattoni Development
Christopher Mann—Sperry Van Ness

Multi-Family Panel

Moderator: Sarah K. Fye—Johnson Perkins Griffin

Panelists

Kenneth N. Blomsterberg—Marcus & Millichap
Ben Galles—LOGIC Commercial Real Estate
Blake Smith—S3 Development
Jessie Greer, MSRE, CCIM, CPM, CEPA—Avison Young

Office Panel

Moderator: Bruce Hahn, MAI, SRA

Panelists

Bram Buckley, CCIM—Avison Young
Melissa Molyneaux, SIOR, CCIM—Colliers

Lunch Speaker

Teresa Di Loreto—The Di Loreto Companies

Topic: *Downtown Damonte*

Overview Moderator

Nicholas W. Bennett, MAI—The DiFederico Group

2022-2023 NVAI Chapter President

NOTE: Additional speakers may be added to panels as they are approved by the Nevada Real Estate Division. For up-to-date speaker information, go to: www.ainevada.org/2019nnvreo

FEES

TYPE	EARLY BIRD	REGULAR
	Registration Fee (Through 09/30/22)	Registration Fee (10/01 to 10/14/22)
AI Member	\$130	\$150
Regular	\$130	\$150

*Late fees will apply if space is available

LOCATION

Atlantis Casino Resort Spa
3800 S. Virginia Street
Reno, NV 89502

SCHEDULE

Registration & Continental Breakfast ♦ 7:30 AM
Overview Panels ♦ 8:30 AM—1:30 PM

2022 Northern Nevada Real Estate Overview CE approvals:

- ♦ Nevada Commission of Appraisers - CE.0009591-A
- ♦ Nevada Real Estate Division on behalf of the Nevada Real Estate Commission (5 hours, Real Estate General) - SE.7024000-RE
- ♦ Appraisal Certification Board (Property Tax) - Pending
- ♦ Appraisal Institute (5 hours)

100% attendance is required, which includes the lunch session.
Partial credit is not available for continuing education credit.

May 11, 2023

Agenda Item 5

1. b) Possessory Interest: Yes, There is a
Tax on That



Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER: [Redacted]
TITLE OF COURSE: Possessory Interest: Yes, There Is a Tax on That
VENDOR/PROVIDER: IAAO Webinar

1. Course Summary:

laws of valuation methodologies on possessory interest properties

2. What are the hours of instruction?

1.5

3. What is the completion date?

9/28/22

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- Mass Appraisal Concepts and Applications
IAAO Standards
Residential, Commercial/Industrial Appraisal
Unitary/Centrally Assessed Property Appraisal
Legal Documents (Deeds, Titles, Leases, etc.)
Nevada Statutes or Regulation, Appraisal or Assessment Standards
College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects
GIS, Mapping, CAMA
Laws Relating to Real Estate, Water or Mining
Professional Ethics
Other Possessory Interest

If other, please describe why the course is applicable to appraisal and/or property tax.

see flyer

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
Syllabus or Course Material

flyer

SIGNATURE

[Redacted Signature]

9/27/22

Requestor Signature

Date

For Department Use Only

Table with 4 columns: NUMBER OF CREDIT HOURS GRANTED, NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT, MILESTONE APPLIED TO, TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services Title Date

Burke, Cori

From: info@iaao.org
Sent: Monday, September 26, 2022 10:06 AM
To: Burke, Cori
Subject: IAAO September webinar: Possessory Interest: Yes, There is a Tax on That

[NOTICE: This message originated outside of Washoe County -- DO NOT CLICK on links or open attachments unless you are sure the content is safe.]

Click [here](#) to view in your browser



Webinar reminder - register today
Possessory Interest:
Yes, There is a Tax on That

Wednesday, Sept. 28, 2022
Noon Central

The lease of government-owned property is assessable in California and will be the focus of the IAAO September webinar, *Possessory Interest: Yes, There is a Tax on That* on Wednesday, Sept. 28 from Noon to 1:30 p.m. Learn about the laws and valuation methodologies used in Los Angeles County.

May 11, 2023

Agenda Item 5

1. c) Residential Construction and the Appraiser



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER [REDACTED]	TITLE [REDACTED]
TITLE OF COURSE Residential Construction and the Appraiser	
VENDOR/PROVIDER McKissock Learning	

1. Course Summary:
See attached.

2. What are the hours of instruction? 7 hours

3. What is the completion date? 03/30/2021

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|---|---|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications
<input type="checkbox"/> IAAO Standards
<input checked="" type="checkbox"/> Residential, Commercial/Industrial Appraisal
<input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal
<input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.)
<input type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects
<input type="checkbox"/> GIS, Mapping, CAMA
<input type="checkbox"/> Laws Relating to Real Estate, Water or Mining
<input type="checkbox"/> Professional Ethics
<input type="checkbox"/> Other |
|---|---|

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
 Syllabus or Course Material

SIGNATURE [REDACTED]
Requestor Signature

3/6/23
Date

For Department Use Only			
NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE
Verified by:			
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Division of Local Government Services	Title	Date	



Residential Construction and the Appraiser

Course Summary:

This course covers primarily residential construction and is intended for real property appraisers, real estate agents, and anyone else who wants to understand more about how houses are constructed. It covers the entire process, literally from the ground up. Topics include property inspection, site preparation, footings and foundations, framing systems, insulation and ventilation, HVAC and mechanical systems. The course material includes many illustrations and photographs, with an emphasis on recent innovations in building materials and practices.

Chapter list:

1. Inspection of Property and Site
2. Site Considerations
3. Foundation
4. Structure and Exterior Finish
5. Architectural Styles and Factory-Built Housing
6. Mechanical Systems: Plumbing
7. Mechanical Systems: Electrical and HVAC
8. Interior Details and Housing Trends
9. Final Exam

May 11, 2023

Agenda Item 5

1. d) Calculating New Land & Remainders



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

<small>NAME OF REQUESTER</small> [REDACTED]	<small>TITLE</small> [REDACTED]
<small>TITLE OF COURSE</small> Calculating New Land & Remainders	
<small>VENDOR/PROVIDER</small> Washoe County Assessor's Office - Nevada Assessors' Association	

1. Course Summary:

A review of how new value is treated and determined through NAC 361.61047, 361.610475, 361.61048, and/or based on changes in actual or authorized use. In addition, a review of how abatement is calculated upon properties determined to be remainders after a parcel boundary is changed or split.

2. What are the hours of instruction? 1.5 hours

3. What is the completion date? 4/12/23

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|--|--|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input type="checkbox"/> Other |
| <input checked="" type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
- Syllabus or Course Material

SIGNATURE

Requestor Signature: [REDACTED]

Date: 4-20-23

For Department Use Only			
<small>NUMBER OF CREDIT HOURS GRANTED</small>	<small>NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT</small>	<small>MILESTONE APPLIED TO</small>	<small>TOTAL HOURS FOR THIS MILESTONE</small>
Verified by: _____			
<small>Division of Local Government Services</small>	<small>Title</small>	<small>Date</small>	

New Land And Remainders

Part 1:

Improvement to or Change in Actual or
Authorized Use of Property

Part 2:

Abatement for Remainder Parcels



Steve Clement

Chief Property Appraiser | Washoe County Assessor's Office

Office: 328.2234

sclement@washoecounty.gov

1001 E. Ninth St., Bldg. D, Reno, NV 89512



Note: NAC Section “Improvement to or Change in Actual or Authorized Use of Property” Covers When And How New Land Is Determined For Existing Parcels.

Part 2:

Abatement for Remainder Parcels

NAC Section “Abatement for Remainder Parcels” Covers If, When And How The Abatement “Tax Cap” Is Determined For New Parcels.

**APPROVED REGULATION OF THE
NEVADA TAX COMMISSION**

LCB File No. R018-17

Effective February 27, 2018

EXPLANATION – Matter in *italics* is new; matter in brackets ~~omitted material~~ is material to be omitted.

AUTHORITY: §§1-3, NRS 360.090, 361.4722, 361.4723 and 361.4724.

A REGULATION relating to property taxes; revising provisions governing the exclusion from certain partial abatements of property taxes for an improvement to or change in the actual or authorized use of property; and providing other matters properly relating thereto.

This Regulation Revised The Method For Calculation Of New Land (Excluded From Partial Abatement Under NAC 361.610465).

Any Improvement To The Property.

[NAC 361.61047](#)

Change In Actual Use Of The Property.

[NAC 361.610475](#)

Note: Residential Use IS Separated Into SFR and Multi-Family In This NAC.

Change In Authorized Use Of The Property.

NAC 361.61048

Amount Of Value Excluded From Abatement (New Land \$).

NAC 361.610485

Amount Of Value Excluded From Abatement (New Land \$).

NAC 361.610485

Amount Of Value Excluded From Abatement (New Land \$).

[NAC 361.610485](#)

Change In Use

Change In Use Residential To Multi-Family

Appraiser	DATE	APN	Fiscal Year
SLC	3/21/2023	011-255-03	2023
<u>NAC 361.610465</u> CHANGE IN ACTUAL OR AUTHORIZED USE			
Has a new improvement been made or a change in the actual or authorized use occurred? See NAC 361.61047 , 361.610475 or 361.61048 .		NO? STOP - No New Land	YES? Continue...
<u>NAC 361.610485</u> DETERMINATION OF AMOUNT OF PROPERTY TAXES TO BE ADDED TO TAX ROLL			
A	2023 Taxable LAND Value AFTER the change in use	187,500	Section 2 Part 2b (1)
B	2023 Taxable LAND Value BEFORE the change in use 2023	150,500	Section 2 Part 2b (2)
C	Change in Value [A - B]	37,000	Section 2 Part 2b (3)
D	Total Taxes from 2022, BEFORE any change in use (Excluding Exemptions)	1,371.62	Section 2 Part 4
E	2022 Total Taxable Value BEFORE any change in use	182,900	
F	Effective Tax Rate (ETR) (Taxes / Taxable Value [D/E])	0.7499 %	
G	Taxes on New (ETR x Change In Value [F x C])	277.47	Section 2 Part 2b (4)
H	Prior Year Total Tax Rate (From Subject Property's Tax District)	3.6600 %	Section 2 Part 2b (5)
I	Assessed New Land (Taxes on New / Prior year Tax Rate [G / H])	7,581	
Taxable New Land (Assessed New Land / Assessment Ratio [I / 0.35])		21,661	
Reason for Change:	Change in Actual Use : Primary use of property has changed - NAC 361.610475		

**APPROVED REGULATION OF THE
NEVADA TAX COMMISSION**

LCB File No. R021-17

Effective January 30, 2019

EXPLANATION – Matter in *italics* is new; matter in brackets ~~emitted material~~ is material to be omitted.

AUTHORITY: §§1-6, NRS 360.090 and 361.4722.

A REGULATION relating to property taxes; revising the methods for determining the applicability and amount of the partial abatement of property taxes for remainder parcels of property; and providing other matters properly relating thereto.

This Regulation Revised The Language For Determining If A
Remainder Parcel Qualifies For A Partial Abatement And Methods
For Calculation Of Remainder Parcels.

Part 2: Abatement for Remainder Parcels

Part 2: Abatement for Remainder Parcels

NRS 360.090, 361.4722)

“New parcel for development” means each new parcel which results from the division of any previously existing parcel or parcels, the combination of any previously existing parcels, or any change in the configuration of any parcels or of lot size or lot boundaries, by means of a parcel map, subdivision map, certificate of land division, long-term lease, action of any governmental entity or any other means.

Part 2: Abatement for Remainder Parcels

- ❖ Evaluate Each “New Parcel For Development” To Determine If There Is A Change In Use:
- ❖ Vacant Land To Residential Subdivision Land (Residential Subdivision Map Recorded).
- ❖ Vacant Land To Commercial/Industrial Subdivision, Or New parcels Within (Com/Ind Subdivision Map Recorded).
- ❖ Vacant Land With New Construction On Parcel Sufficient To Determine A Change In Use.
- ❖ Use Of The Property For The Current Year Has Change From The Previous Year.
- ❖ If Parcel Had More Than One Use, Use That Portion To Determine The Use Of The New Parcel.
- ❖ “Use of the property” means the principal use of the property for one of the following purposes:
 - (a) Agricultural use; (b) Open-space use; (c) Residential use; (d) Commercial or industrial use;
 - (e) Institutional use; (f) Recreational use; (g) Use as vacant land.
- ❖ **If the use of the property: Has not changed, the parcel is a remainder parcel.**
- ❖ **Has changed, the parcel is a new parcel for development which is not eligible for the partial abatement of taxes.**

Note: Residential Use IS NOT Separated Into SFR and Multi-Family In This NAC.

Part 2: Abatement for Remainder Parcels

- ❖ **Calculation Of Taxes And Tax Cap Value For A Remainder Parcel:**
- ❖ **Identify The Parcels (Parent Parcels) Which Contained The Area Of The Remainder Parcel (Child Parcel).**
- ❖ **Sum All The Taxes From The Parent Parcels For The Previous Year.**
- ❖ **Sum All The Taxable Values From The Parent Parcels For The Previous Year.**
- ❖ **Calculate The Abated Effective Tax Rate By Dividing The Sum Of The Taxes By The Sum Of The Taxable Values.**
- ❖ **Calculate The Taxable Value Of The Remainder (Child) Parcel As If It Has Existed In The Previous Year.**
- ❖ **Remainder Parcel Net Property Taxes** = “Abated ETR” x The Child Parcel’s Taxable Value As It Existed In Previous Year.
- ❖ **Remainder Parcel Tax Cap Value** = Remainder Parcels Taxes ÷ “Actual ETR” (0.35 x Tax Rate).

Part 2: Abatement for Remainder Parcels

Date: 3/22/2023
Current Fiscal Year: 2023

Tax District: 1811
2022 Tax Rate: 3.66 %

NAC 361.61038 DETERMINATION OF AMOUNT OF NET PROPERTY TAXES ATTRIBUTABLE TO REMAINDER PARCEL FOR PRIOR YEAR.

NAC 361.61038 sec 1

- Identify each of the parcels which contained the land area of the remainder parcel in the prior year.
- Determine the taxable value of each of the parcels identified in paragraph (a) for the prior year.
- Determine the total amount of taxes levied, or which would have been levied but for any exemptions from taxation, in the prior year on each of the parcels identified in paragraph (a) for the prior year.
- Calculate the effective tax rate for the remainder parcel for the prior year by dividing the total amount of taxes determined pursuant to paragraph (c) by the total of the taxable values identified pursuant to paragraph (b).

2022 TAXABLE VALUES (last year parcel was taxed)

Parent Parcels	NBC	SF	AC	Imp Taxable	Land Taxable	Total Taxable	NET Total Taxes	Abatement	
038-280-61	FCEE	47,105	1.081382	0	240,000	240,000	1,043.63	-2,030.77	×
038-280-62	FCEE	57,964	1.330670	0	540,000	540,000	1,921.23	-4,996.18	×
Totals		105,069	2.412052	0	780,000	780,000	2,964.86	-7,026.95	

Effective Tax Rate: 0.380110 %

NAC 361.61038 sec 1

- Determine the taxable value that the remainder parcel would have had if a taxable value for the remainder parcel had been separately established for the prior year based upon all the assumptions, costs, values, calculations and other factors and considerations that would have been used for the valuation of that property for that prior fiscal year.
- The amount of net property taxes attributable to the remainder parcel for the prior year is the amount obtained by multiplying the effective tax rate for the remainder parcel calculated pursuant to paragraph (d) by the taxable value of the remainder parcel determined pursuant to paragraph (e).

TAXABLE VALUES FOR CHILDREN (as if they existed in 2022).

Child Parcels	NBC	SF	AC	Imp Taxable	Land Taxable	Total Taxable	Rem. Taxes	2022 Remainder	
038-280-61	FCEE	47,105	1.081382	0	450000	450,000	1,710.50	133,528	×
038-280-62	FCEE	57,964	1.330670	0	450000	450,000	1,710.50	133,528	×
Totals		105,069	2.412052	0	900,000	900,000	3,420.99	267,056	

Size Difference: 0 0.000000 Explain difference in total sizes between parents and children. (Remap, Road Dedication, BLA, SUB etc) in comments below.

Remainder



Residential BLA:



Note: 09 is Parent To Child and 10 is Parent To Child. Two Remainder Calculations. Not Mixing Abated ETR's.

Residential BLA:

Remainder Or New Parcel Examples.



Note: 09 is Parent To Child and 10 is Parent To Child. Two Remainder Calculations. Not Mixing Abated ETR's.

Residential COMBO:



Residential COMBO:



Residential Combo (Reversion) in existing residential subdivision, Parcel 03 and 04 were combined into new Parcel 148-381-26. Square footage of child parcel changed, value was base lot and there was no change in use. ("Residential Use" includes the use of lots in a residential subdivision for which a final map has been recorded and on which residential improvements will be constructed. Therefore, residential use to residential use = no change in use).

Child parcel 148-381-26 is a remainder parcel.

Complete Remainder Parcel Worksheet.

(The assumption here is that there is no change in use and that the new land was captured when the residential subdivision map was initially created; even if new construction begins the same year as the combination, see definition of "Residential Use" NAC 361.61028).

Residential SPLIT (PM):



Residential SPLIT (PM):



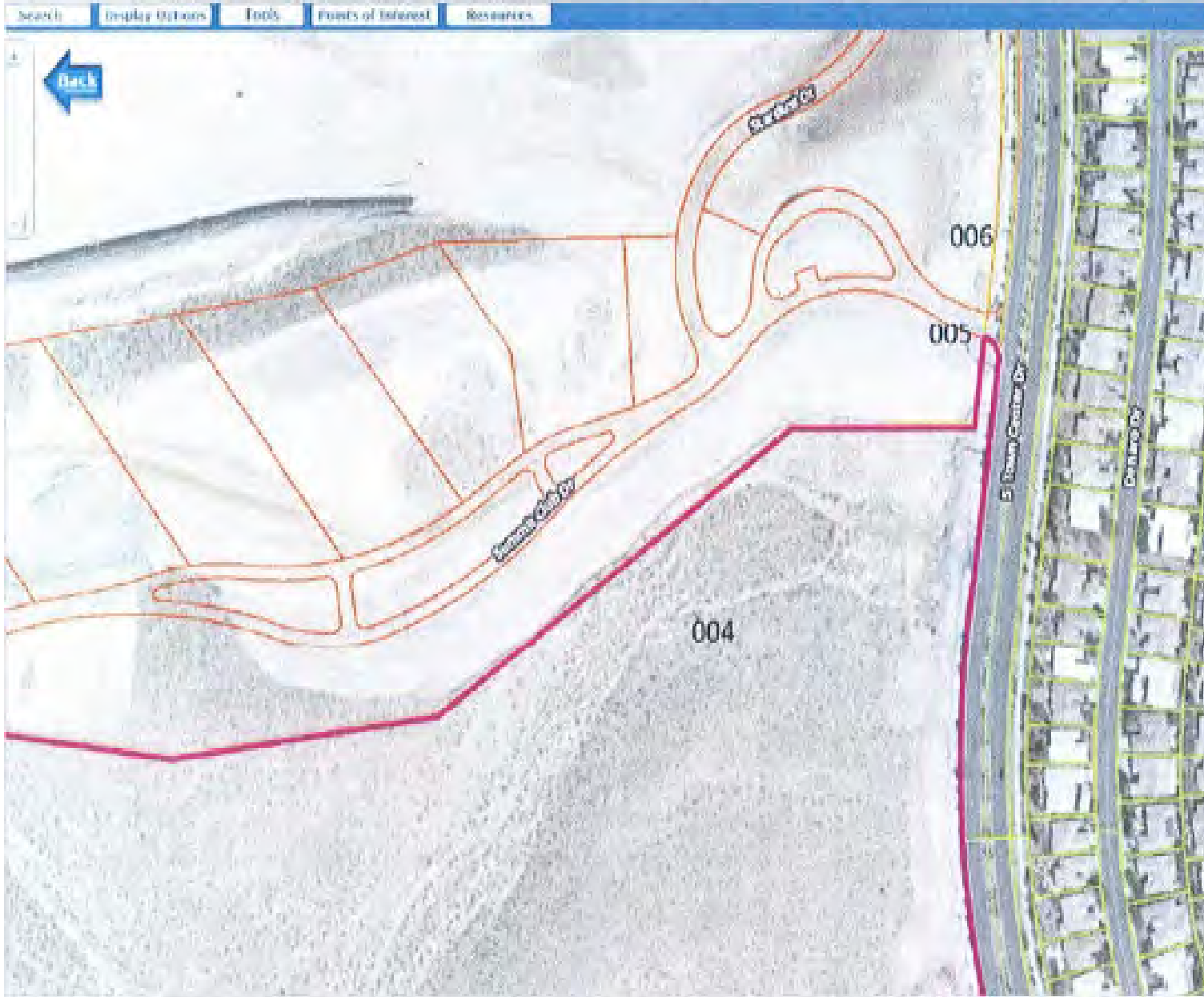
Residential SPLIT (Parcel Map) in existing residential subdivision, Parcel 09 was split into two new parcels 17 and 18. Previous value was base lot so there was no incremental value increase or change in use. ("Residential Use" includes the use of lots in a residential subdivision for which a final map has been recorded and on which residential improvements will be constructed. Therefore, residential use to residential use = no change in use). (Note: Even though zoning is MF14 the new parcels are only large enough to permit a single SFR).

Child parcels 17 and 18 are remainder parcels.

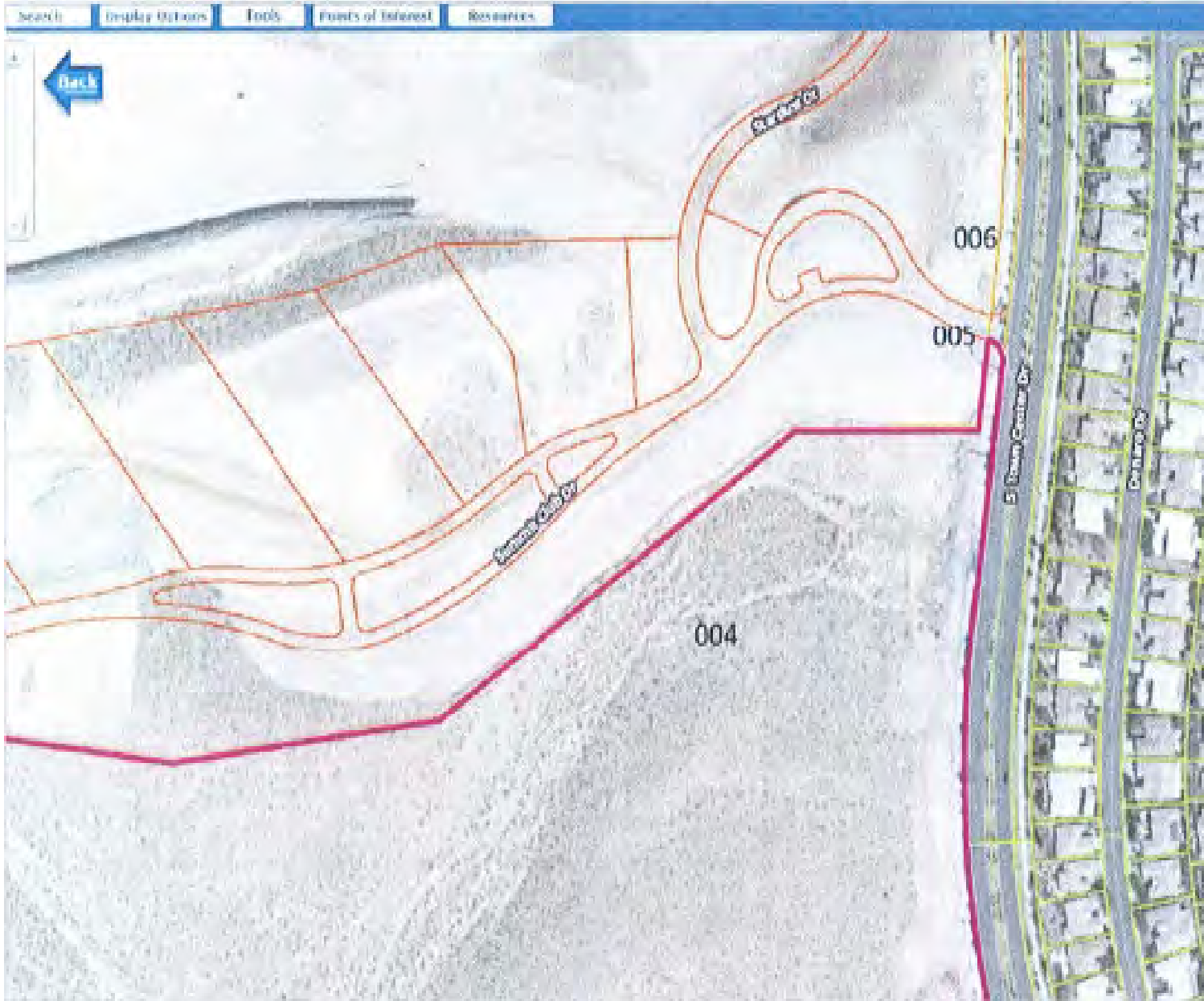
Complete Remainder Parcel Worksheet.

(Again, the assumption here is that there is no change in use and that the new land was captured when the residential subdivision map was initially created, even if new construction begins on parcel 18 the same year as the split).

Residential SPLIT (PM):



Residential SPLIT (PM):



Parcel 04, 05 and 06 were all part of very large parcel valued at \$/acre. Cut created one very large parcel 004, one very small street access parcel 05, and one long narrow parcel 06. No new construction the same year as the parcel map.

No change in use (vacant land to vacant land).

Child parcel 04 is a remainder parcel. Parcels 05 and 06 token values.

**Courtesy Of Clark
County Assessors Office**

Residential SPLIT (Subdivision):



Residential SPLIT (Subdivision):



Subdivision lots have existed for some time and have a developer discount valuation as base lots. During the fiscal year a map was filed to recombine the existing subdivision and then recut into a new subdivision with slight variations.

All parcels are new no remainder.

(calculate Subdivision Or Under Development discount as required).

**Courtesy Of Clark
County Assessors Office**

Residential SPLIT (Subdivision):



Residential SPLIT (Subdivision):



New subdivision parcel map all subdivision parcels are new no remainder (calculate Subdivision Or Under Development discount as required).

APN 528-330-21 is a remainder parcel. No change in use (vacant land still vacant land).

Complete Remainder Parcel Worksheet for parcel 528-330-21.

Commercial Combo/Split



Commercial Combo/Split



Parent parcels 25, 26, 30, 31, 32, 36, 37, 38, 39, 40 combined and then split into four children 032-291-42 thru 45. Parents included some developed areas and some vacant areas, valuation was \$/sf.

Four parcels as result of cut, three with already existing improvements 42, 43, and 45 and one vacant land parcel 44.

Square footage of all parcels changed, but value was \$/sf so there was no incremental value increase or change in use (improved commercial to improved commercial).

All parcels are remainder parcels.
Complete Remainder Parcel Worksheets.

Note: 36 Parent to Child 43.

37 Parent to Child 44.

38 Parent to Child 45.

25,26,30,31,32,36,37,28,39,40 all parent to 42.



Commercial Combo/Split



Commercial Combo/Split



Parent parcel split into two children 012-402-47 & 48. Parent was vacant land in an Industrial Business Park, valuation was \$/sf. Square footage of all parcels changed.

Both children parcels are remainder parcels if there is no change in use (vacant to vacant) during the same year as the split. Complete Remainder Parcel Worksheet.

If new construction occurs on either of the new parcels in the same year as the split sufficient for an identification of the use of the property then those children parcels would be all new no remainder (change in use vacant land to improved industrial).

Commercial Boundary Line Adjustment (BLA)



Commercial Boundary Line Adjustment (BLA)



Boundary Line Adjustment (BLA). As a result of a BLA (gaining a portion of 038-120-17) 038-870-26 becomes a new vacant parcel. Prior valuation was \$/sf. Square footage and industrial zoned.

Parcel 26 then has a new Mega Warehouse constructed in the same year as the BLA. Therefore, new construction occurred on 038-870-26 in the same year as the BLA sufficient for an identification of the use of the property. Change in use "New Parcel for Development" to "Industrial Use". Parcels 038-870-26 is all new no remainder.



If no new construction occurs on the new parcel in the same year as the BLA sufficient for an identification of the use of the property then parcel 038-870-26 would be a remainder (no change in use vacant to vacant). Complete Remainder Parcel Worksheet.

Parcel 038-120-17 is a remainder (no construction, no change in use). Complete Remainder Parcel Worksheet.

Commercial Combo:



Commercial Combo:



Commercial Combo (Reversion) in existing commercial zoned area. Parcel 19 and 20 were combined into new Parcel 038-870-21. Parcel 19 was valued @\$4.50 sf, Parcel 20@ \$5.25 sf. New parcel will be valued @\$4.50 sf.

**Parcel 038-870-21 is a remainder.
(no construction, no change in use vacant to vacant).**

Complete Remainder Parcel Worksheet.

**If new construction occurs on the new parcel in the same year as the combo sufficient for an identification of the use of the property then parcel 038-870-21 would be all new no remainder.
(vacant land to improved commercial).**



Steve Clement

Chief Property Appraiser | Washoe County Assessor's Office

Office: 328.2234

sclement@washoecounty.gov

1001 E. Ninth St., Bldg. D, Reno, NV 89512



May 11, 2023

Agenda Item 5

1. e) Processing Personal Property



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER [REDACTED]	TITLE [REDACTED]
TITLE OF COURSE Processing Personal Property	
VENDOR/PROVIDER Washoe County Assessor's Office - Nevada Assessors' Association	

1. Course Summary:

An overview of how effective and efficient changes in processing personal property can result in better service and stronger conclusions.

2. What are the hours of instruction? 1.5 hours

3. What is the completion date? 4/12/23

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|--|--|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input type="checkbox"/> Other |
| <input checked="" type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
- Syllabus or Course Material

SIGNATURE

[REDACTED SIGNATURE]

Date 4-20-23

Requestor Signature

Date

For Department Use Only

NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services _____ Title _____ Date _____

Processing Personal Property with Python

Washoe County Assessor's Office

Introduction

- Personal Property Coordinator
 - Project Development
 - Process and Operations Management
-
- Principal Account Clerk for Personal Property
 - Project Management
 - Python

What is Python?

- Programming language that tells the computer what to do
- Designed to be easy to learn
- Usable for a wide range of applications
- Code is extremely readable
- Used in artificial intelligence, machine learning, and neural networking
- Access to many external libraries



Table

What is a Python Library?

Library	Use
Openpyxl	Process Excel files
Pandas	General Data Analysis
Tkinter	OS Windows
Win32com	Outlook client
Xlwings	Excel Macros
TensorFlow	Machine learning

How is Python being used today?



Mass Code Assets



Compare Asset Lists



Convert/Correct bad files



Generate Custom Reports



Process Excels

Asset Life Category Assignment (continued)

- Requires manual input of life categories of assets
- Review assets to determine depreciation life
- May require additional research if asset description is incomplete, vague, or ambiguous
- May also require additional research if asset is uncommon

2020075 WHEELER AVE RENTALS
Schedule 0 | COMMERCIAL MENDEGUIA, CARLOS Status A | ACTIVE-NOT BILLED
Confidential

General Detail Summary **Details 6** Aircraft Mobile Home Exemptions 0 Notes and Data Inspections 0

+ - Filter

	Flag	Code	Depreciation Life	Asset Description
1	<input type="checkbox"/>	Y15	FIFTEEN-YEAR ITEMS	25 BLINDS FROM 2020060
2	<input type="checkbox"/>			6 REFRIGERATORS FROM 2020060
3	<input type="checkbox"/>			UNIT HOME
4	<input type="checkbox"/>			WINDOW TREATMENTS
5	<input type="checkbox"/>			1 REFRIGERATOR FROM 2020060
6	<input type="checkbox"/>			PRINTER



Asset Life Category Assignment

- Processing entire account can be time consuming
- Requires research, repetitive click and keystroke
- Can lead to mistakes or miscoding



2020198 WOLF RUN EAST Status A | ACTIVE-NOT BILLED
WOLF RUN DST Confidential

Schedule 0 | COMMERCIAL

General Detail Summary Details 28 Aircraft Mobile Home Exemptions 0 Notes and Data Inspections 0 Permi

+ - Filter

Flag	Code	Depreciation Life	Asset Description
<input type="checkbox"/>	Y15	FIFTEEN-YEAR ITEMS	Sofa/Love Seat (210)
<input type="checkbox"/>	Y15	FIFTEEN-YEAR ITEMS	Chair (210)
<input type="checkbox"/>			Apt. TVs (210)
<input type="checkbox"/>			Dishwasher (210)
<input type="checkbox"/>			Refrigerator (210)
<input type="checkbox"/>			Microwave (210)
<input type="checkbox"/>			Electric Ranges (210)
<input type="checkbox"/>	Y15	FIFTEEN-YEAR ITEMS	Kitchen Stools (420)
<input type="checkbox"/>			Mattress (210)
<input type="checkbox"/>			Bed Frames (210)
<input type="checkbox"/>			Bedside table (210)
<input type="checkbox"/>			Desk (210)
<input type="checkbox"/>			Desk Chairs (210)
<input type="checkbox"/>			Sectional in Lounge (1)
<input type="checkbox"/>	Y05	FIVE-YEAR LIFE ITEMS	Lounge TV (1)
<input type="checkbox"/>			Pool Table (1)
<input type="checkbox"/>			Ping Pong Table (1)
<input type="checkbox"/>			Poker Table (1)
<input type="checkbox"/>			BBQ Grill (2)

Problem/Solution

Auto Code Assets



Description

Uses a master excel sheet of already coded assets. Off that sheet, supplies the correct life code to the asset.

Impact

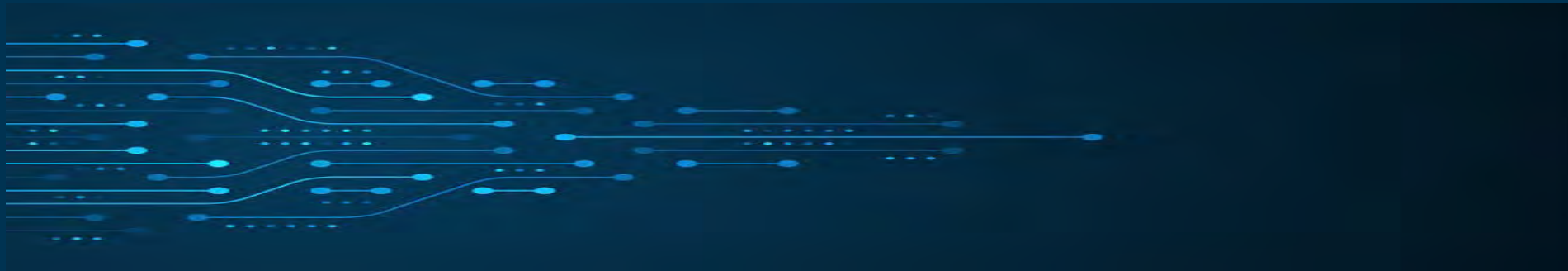
Reduces time to code assets. Low-level and high-level comparison. 100,000% increase in production.

Auto Coding in Python

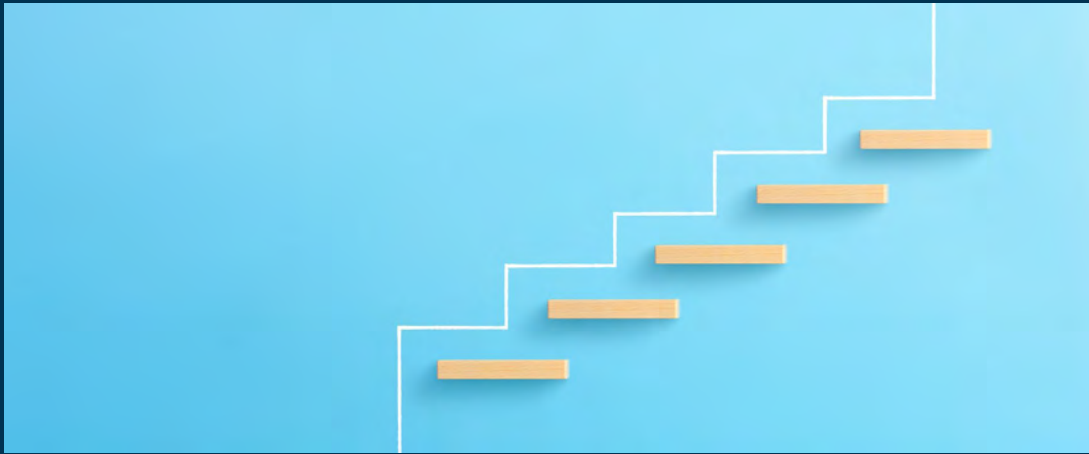
- Makes low level comparison
- Separates by starting letter
- After a match is found applies life code
- Assets must match exactly

- Tokenized Comparison

- Makes higher level comparison
- Separates the words into sections
 - Then the sections into sections
- Compares against all assets
- Returns reason why it matched
- Uses multiprocessing
- Does not need to match exactly



Example



- Set up
 - File to code
 - Master file
 - Hit start on app

Example

- Results
 - Split master file
 - Asks current asset the first letter
 - Compares asset against same letter
 - If match found, applies life code
 - Identifies possible improvements

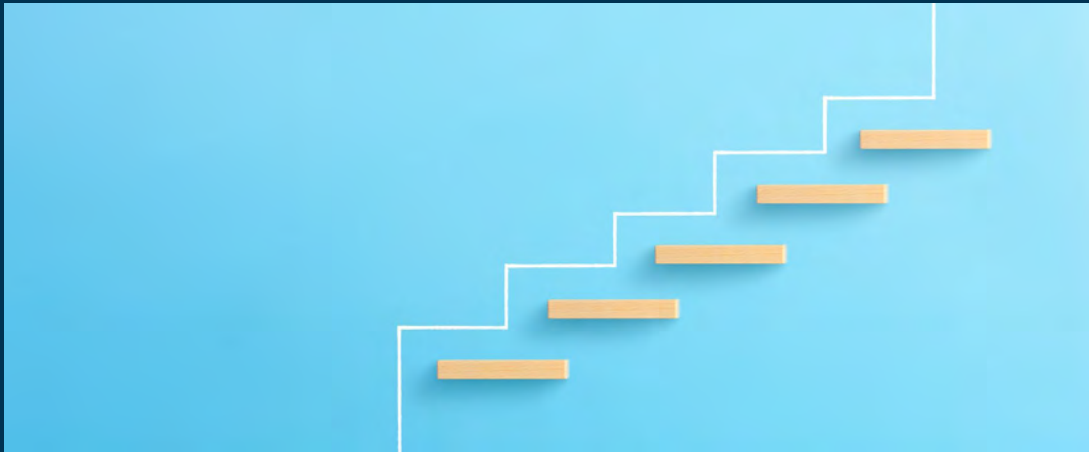


Example

- Similar setup to One to One
- Load master sheet
- Tokenizes both lists
- Compares token values
- Keeps the highest match
- After comparing against all applies code



Example



- Set up
 - File to code
 - Master file
 - Hit start on app

Example

- Results
 - Loads files
 - Prepares to multi process
 - Launches controlled multi process
 - Tokenizes asset in question
 - Compares asset against tokenized master list and keeps best match
 - Applies life code of best match
 - Identifies possible improvements



Auto Coding Benefit

Future of Auto Coding



Query data from
database instead of
using Excel



Add NAICS and cost
as conditions



Join One to One and
Tokenizer



Go from 95%-98%
accuracy to 99%



Create Neural
Network

Questions

Excel-based Declarations - Outdated Version (continued)

- Formatted with designated headers
- Multiple tabs were generated
 - Record tab
 - Deleted
 - Prior
- Only compared new listing against previous one using five data points
 - Description, year acquired, cost, serial number, and internal asset ID

Excel-based Declarations (Outdated Version)

- When exact match found, life category was carried over
- Could not identify:
 - Special characters, blank spaces, or other formatting issues not visually evident
- Running macro and coding manually would take 5 to 45 minutes
 - Dependent on asset count and sufficient description
 - Much longer if submitter provided all new descriptions or all new assets

Batch Process Excels



Description

One folder at a time, batch processes all excels in that folder

Impact

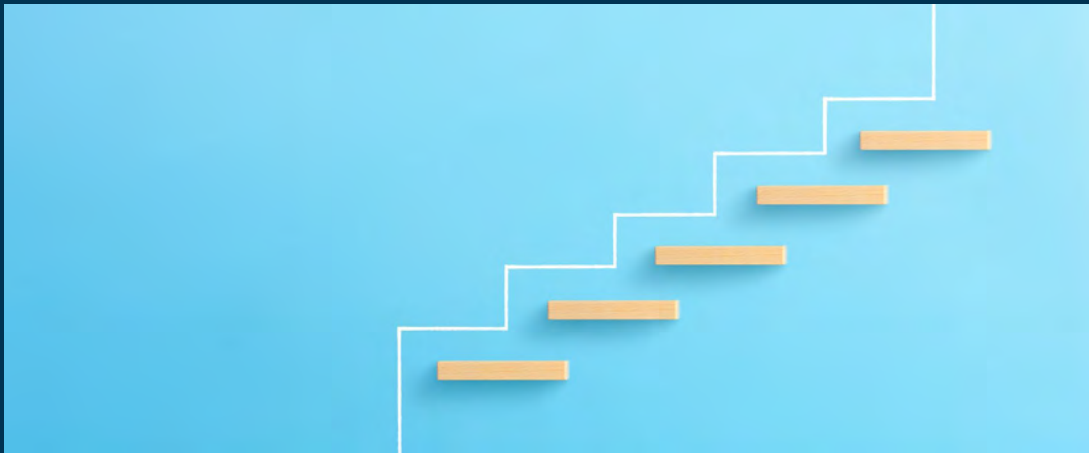
In the past one account could take up to half a day, now is reduced to all excels being ready in < 10 hours

Batch Processing Excels in Python

- CSV, XLSX, XLSM, XLS...
 - Iterating through files is slow
 - Grouped vs Non-Grouped accounts
 - Tax payers don't file correctly
 - Tax payers change fields they shouldn't
 - MAKE USER FRIENDLY
- Questions from those issues
 - How do we even convert files?
 - Is there a way to only iterate once?
 - How to process many accounts in one file
 - "How much to fix" vs "How much to expect"
 - How do we correct data?
 - How easy is it to make changes?



Example



- Set up
 - Folder that we want to work on
 - Folder with last years files
 - Folder for bad files
 - Folder for complete files
 - Template
 - Master sheet

Example

- Results
 - Converted and added all files
 - Corrected formatting
 - Saved bad files
 - Created files to work on
 - Set us up for follow up on bad files
 - Created “master” file that allows us to see all accounts we worked on in one sheet



Batch Process Excels Benefit

- One to One
- Tokenizer
 - Launches uncontrolled multi process
- Declare new to roll assets
- Marked for deletion
- Compares declared vs last year assets
 - Account number, cost, description, year acquired, code, unique id
- Highlights mismatches
- Separates files based on account number

Future of Batch Processing Exceles



Export in both group and non group format



Add auto email reply to files not in our format



Automate to run over night



Generate easier to see reports. Assessed value drops, too many missing assets, new account, ect...



Complete "Wish List"

Questions

Lessor Lessee Match



Description

One asset at a time, helps user place correct information

Impact

Reduces search time and overwrites all needed fields with exact data

Lessor Lessee Match in Python

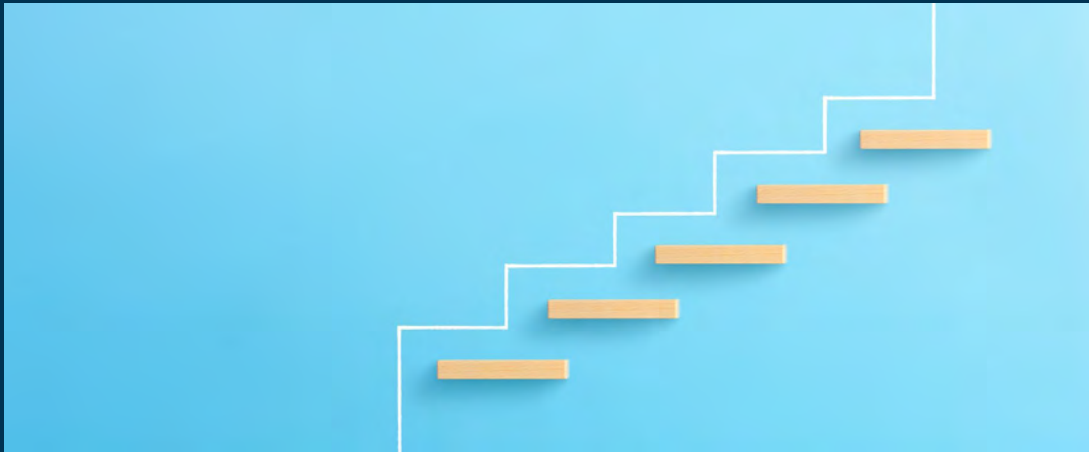
- Streets may go through many tax districts
- Tax payers submit partial vs incomplete addresses
- Point to correct account
- Tax payers don't file correctly
- We may want to hand research

- Questions from those issues

- How do we make sure we are assessing based on tax district?
- How do we make sure to have a 100% accurate address?
- Can we have account info added?
- “How much to fix” vs “How much to expect”
- How do we maximize user input?



Example



- Set up
 - File we want to work
 - Master file

Example

- Results
 - Places correct account number, lessee name, lessee address, doing business as name, tax district
 - On ones not found it is comparing against all real property data. Will place correct situs and tax district.
 - Non-match ones will highlight for further review



Lessor Lessee Match Benefit



Future of Lessor Lessee Match



Make fully compatible with telecom and billboard accounts



Reference last years filing when no match



Build possible accounts



Generate reports to both real and personal property



Integrate to batch process excel app

Questions

May 11, 2023

Agenda Item 5

1. f) Commercial Review



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER [REDACTED]	TITLE [REDACTED]
TITLE OF COURSE Commercial Review	
VENDOR/PROVIDER Washoe County Assessor's Office - Nevada Assessors' Association	

1. Course Summary:

A review of the considerations that must be made in relation to choosing the correct variables that are assigned to commercial properties for costing purposes using applicable costing manuals and Assessor CAMA systems.

2. What are the hours of instruction? ~~1.5 hours~~ 4 hours

3. What is the completion date? 4/12/23

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|--|--|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input type="checkbox"/> Other |
| <input checked="" type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
- Syllabus or Course Material

SIGNATURE

Requestor Signature: [REDACTED] Date: 4-20-23

For Department Use Only

NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services Title Date

Commercial Review

Part 1:

Review Construction Classes, Building Attributes And Extra Features.

Part 2:

30 Occupancies.

1190 Buildings.

10 Years.

\$3.3 Billion Dollars.



Steve Clement

Chief Property Appraiser | Washoe County Assessor's Office

Office: 328.2234

sclement@washoecounty.gov

1001 E. Ninth St., Bldg. D, Reno, NV 89512



Presentation Overview!

Review Construction Classes, Building Attributes And Extra Features:

- **Building Class / Frame Types**
- **Exterior Wall Types**
- **Quality Class**
- **Heat Types**
- **Ceiling Heights / Wall Heights**
- **Stories**
- **Perimeter vs Shape**
- **Age/WAY**
- **Elevators/Fire Sprinklers**
- **Yard Items Extra Features XFOBS**

A look at the 30 most common and highest value Commercial and Industrial Buildings constructed between 2013-2022 in Washoe County.

Organized into Five Groupings.

- **Multi-Family**
- **Industrial**
- **Specialty**
- **Office**
- **Retail**

Building Type	Total Buildings	Total Taxable
Multi-Family		
352 Multiple Res (Low Rise)	637	\$843,132,561
300 Apartment	33	\$474,465,607
311 Chubhouse	68	\$59,798,513
710 Retirement Community Complex	3	\$27,902,586
	741	\$1,405,299,267
Industrial		
584 Mega Warehouse	37	\$692,387,638
406 Storage Warehouse	35	\$132,291,486
453 Industrial Flex Building	18	\$10,066,044
494 Industrials, Light Mftg.	9	\$72,184,730
454 Shell, Industrial	10	\$15,935,210
407 Distribution Warehouse	2	\$16,643,789
528 Service Repair Garage	18	\$13,369,430
470 Equipment (Shop) Building	12	\$2,848,659
	141	\$955,726,986
Speciality		
497 Computer Center	28	\$300,116,180
331 Hospital	3	\$95,353,286
313 Convalescent Hospital	7	\$93,091,892
595 Hotel, Limited Service	9	\$93,635,275
345 Parking Structure	5	\$32,330,913
577 Parking Level	18	\$50,844,835
	70	\$665,372,381
Office		
344 Office Building	85	\$109,751,740
341 Medical Office	28	\$70,133,176
392 Industrial Engineering	2	\$18,034,831
	115	\$197,919,747
Retail		
353 Retail Store	42	\$21,024,172
349 Fast Food Restaurant	24	\$14,883,821
350 Restaurant	14	\$11,350,149
412 Neighborhood Shopping Ctr	16	\$19,236,976
413 Community Shopping Center	5	\$6,596,489
304 Bank	10	\$11,118,336
340 Market	1	\$3,528,740
446 Supermarket	1	\$7,060,192
419 Convenience Market	10	\$5,955,073
	123	\$100,753,948
	1,190	\$3,325,072,329

Part I

Review Construction Classes and Building Attributes:

- **Building Class / Frame Types**
- **Exterior Wall Types**
- **Quality Class**
- **Heat Types**
- **Ceiling Heights / Wall Heights**
- **Stories**
- **Perimeter vs Shape**
- **Age/WAY**
- **Elevators/Fire Sprinklers**
- **Yard Items Extra Features XFOBS**



Marshall & Swift: Class Of Construction

Class A

Fireproof Structure

- Frame: **Structural Steel** Column and Beams.



- Walls: Panel or curtain walls are usually hung from this frame type and just enclose space. The walls are normally not weight bearing.
- Roof Concrete or Concrete on Steel.

Class B

Fireproof Structure

- Frame: Reinforced Concrete Column and Beams.



- Walls: Panel or curtain walls are usually hung from this frame type and just enclose space. The walls are normally not weight bearing.
- Roof Concrete or Concrete on Steel.

Class C

- Frame: Masonry Bearing (lacks fire resistance of Class A & B).



- Walls: Brick, Block, Concrete Tilt-up, Nonbearing Curtain Walls.
- Roof: Wood or Steel Joists. Wood or Steel Deck.

Class C

- Frame: Masonry Bearing (lacks fire resistance of Class A & B).



- Walls: Brick, Block, **Concrete Tilt-up**, Nonbearing Curtain Walls.
- Roof: Wood or Steel Joists.
Wood or Steel Deck.

Class C

- Frame: Masonry Bearing (lacks fire resistance of Class A & B).



- Walls: Brick, Block, Concrete Tilt-up, Nonbearing Curtain Walls.
- Roof: Wood or Steel Joists. Wood or Steel Deck.

Class D

- Frame: Wood or Steel Framed Exterior Walls.



- Walls: Almost any except Bearing or Curtain Walls of Solid Masonry or Concrete.
- Roof: Wood or Steel Joists.
Wood or Steel Deck.

Class D

- Frame: Wood or Steel Framed Exterior Walls.



- Walls: Almost any except Bearing or Curtain Walls of Solid Masonry or Concrete.
- Roof: Wood or Steel Joists.
Wood or Steel Deck.

Class D

- Frame: Wood or Steel Framed Exterior Walls.



- Walls: Almost any except Bearing or Curtain Walls of Solid Masonry or Concrete.
- Roof: Wood or Steel Joists.
Wood or Steel Deck.

Note: Class C Frame on First Floor and Class D Steel Framed on Second Floor.

Class S

- Frame: Metal Bents, Columns, Girders, Purlins (roof rafter) and Girts (wall sheeting rail). Exterior Walls.



- Walls: Metal Skin or Sandwich Panels.
- Roof: Steel Joists (Bents or Girders). Wood or Steel Deck.

Class S

- Frame: Metal Bents, Columns, Girders, Purlins (roof rafter) and Girts (wall sheeting rail).
Exterior Walls.



- Walls: Metal Skin or Sandwich Panels.
- Roof: Steel Joists (Bents or Girders).
Wood or Steel Deck.

Class S

- Frame: Metal Bents, Columns, Girders, Purlins (roof rafter) and Girts (wall sheeting rail).
Exterior Walls.



555 Light Commercial Arch-Rib, Quonset

These light commercial buildings have semicircular (culvert) shape roofs that curve to the ground to form the sides. These buildings have many uses, such as general material, commodity or equipment storage and repair, and are generally lighter than typical warehouse buildings. Interior modifications can turn them into any one of several uses. The better qualities will have some built-in shop or workbench cabinetry and adequate lighting and plumbing.

Note: Exterior wall choices are not available for this occupancy.

- Walls: Metal Skin or Sandwich Panels.
- Roof: Steel Joists (Bents or Girders).
Wood or Steel Deck.

Marshall & Swift: Exterior Wall Types

Reno Fun Fact

Concrete-Masonry Walls: Bearing or Curtain

Brick

- 807 Brick, Solid
- 808 Brick, SCR Modular (6" 8")
- 805 Brick with Block Back up
- 806 Brick with Clay Tile Back up
- 810 Cavity Brick
- 811 Cavity Brick with Block Back up

Block

- 801 Adobe Block
- 812 Concrete Block
- 804 Block with Stucco
- 803 Block with EIFS
- 814 Concrete Block, Slumpstone
- 815 Concrete Block, Textured Face
- 813 Concrete Block, Glazed
- 809 Cavity Concrete Block
- 821 Hollow Clay Block
- 826 Structural Clay Tile
- 820 Glass Block

Concrete

- 816 Concrete, Formed
- 819 Concrete w/ Stay in Place Forming
- 817 Concrete, Precast Panels
- 818 Concrete, Tilt up

Stone

- 802 Ashlar Stone Veneer, Block Back up
- 822 Rubble Stone Veneer, Block Back up
- 823 Solid Granite Stone
- 824 Solid Limestone
- 825 Solid Local Stone

Marshall & Swift: Exterior Wall Types

Curtain Walls

Glass

- 849 Metal and Glass Panels
- 850 Stainless Steel Panels
- 841 Bronze and Glass Panels
- 846 Glazed Atrium

Masonry

- 843 Concrete and Glass Panels
- 845 Glass Fiber Reinforced Concrete Panels
- 848 Masonry Panels

Studs

- 851 Steel Studs and Stucco
- 844 EIFS Panels
- 855 Wood Siding Panels
- 840 Aggregate Siding Panels

Stone

- 847 Stone Panels, Marble
- 852 Stone Panels, Granite
- 854 Stone Panels, Limestone
- 853 Stone Panels, Local Stone
- 842 Composite Stone Panels

Pre Engineered - Sandwich

- 865 Metal Sandwich Panels
- 866 Texture Covered Metal Sandwich Panels
- 861 Cold Storage Metal Sandwich Panels
- 862 Cold Storage Stainless Steel Sandwich Panels
- 864 Glass Exterior w/Metal Sandwich Panels
- 863 Fiberglass Sandwich Panels
- 860 Cement Fiber Sandwich Panels

Pre Engineered Buildings - Prefabricated Wall Panels (Service Stations)

- 868 Pre-Fab Panels, Metal and Glass
- 869 Pre-Fab Panels, Metal with Block Back up
- 871 Stucco on Pre-Fab Metal Panels
- 867 Pre-Fab Panels, Masonry Veneer
- 870 Stone Veneer on Pre-Fab Metal Panels
- 872 Porcelain Enamel Finish Additive

Marshall & Swift: Exterior Wall Types

Stud Walls

Siding

896 Wood Siding
894 Textured Plywood
887 Hardboard Siding
886 Hardboard Sheet
888 Metal Siding
895 Vinyl Siding
890 Shingles
880 Asphalt Siding
884 Cement Fiber Siding

Stucco

892 Stucco
885 EIFS

Masonry Veneer

882 Brick Veneer
883 Block Veneer
881 Ashlar Stone Veneer
889 Rubble Stone Veneer
893 Synthetic Masonry Veneer
891 Stresskin Sandwich Panel Additive

Single Wall

919 Rustic Log
918 Metal on Wood Frame
916 Metal on Steel Frame
917 Metal, Texture Covered on Steel Frame
912 Cement Fiber on Wood Frame
913 Cement Fiber on Steel Frame
914 Fiberglass Panels on Wood Frame
915 Fiberglass Panels on Steel Frame
921 Stucco on Wood Frame
922 Synthetic Plaster on Steel Frame (EIFS)
910 Boards on Wood Frame
911 Boards on Steel Frame
923 Wire Mesh on Wood Frame
920 Spaced Boards on Wood Frame
924 Interior Finish Liner Additive

Marshall & Swift: Exterior Wall Types



Marshall & Swift: Exterior Wall Types



Marshall & Swift: Exterior Wall Types



Marshall & Swift: Exterior Wall Types



Marshall & Swift:

Quality Classes

C10	Commercial 1.0 (Low Cost)	1
C15	Commercial 1.5 (Fair)	1.5
C20	Commercial 2.0 (Average)	2
C25	Commercial 2.5 (Above Average)	2.5
C30	Commercial 3.0 (Good)	3
C35	Commercial 3.5 (Very Good)	3.5
C40	Commercial 4.0 (Excellent)	4

Marshall & Swift: Quality Classes

**Washoe County adopted
the following 2018 codes
IBC, IRC, IEBC et al.,
effect January 1, 2019.**

Marshall & Swift: Quality Classes

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the following 2018 codes
IBC, IRC, IEBC et al.,
effect January 1, 2019.**

Marshall & Swift: Quality Classes

**Washoe County adopted
the following 2018 codes
IBC, IRC, IEBC et al.,
effect January 1, 2019.**

Marshall & Swift: Quality Classes

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IBC, IRC, IEBC et al.,
effect January 1, 2019.**

Marshall & Swift: Quality Classes

Marshall & Swift:

Heating, Cooling and Ventilation:

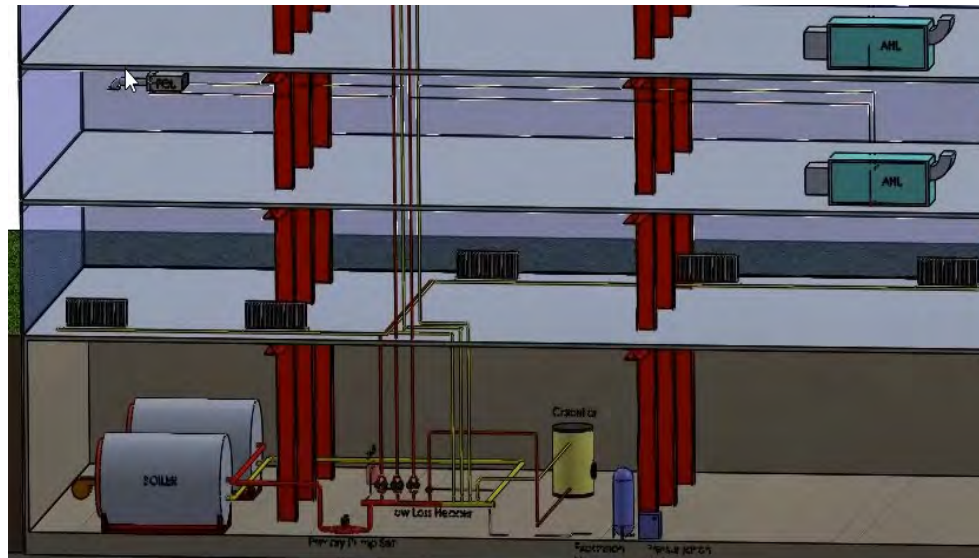
601 Electric
602 Electric Wall
603 Forced Air Unit
604 Hot Water
605 Hot Water, Radiant
606 Space Heaters
607 Steam
608 Steam Without Boiler
609 Ventilation
610 Wall Furnace
611 Package Unit
612 Warmed and Cooled Air
613 Hot and Chilled Water
614 Heat Pump
615 Floor Furnace
616 Individual Thru-Wall Heat Pump
617 Complete HVAC

618 Evaporative Cooling
619 Refrigerated Cooling, Zoned
620 Electric Panels
621 Space Heaters, Radiant
622 Space Heaters, Steam Coil with Boiler
623 Space Heaters, Steam Coil without Boiler
624 Heat Pump, Ground Loop
625 Refrigerated Cooling, Packaged
626 Controlled Atmosphere, Conditioned Air
627 Controlled Atmosphere, Livestock
628 Controlled Atmosphere, High to Precise Humidity
629 Controlled Atmosphere, Warmed and Cooled Air
649 No HVAC

Marshall & Swift: Heat Types

613 Hot and Chilled Water 85% of Buildings.

Hot and chilled water from a boiler, chiller and cooling tower and piped to various sections of a building. Fin coils or convectors with fans are then used to distribute the warm or cool air throughout the zone. Common in Class A and B high-rise buildings.

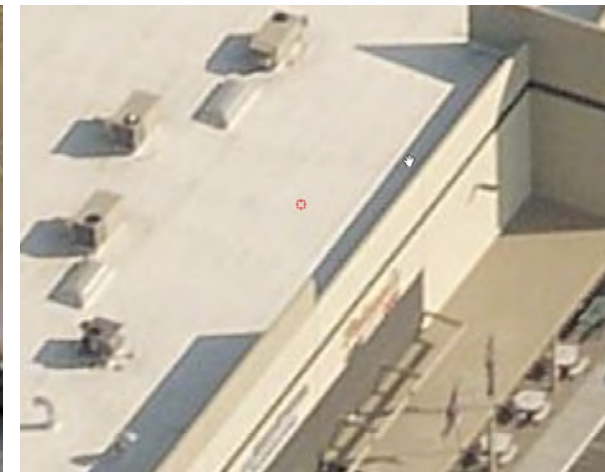


Marshall & Swift: Heat Types

611 Package Unit

35% of Buildings

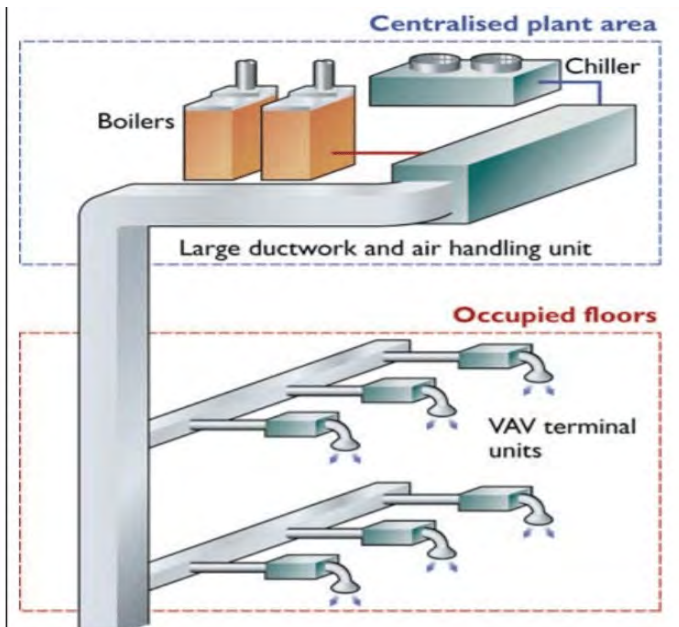
Similar to central air. Small package system contains one short duct and thermostat per unit, often a number of individual units servicing one building. Package Units can either heating, cooling or both which has a separate heating unit with a electric remote refrigerated cooling unit. Package Units are individual roof-mounted units or ground units having their own individual compressors.



Marshall & Swift: Heat Types

612 Warmed and Cooled Air 23% of Buildings

Similar to 613 except that the warmed and cooled air is generated at the centralized plant. Unlike Package Units 612 has a long complex duct system to numerous zoned areas. This system combines heating and cooling.



Marshall & Swift: Heat Types

649 No HVAC

40% Buildings

Use this component for areas of a building that do not have any heating, cooling or ventilation. Eliminates Default HVAC.

611 Package Unit

20% of Buildings

Similar to central air. Small package system contains one short duct and thermostat per unit, often a number of individual units servicing one building. Package Units can either heating, cooling or both which has a separate heating unit with a electric remote refrigerated cooling unit. Package Units are individual roof-mounted units or ground units having their own individual compressors.

Marshall & Swift: Heat Types

606 Space Heaters & 621 Space Heater, Radiant

30% Of Buildings.

Unit heaters usually with a fan blower commonly suspended from the ceiling or roof. & Suspended Radiant Unit Heaters. Typical in structures with large open areas.



Marshall & Swift: Heat Types

610 Wall Furnace

Small gas or electric vented outside. Relatively low-cost found in both lower quality and older structures.



618 Evaporative Cooling

Who Doesn't Know This One?



616 Individual Thru-Wall Heat Pump

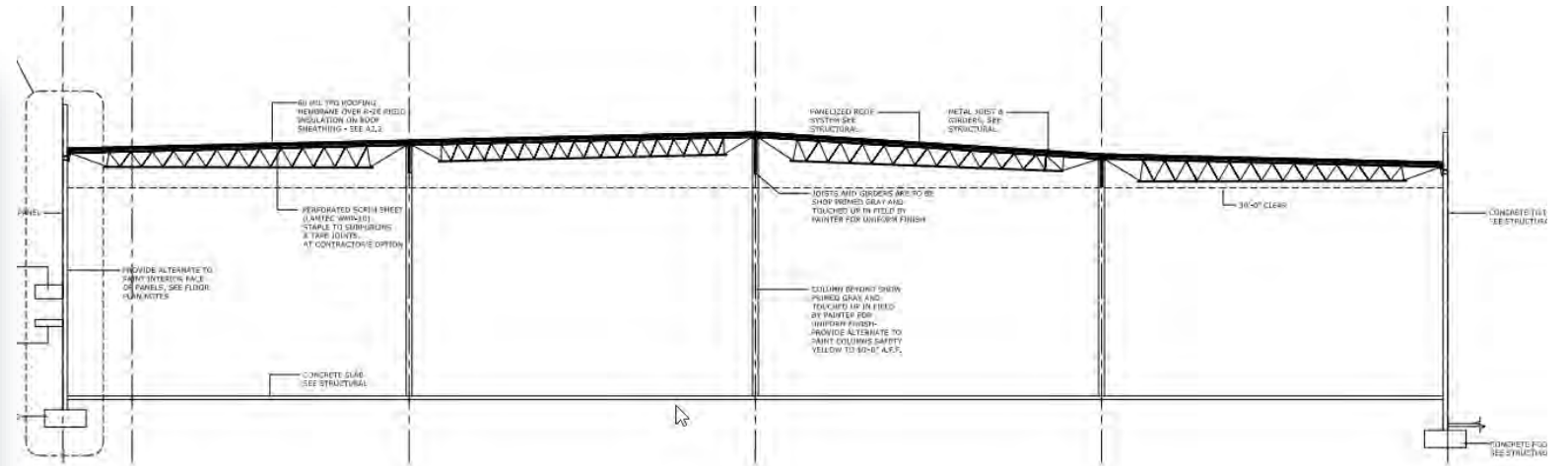
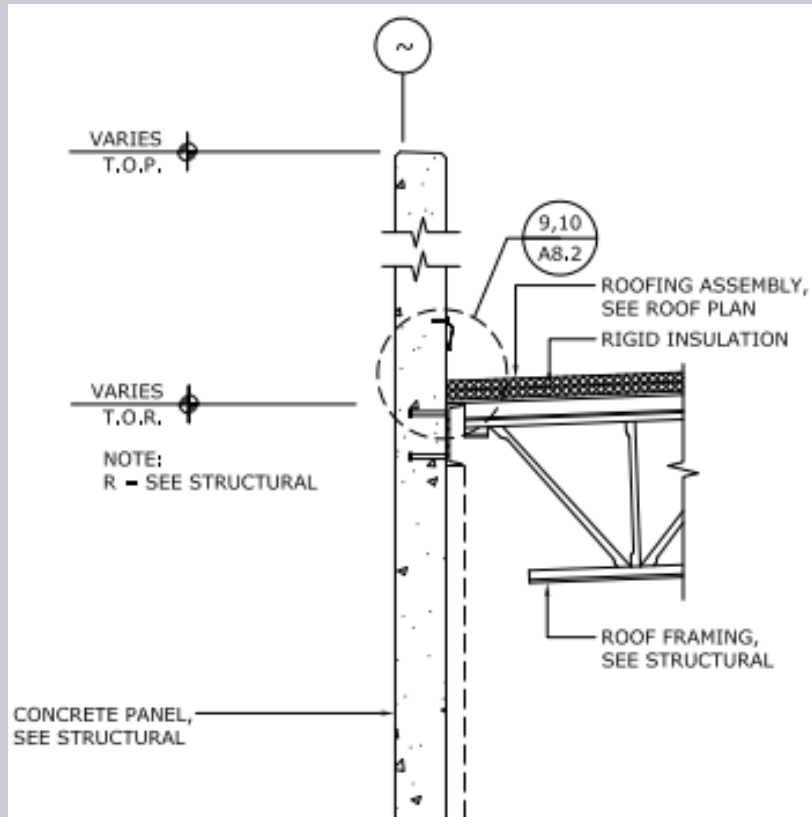
A small heat pump installed in a window opening or wall. Typically no ductwork. Services one room. (Apts, Motels, Hotels).



Marshall & Swift: Heat Types

Comparison Of HVAC Costs				
Costs From a 11,808 Sq Ft Class D Office Bldg				
<u>Heating Only</u>		<u>\$/SQ FT</u>		<u>Cost Bldg</u>
606 Space Heat		\$3.08		\$36,369
610 Wall Furnance		\$3.69		\$43,572
621 Radiant Space Heaters		\$3.84		\$45,343
603 Forced Air		\$10.16		\$119,969
<u>Heating And Cooling</u>				
616 Thru-Wall Heat Pump		\$7.07		\$83,483
611 Package units		\$14.40		\$170,035
603+618 FA Plus Evap		\$15.77	Adds \$5.61	\$186,212
603+625 FA Plus Ref Package		\$18.95	Adds \$8.79	\$223,762
614 Heat Pump		\$19.15		\$226,123
603+619 FA Plus Ref Zoned		\$22.64	Adds \$12.48	\$267,333
612 Warm & Cooled Air		\$24.15		\$285,163
613 Hot & Chilled Water		\$37.13		\$438,431
617 Complete HVAC		\$37.13		\$438,455

Marshall & Swift: Ceiling Height/Avg Wall Height Floor



Top Of Parapet
Top Of Ceiling
Bottom Of Joist

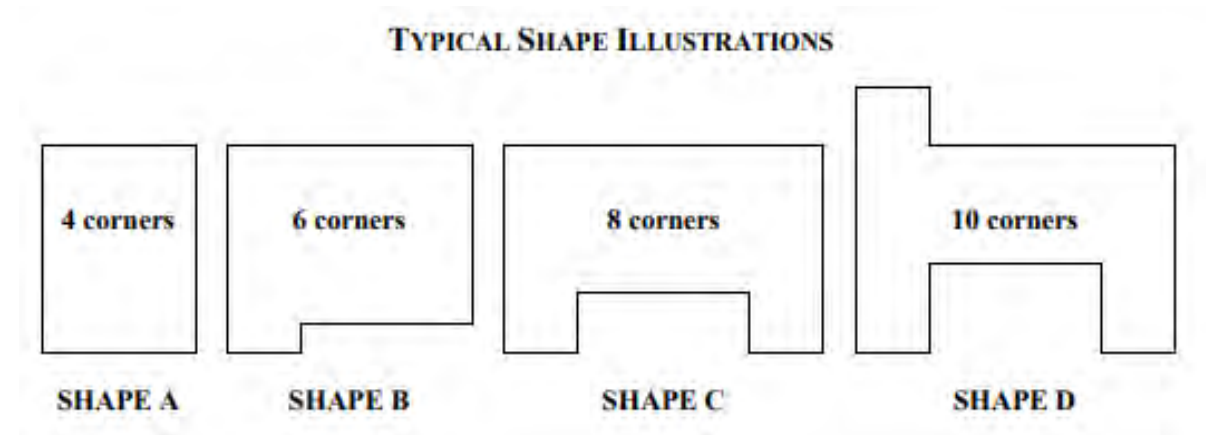
Marshall & Swift:

Ceiling Height/Avg Wall Height Floor

Comparison Of Wall Heights Costs				
Costs From a 321,700 SF Class C Mega Warehouse				
Ceiling Height	Building RCN	Change	% Increase	
30'	\$13,989,105			
31'	\$14,244,667	\$255,562	1.8%	
32'	\$14,503,509	\$258,842	1.8%	
33'	\$14,755,854	\$252,345	1.7%	
34'	\$15,014,698	\$258,844	1.8%	
35'	\$15,267,106	\$252,408	1.7%	
36'	\$15,525,949	\$258,843	1.7%	
37'	\$15,788,009	\$262,060	1.7%	
38'	\$16,046,852	\$258,843	1.6%	
39'	\$16,308,848	\$261,996	1.6%	
40'	\$16,567,692	\$258,844	1.6%	

Marshall & Swift: The Rest Of Pack

- ❖ Square
- ❖ Rectangular (or Slightly Irregular)
- ❖ Irregular
- ❖ Very Irregular



Marshall & Swift: The Rest Of Pack

Weighted Average Year:

*COST AGE WEIGHTING			
ORIG. RCN	<u>100000</u> /TOTAL RCN=	0.5 X CONST. YR	<u>2000</u> = <u>1000</u>
ADDED RCN	<u>100000</u> /TOTAL RCN=	0.5 X CONST. YR	<u>2010</u> = <u>1005</u>
TOTAL RCN	<u>200000</u>		
		WT. AVG. YR.	<u>2005.00</u>

% ORIG.	<u>50.0</u>	X CONST. YR	<u>2005</u> = <u>1002.50</u>
% REMOD	<u>50.0</u>	X CONST. YR	<u>2015</u> = <u>1007.50</u>
		WT. AVG. YR	<u>2010.00</u>

SQ/FT.

<u>WAY COMPUTATION</u>			
*SQUARE FOOT AGE WEIGHTING			
SQ. FT. ORIG.	<u>1000</u> /SQ.FT. TOTAL	<u>1500</u> =	<u>67%</u> % x YR. BLT <u>2000</u> = <u>1333.33</u>
SQ.FT. 1ST ADD.	<u>500</u> /SQ.FT. TOTAL	<u>1500</u> =	<u>33%</u> % x YR. BLT <u>2005</u> = <u>668.33</u>
SQ.FT. TOTAL	<u>1500</u>	<u>100%</u>	
		WT. AVG. YR.	<u>2002</u>

Marshall & Swift: The Rest Of Pack

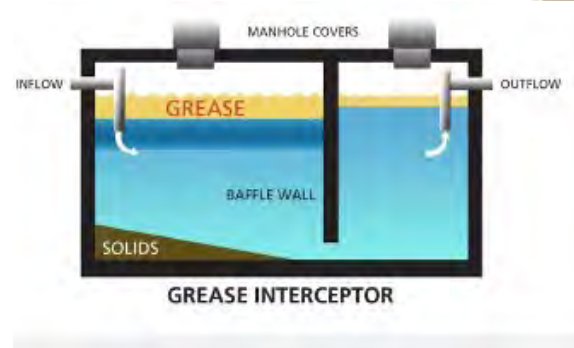
Marshall & Swift: The Rest Of Pack



Marshall & Swift: The Rest Of Pack



Marshall & Swift: Yard Items And Extra Feature



Marshall & Swift:

Yard Items And Extra Feature

(Primarily Industrial, Some Big Box Retail)



OIL/WATER SEPARATOR BANK INSTALLED AT AN INDUSTRIAL FACILITY FOR STORMWATER DISCHARGE COMPLIANCE AND SPILL CONTROL



Marshall & Swift: Yard Items And Extra Feature (Service Stations)

Anatomy of A Service Station Fueling Site

DSP4=ELECTRONIC TWIN DISPENSER (2 Hose)

*One dispenser.

DSPD = DOUBLE SIDED OPERATION*

*Add if both sides have hoses.

DSPT = TICKET PRINTER*

*two units if double sided, one if single sided.

DSPA = PURCHASE ACCEPTOR*

*two units if double sided, one if single sided.

PIPD = PIPE WORK PER DISP/PRODUCT (3)*

*This example shows Mid grade is a mix of Reg and Prem.

TOTL = TOTALIZER PER HOSE *

*Electronic Remote Equipment (per hose).

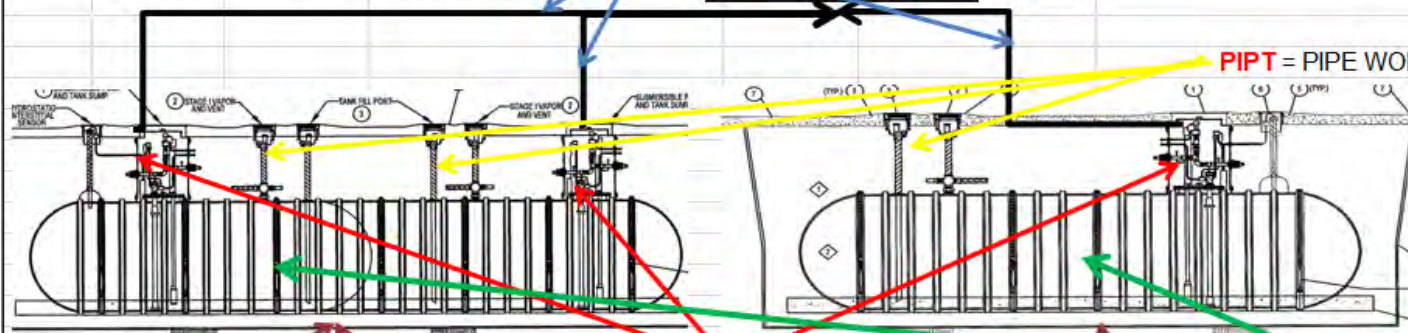
For Communication Between Store, Office or Booth Equipment and Dispensers.

The Maverik below has 5 Dispensers, each Dispenser has 6 hoses (Double Sided)

TOTL = 30



AIRW - AIR/WATER UNIT



PIPT = PIPE WORK PER TANK (3)*

*On multi-compartment tanks is the # of products in the sectioned tank.

PMP8 =
2 HORSEPOWER SUB PUMP (3)

TNKM = LEAK-MONITORING SYS (2)

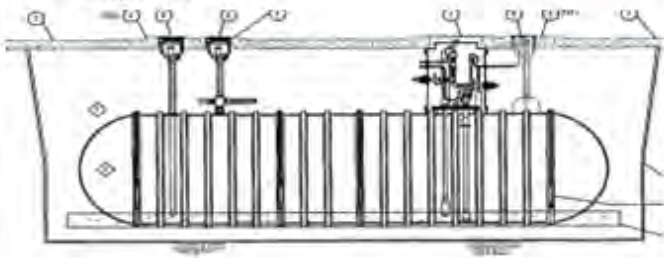
TUF3 -8K Tank

TUF7-20K TANK (1) + TNMC =
Add if Tank Is Multi-Compartment Tank (1)

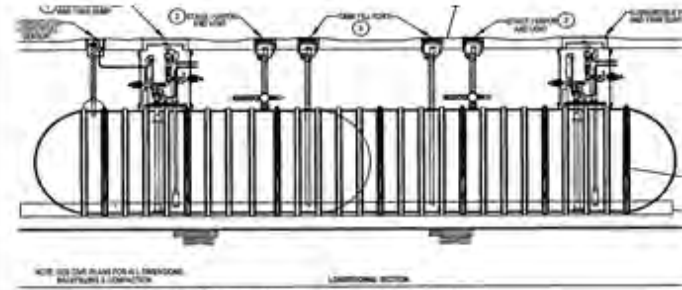
Marshall & Swift: Yard Items And Extra Feature (Service Stations)

TANKS

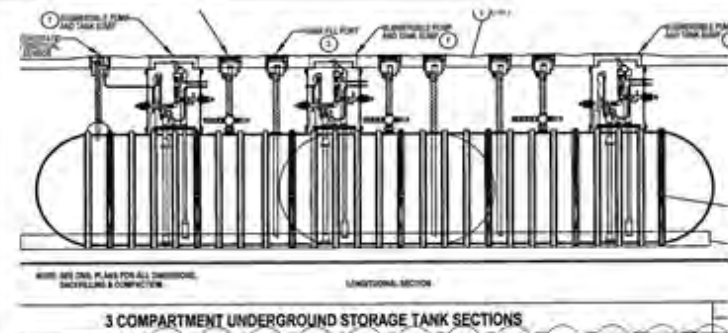
Single Tank



- One Tank One Product
Single (1) tank per capacity (TUF1 - TUF8).
- One(1) Submerged Pump per HP (PMP5 - PMP8).
- One(1) Leak-Monitoring System (TNKM).
- One(1) pipe work per tank (PIPT).



- One Tank Two Products
Single(1) tank per capacity (TUF1 - TUF8).
- Two(2) Submerged Pumps per HP (PMP5 - PMP8).
- One(1) Leak-Monitoring System (TNKM).
- Two(2) pipe works per tank (PIPT).
- One(1) Multi-Compartment Tank (TNMC).






- One Tank Three Products
Single (1) tank per capacity (TUF1 - TUF8).
- Three(3) Submerged Pumps per HP (PMP5 - PMP8).
- One(1) Leak-Monitoring System (TNKM).
- Three (3) pipe works per tank (PIPT).
- One(1) Multi-Compartment (TNMC).

Marshall & Swift:

Yard Items And Extra Feature

(Service Stations)

ELECTRONIC DISPENSERS


CODE	DESCRIPTION	Per Dispenser	Total if Station Had X Dispensers ex. X=5	Notes
	DSP5 ELECTRONIC 3 HOSE	1	5	Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided). There are 5 products on this dispenser. If there is a separate tank for mid grade PIPD= 5, tanks; Diesel, Ethanol Free, Reg, Mid, Prem *IF mid grade is mixed by the dispenser using premium and regular then PIPD = 4. tanks; Diesel, Ethanol Free, Reg, Prem.
	DSPD DBL-SIDED (TWO)	1	5	
	PIPD PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product*)	4 or 5	20 or 25	
	DSPA PURCHASE ACCEPTOR	2	10	
	DSPT TICKET PRINTER	2	10	
	DSMP MIXED PRODUCTS	0-2	0-10	
	DSP5 ELECTRONIC 3 HOSE	1	5	Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided). There are 3 products on this dispenser. If there is a separate tank for mid grade PIPD= 3, tanks; Reg, Mid, Prem. *IF mid grade is mixed by the dispenser using premium and regular then PIPD = 2 tanks; Reg and Prem
	DSPD DBL-SIDED (TWO)	1	5	
	PIPD PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product*)	2 or 3	10 or 15	
	DSPA PURCHASE ACCEPTOR	2	10	
	DSPT TICKET PRINTER	2	10	
	DSMP MIXED PRODUCTS	0-2	0-10	
	DSP4 ELECTRONIC TWIN (2 Hose)	1	5	Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided). There are 4 products on this dispenser. If there is a separate tank for mid grade PIPD= 4; tanks, Diesel, Reg, Mid, Prem *IF mid grade is mixed by the dispenser using premium and regular then PIPD = 3; tanks, Diesel, Reg, Prem.
	DSPD DBL-SIDED (TWO)	1	5	
	PIPD PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product*)	3 or 4	15 or 20	
	DSPA PURCHASE ACCEPTOR	2	10	
	DSPT TICKET PRINTER	2	10	
	DSMP MIXED PRODUCTS	0-2	0-10	

Marshall & Swift:

Yard Items And Extra Feature

(Service Stations)

ELECTRONIC DISPENSERS

CODE	DESCRIPTION	Per Dispenser	Total if Station Had X Dispensers ex. X=5	Notes
 DSP4	ELECTRONIC TWIN (2 Hose)	1	5	Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided).
DSPD	DBL-SIDED (TWO)	1	5	
PIPD	PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product).	2	10	There are 2 products on this dispenser. each product has its own tank, i.e., reg, prem or reg, diesel, etc.
DSPA	PURCHASE ACCEPTOR*	0	0	There are no purchase acceptor on this dispenser.
DSPT	TICKET PRINTER*	0	0	There are no ticket printers on this dispenser.
DSMP	MIXED PRODUCTS	0	0	No mixed products, each product has its own tank, i.e., reg, prem or reg, diesel, etc.

*There may be a master terminal on the island that contains a purchase acceptor and ticket printer. Cost accordingly.



DSP4	ELECTRONIC TWIN (2 Hose)	1	5	Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided).
DSPD	DBL-SIDED (TWO)	1	5	
PIPD	PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product).	2	10	There are 2 products on this dispenser. each product has its own tank, i.e., reg, prem or reg, diesel, etc.
DSPA	PURCHASE ACCEPTOR	2	10	One each side of dispenser.
DSPT	TICKET PRINTER	2	10	One each side of dispenser.
DSMP	MIXED PRODUCTS	0	0	No mixed products, each product has its own tank, i.e., reg, prem or reg, diesel, etc.





DSP3	ELECTRONIC SINGLE (1 hose)	1	5	Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided).
DSPD	DBL-SIDED (TWO)	1	5	
PIPD	PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product*).	2 or 3	10 or 15	There are 3 products on this dispenser. If there is a separate tank for mid grade PIPD= 3, tanks; Reg, Mid, Prem. *IF mid grade is mixed by the dispenser using premium and regular then PIPD = 2 tanks; Reg and Prem
DSPA	PURCHASE ACCEPTOR	2	10	One each side of dispenser.
DSPT	TICKET PRINTER	2	10	One each side of dispenser.
DSMP	MIXED PRODUCTS	0-2	0-10	Use when there is no under ground tank for mid grade gas. Mid grade is mixed by dispenser using gas from reg and prem tanks. Per Hose.

Marshall & Swift:

Yard Items And Extra Feature

(Service Stations)

ELECTRONIC DISPENSERS




CODE	DESCRIPTION	Per Dispenser	Total if Station Had X Dispensers ex. X=5	Notes
	DSP3 ELECTRONIC SINGLE (1 hose)	1	5	Do not count front and back as two dispensers.
	DSPD DBL-SIDED (TWO)	1	5	Use to account for both sides (exclude if one sided).
	PIPD PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product).	2	10	There are 2 products on this dispenser. each product has its own tank, i.e., reg, prem or reg, diesel, etc.
	DSPA PURCHASE ACCEPTOR	2	10	One each side of dispenser.
	DSPT TICKET PRINTER	2	10	One each side of dispenser.
	DSMP MIXED PRODUCTS	0	0	No mixed products, each product has its own tank, i.e., reg, prem or reg, diesel, etc.
	DSP3 ELECTRONIC SINGLE (1 hose)	1	5	Do not count front and back as two dispensers.
	DSPD DBL-SIDED (TWO)	1	5	Use to account for both sides (exclude if one sided).
	PIPD PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product).	1	5	There is 1 products on this dispenser. the product has its own tank, i.e., reg or diesel.
	DSPA PURCHASE ACCEPTOR	2	10	One each side of dispenser.
	DSPT TICKET PRINTER	2	10	One each side of dispenser.
	DSMP MIXED PRODUCTS	0	0	No mixed products, single product no mixing.

Marshall & Swift:

Yard Items And Extra Feature

(Service Stations)

MECHANICAL DISPENSERS

CODE	DESCRIPTION	Per Dispenser	Total if Station Had X Dispensers ex. X=5	Notes
	DSP1 MECHANICAL SINGLE PIPE WORK DISP/PROD (One pipe from master dispenser).	1	5	<p>Satellite Dispenser</p> <p>A fuel dispensing system that allows fuel tanks on both sides of a vehicle to be filled during a single sales transaction. During the fueling operation, fuel is metered in the master dispenser and then supplied to two nozzles.</p> <p>One nozzle is attached to the master dispenser and the other is typically mounted on a small dispenser cabinet positioned so it will be on the opposite side of the vehicle from the master dispenser.</p> <p>The satellite dispenser is supplied with fuel from the master dispenser via underground piping.</p>
	PIP2	1	5	
	Mostly found at truck stops for Big Rig fueling. Can be double sided but usually not. May have a display for gallons (mechanical or electronic).			
	DSP2 MECHANICAL TWIN DBL-SIDED (TWO)	1	5	<p>Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided).</p>
	DSPD	1	5	
	PIP2 PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product).	1 or 2	5-10	There are 1 or 2 products on this dispenser. each product has its own tank, i.e., reg, prem or reg, diesel, etc.
	DSPA PURCHASE ACCEPTOR*	0	0	There are no purchase acceptor on this dispenser.
	DSPT TICKET PRINTER*	0	0	There are no ticket printers on this dispenser.
	DSMP MIXED PRODUCTS	0	0	No mixed products, each product has its own tank, i.e., reg, prem or reg, diesel, etc.
	*There may be a master terminal on the island that contains a purchase acceptor and ticket printer. Cost accordingly.			
	DSP1 MECHANICAL SINGLE DBL-SIDED (TWO)	1	5	<p>Do not count front and back as two dispensers. Use to account for both sides (exclude if one sided).</p>
	DSPD	1	5	
	PIP2 PIPE WORK DISP/PROD (# pipes from tank to dispenser, one pipe for each product).	1	5	There are 1 or 2 products on this dispenser. each product has its own tank, i.e., reg, prem or reg, diesel, etc.
	DSPA PURCHASE ACCEPTOR*	0	0	There are no purchase acceptor on this dispenser.
	DSPT TICKET PRINTER*	0	0	There are no ticket printers on this dispenser.
	DSMP MIXED PRODUCTS	0	0	Product has its own tank
	*There may be a master terminal on the island that contains a purchase acceptor and ticket printer. Cost accordingly.			

BREAK

Part II

A look at the 30 most common and highest value Commercial and Industrial Buildings constructed between 2013-2022 in Washoe County.

Organized into Five Groupings.

- **Multi-Family**
- **Industrial**
- **Specialty**
- **Office**
- **Retail**



Building Type	Total Buildings	Total Taxable
Multi-Family		
352 Multiple Res (Low Rise)	637	\$843,132,561
300 Apartment	33	\$474,465,607
311 Chubhouse	68	\$59,798,513
710 Retirement Community Complex	3	\$27,902,586
	741	\$1,405,299,267
Industrial		
584 Mega Warehouse	37	\$692,387,638
406 Storage Warehouse	35	\$132,291,486
453 Industrial Flex Building	18	\$10,066,044
494 Industrials, Light Mftg.	9	\$72,184,730
454 Shell, Industrial	10	\$15,935,210
407 Distribution Warehouse	2	\$16,643,789
528 Service Repair Garage	18	\$13,369,430
470 Equipment (Shop) Building	12	\$2,848,659
	141	\$955,726,986
Specialty		
497 Computer Center	28	\$300,116,180
331 Hospital	3	\$95,353,286
313 Convalescent Hospital	7	\$93,091,892
595 Hotel, Limited Service	9	\$93,635,275
345 Parking Structure	5	\$32,330,913
577 Parking Level	18	\$50,844,835
	70	\$665,372,381
Office		
344 Office Building	85	\$109,751,740
341 Medical Office	28	\$70,133,176
392 Industrial Engineering	2	\$18,034,831
	115	\$197,919,747
Retail		
353 Retail Store	42	\$21,024,172
349 Fast Food Restaurant	24	\$14,883,821
350 Restaurant	14	\$11,350,149
412 Neighborhood Shopping Ctr	16	\$19,236,976
413 Community Shopping Center	5	\$6,596,489
304 Bank	10	\$11,118,336
340 Market	1	\$3,528,740
446 Supermarket	1	\$7,060,192
419 Convenience Market	10	\$5,955,073
	123	\$100,753,948
	1,190	\$3,325,072,329

Multi-Family

Building Type	Total Buildings	Total Taxable
352 Multiple Res (Low Rise)	637	\$843,132,561
300 Apartment	33	\$474,465,607
311 Clubhouse	68	\$59,798,513
710 Retirement Community Complex	3	\$27,902,586
	741	\$1,405,299,267

352 Multiple Residence (Low Rise)

These are three stories or less with each unit within the building having a kitchen and at least one bath. They are designed for other than transient occupancy (permanent or semi-permanent). The best qualities have combined heating and cooling systems. They also have plaster, paneling, good detailing in molding and trim and high cost floor finishes.

The structures commonly are solid masonry or wood frame walls (Class C and D). Some of the special refinements found in the better qualities include intercoms, television jacks and antennas, and at least one bath per bedroom.

The lower qualities typically have one bath or a bath and one-half for each unit, regardless of the number of bedrooms. The typical story height for these structures is nine feet.

The following are not included in the costs: Fireplaces, built-in appliances, balconies, furnishings, pools and equipment.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Stucco on Frame
- Quality - C20 Average
- Heat - Warm/Cool Air
- Ceiling Height - Ave Ceiling Height Per Floor 9'
- Stories - 3 Stories
- Shape - Irregular Shape
- Apt. Types i.e., 9-1BR, 9-2BR, 2-3BR In Bldg.
- 33 Bedrooms in Bldg.
- 31 Full Baths.
- 133 Plumbing Fixtures in Bldg.
- 20 Living Units In Bldg.

352 Multiple Residence (Low Rise)

These are three stories or less with each unit within the building having a kitchen and at least one bath. They are designed for other than transient occupancy (permanent or semi-permanent). The best qualities have combined heating and cooling systems. They also have plaster, paneling, good detailing in molding and trim and high cost floor finishes.

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Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Stucco on Frame
Stud Walls / Wood Siding
- Quality - C20 Average
- Heat – Package Unit
- Ceiling Height - Ave Ceiling Height Per Floor 9'
- Stories - 3 Stories
- Shape –Irregular Shape
- Apt. Types 20 Studios, 18-1BR, 3-2BR.
- 24 Bedrooms in Bldg.
- 44-Full Baths / 1-½ Baths in Bldg.
- 257 Plumbing Fixtures in Bldg.
- 41 Living Units In Bldg.

300 Apartment (High Rise)

High-rise apartments are structures with three or more stories of multiple dwelling units. The structures are built of all construction classes. Each dwelling unit consists of its own separate living area and kitchen facility. Normally, structures over three stories have elevators, but this depends on the height of the building and the need for transportation to the upper levels. These structures have a lobby area, interior hall access to dwelling units and some type of stairway for fire exit. Although apartments built as condominiums sometimes are required by building and zoning codes to have certain items not required for rental units, basically, "condominium" is a type of ownership and not a type of construction and the apartment costs are valid.

The following are not included in the costs: Appliances, fireplaces, canopies, balconies, swimming pools, yard improvements and any developers' or soft costs related to a type of ownership such as condominium.



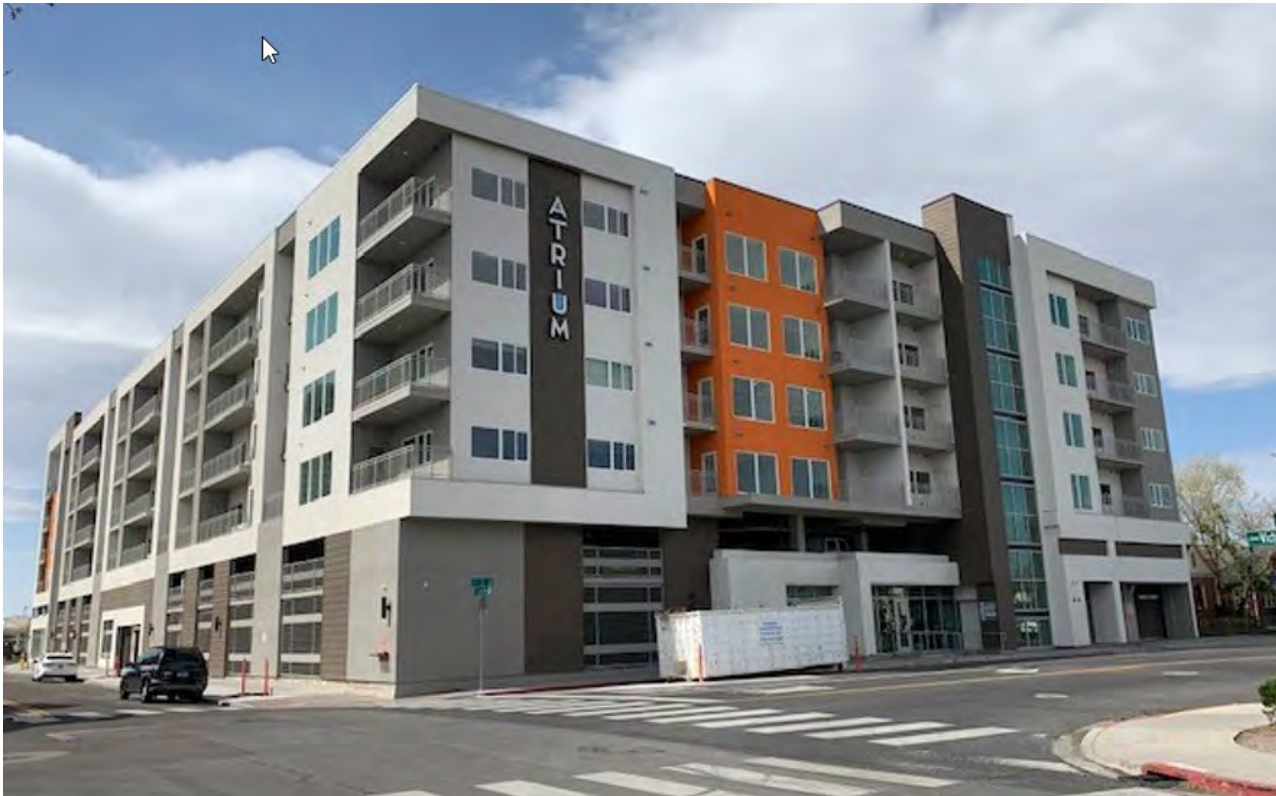
Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Stucco on Frame
- Quality - C20 Average
- Heat – Wall Heat Pump
- Ceiling Height – Avg. Ceiling Height Per Floor 9'
- Stories - 8 Stories
- Shape – Very Irregular Shape
- 6 Apt. Types – Studio, 1BR to 5BR.
- 636 Bedrooms in Bldg.
- 578 Full Baths
- 182 Living Units In Bldg.

300 Apartment (High Rise)

High-rise apartments are structures with three or more stories of multiple dwelling units. The structures are built of all construction classes. Each dwelling unit consists of its own separate living area and kitchen facility. Normally, structures over three stories have elevators, but this depends on the height of the building and the need for transportation to the upper levels. These structures have a lobby area, interior hall access to dwelling units and some type of stairway for fire exit. Although apartments built as condominiums sometimes are required by building and zoning codes to have certain items not required for rental units, basically, "condominium" is a type of ownership and not a type of construction and the apartment costs are valid.

The following are not included in the costs: Appliances, fireplaces, canopies, balconies, swimming pools, yard improvements and any developers' or soft costs related to a type of ownership such as condominium.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Stucco on Wire
Stud Walls / Wood Siding.
- Quality - C20 Average
- Heat – Heat Pump
- Ceiling Height – Avg. Ceiling Height Per Floor 9’
- Stories – 4 Story
- Shape – Irregular Shape
- 2 Apt. Types –97-1BR, 35-2BR.
- 167 Bedrooms in Bldg.
- 167 Full Baths
- 730 Plumbing Fixtures in Bldg.
- 132 Living Units In Bldg.

311 Clubhouse

Clubhouses are general-purpose recreation buildings, such as community halls/centers and veterans' organization buildings. These buildings generally have light kitchen facilities, large multi-purpose general use room with stage, and multiple restrooms. Better quality clubhouses have moveable partition walls and some small meeting rooms or offices.

The following are not included in the costs: Kitchen and stage equipment.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Cement Fiber Siding
Stud Walls / Rubble Stone Vnr.
- Quality – C30 Good
- Heat – Warm/Cool Air
- Ceiling Height – Avg. Ceiling Height 18'
- Stories – 1 Story
- Shape – Perimeter/Very Irregular
- 1 Unit Type in Bldg.
- Indoor Pool & Spa
- Fire Sprinklers.

311 Clubhouse

Clubhouses are general-purpose recreation buildings, such as community halls/centers and veterans' organization buildings. These buildings generally have light kitchen facilities, large multi-purpose general use room with stage, and multiple restrooms. Better quality clubhouses have moveable partition walls and some small meeting rooms or offices.

The following are not included in the costs: Kitchen and stage equipment.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Stucco on Wire
Stud Walls / Ashlar Stone Veneer.
- Quality – C25 Above Average
- Heat – Warm/Cool Air
- Ceiling Height – Avg. Ceiling Height 13’
- Stories – 1 Story
- Shape – Slightly Irregular
- 1 Unit Type in Bldg.
- Outdoor Pool & Spa
- Outdoor Barbecue
- Fire Sprinklers

710 Multiple Residence, Retirement Community Complex

These are three stories or less and include a mix of independent, assisted living, and skilled nursing living units, including facilities for Alzheimer's or dementia patients with fitness and care facilities commensurate with the quality. The better qualities have good lounges, craft and game areas, beauty parlor and therapy rooms and fitness rooms. They also have plaster, paneling, good detailing in molding and trim, and high cost floor finishes.

These structures commonly have solid masonry or wood frame walls (Class C and D). Some of the special refinements found include task lighting, railings, intercoms, television jacks and antennas, emergency call systems and nursing stations.

The following are not included in the costs: Fireplaces, built-in appliances, balconies, furnishings, and kitchen, laundry, therapy or recreation equipment.



200-610-04

Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Cement Fiber Siding
Stud Walls / Synthetic Masonry Veneer
- Quality – C25 Above Average
- Heat – Wall Heat Pump
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 8'
- Stories – 1 Stories
- 38 Units in Bldg. (66 Beds)
- Shape – Very Irregular Shape

Industrial

Building Type	Total Buildings	Total Taxable
584 Mega Warehouse	37	\$692,387,638
406 Storage Warehouse	35	\$132,291,486
453 Industrial Flex Building	18	\$10,066,044
494 Industrials, Light Mftg.	9	\$72,184,730
454 Shell, Industrial	10	\$15,935,210
407 Distribution Warehouse	2	\$16,643,789
528 Service Repair Garage	18	\$13,369,430
470 Equipment (Shop) Building	12	\$2,848,659
	141	\$955,726,986

584 Mega Warehouse

These large buildings, typically 200,000 to over a million square feet, are designed for major regional distribution and storage centers. They include an amount of office and personnel support space commensurate with the quality of the building (typically 1 to 5 percent). Support areas typically have plaster or drywall interior partitions and have finished ceilings. The better qualities have large cafeterias and kitchens. Heating and ventilating facilities are sufficient to protect goods from freezing and other spoilage.

The following are not included in the costs: Material handling equipment, dock levelers or site improvements.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete, Tilt-up
- Quality – C10 Low
- Heat – Space Heater
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 36'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Perimeter/Slightly Irregular Shape

584 Mega Warehouse

These large buildings, typically 200,000 to over a million square feet, are designed for major regional distribution and storage centers. They include an amount of office and personnel support space commensurate with the quality of the building (typically 1 to 5 percent). Support areas typically have plaster or drywall interior partitions and have finished ceilings. The better qualities have large cafeterias and kitchens. Heating and ventilating facilities are sufficient to protect goods from freezing and other spoilage.

The following are not included in the costs: Material handling equipment, dock levelers or site improvements.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete, Tilt-up
- Quality – C10 Low
- Heat – Space Heater
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 36'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Slightly Irregular Shape

406 Storage Warehouse

These buildings are designed for storage and include an amount of office space commensurate with the quality of the building (typically 3 to 12 percent).

Typically, they have plaster or drywall interior partitions and may have some finished ceilings. The better qualities have small office fronts with ornamental materials at the front elevation, while lower cost structures are plain with very little if any ornamentation. Heating and ventilating facilities are sufficient to protect goods from freezing and other spoilage.

The following are not included in the costs: Special climate control equipment and dock levelers and material handling equipment.



Review Of Occupancy and Building Attributes:

- Frame - Class C Masonry Bearing Walls
- Ext Walls – Concrete, Tilt-up
- Quality – C10 Low
- Heat – Package Unit
Heat Pump
- Ceiling Height – Avg. Ceiling Height Per Floor 38’
- Stories – 1 Story
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.
- 15,000 SF Mezzanine / Open

406 Storage Warehouse

These buildings are designed for storage and include an amount of office space commensurate with the quality of the building (typically 3 to 12 percent).

Typically, they have plaster or drywall interior partitions and may have some finished ceilings. The better qualities have small office fronts with ornamental materials at the front elevation, while lower cost structures are plain with very little if any ornamentation. Heating and ventilating facilities are sufficient to protect goods from freezing and other spoilage.

The following are not included in the costs: Special climate control equipment and dock levelers and material handling equipment.



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Review Of Occupancy and Building Attributes:

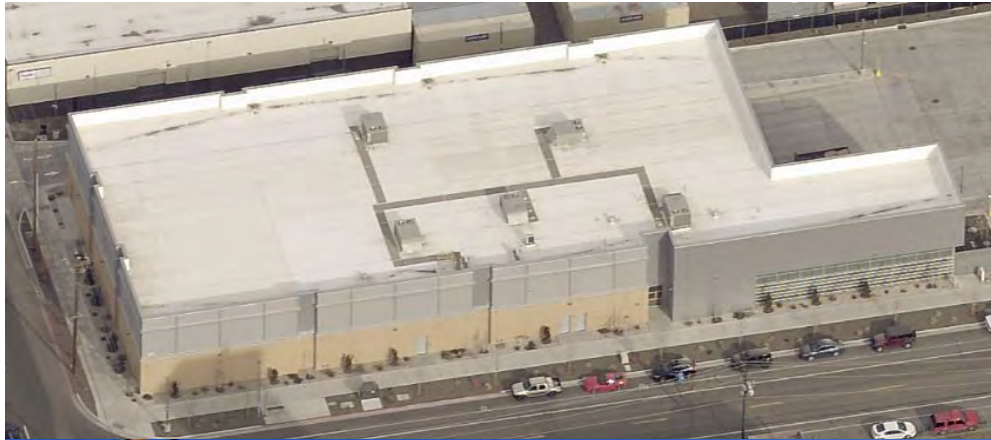
- Frame – Class S Metal Frame and Walls
- Ext Walls – Single Walls / Metal on Steel Frame
- Quality – C10 Low
- Heat – Space Heater
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 16'
- Stories – 1 Story
- Shape – Square / Rectangular
- 1 Unit Type in Bldg.
- 505 SF Office Space (Up to 12% of GBA allowed)

407 Distribution Warehouse

These buildings are designed with large areas to accommodate the breakdown and shipment of small lots of materials and goods. They have more plumbing and lighting than storage warehouses in order to service the large personnel load. Costs include heating and ventilation sufficient to protect goods from freezing or other forms of spoilage.

The distribution areas have drywall or plaster on the interior with finished ceilings and vaults in some cases. Some of the better qualities also have good fire and security systems.

The following are not included in the costs: Material handling equipment and dock levelers.



Review Of Occupancy and Building Attributes:

- Frame – Class A Fireproof Structural Steel Frame
- Ext Walls – Brick, Solid
Curtain Walls / Glass Fiber Reinforced
- Quality – C30 Good
- Heat – HVAC
- Ceiling Height – Avg. Ceiling Height Per Floor 24’
- Stories – 1 Story
- 1 Unit Type in Bldg.

407 Distribution Warehouse

These buildings are designed with large areas to accommodate the breakdown and shipment of small lots of materials and goods. They have more plumbing and lighting than storage warehouses in order to service the large personnel load. Costs include heating and ventilation sufficient to protect goods from freezing or other forms of spoilage.

The distribution areas have drywall or plaster on the interior with finished ceilings and vaults in some cases. Some of the better qualities also have good fire and security systems.

The following are not included in the costs: Material handling equipment and dock levelers.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete, Tilt-up
- Quality – C15 Fair
- Heat – Space Heater
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 30'
- Stories – 1 Story
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.
- 11,700 SF Mezzanine / Office Space in Bldg.

453 Industrial Flex Building

Industrial flex mall buildings are the modern multi-tenant loft structures, typically of low-rise construction. The lower qualities are purely light industrial buildings having minimal subdivisions and finish per shop space user with overhead door entries. The better qualities have fully finished customer service areas with storefront entries. Display-office areas in the higher qualities have finished floors and ceilings with good restroom facilities.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete Block
Block with Stucco
- Quality – C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 22'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- 1,736 SF Finished Area (30% of GBA allowed)

453 Industrial Flex Building

Industrial flex mall buildings are the modern multi-tenant loft structures, typically of low-rise construction. The lower qualities are purely light industrial buildings having minimal subdivisions and finish per shop space user with overhead door entries. The better qualities have fully finished customer service areas with storefront entries. Display-office areas in the higher qualities have finished floors and ceilings with good restroom facilities.



Review Of Occupancy and Building Attributes:

- Frame – Class S Metal Frame and Walls
- Ext Walls – Single Wall / Metal on Steel Frame
- Quality – C30 Good
- Heat – No HVAC
- Ceiling Height – Avg. Ceiling Height Per Floor 28'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Slightly Irregular Shape

453 Industrial Flex Building

Industrial flex mall buildings are the modern multi-tenant loft structures, typically of low-rise construction. The lower qualities are purely light industrial buildings having minimal subdivisions and finish per shop space user with overhead door entries. The better qualities have fully finished customer service areas with storefront entries. Display-office areas in the higher qualities have finished floors and ceilings with good restroom facilities.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Wall
- Ext Walls – Concrete Tilt-Up
- Quality – C20 Good
- Heat – 611 Package Unit
606 Space Heater
- Ceiling Height – Avg. Ceiling Height Per Floor 21'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Square/Rectangular
- Fire Sprinklers

494 Industrial Light Manufacturing

These buildings are designed to shelter manufacturing processes. There is an average amount of office and support space commensurate with the quality included, typically for light industrials, between 4 and 25 percent. This includes suitable locker, break and lunchroom facilities to accommodate the personnel load. Offices may be single story or stacked. Single-story offices may have a softwood flooring storage mezzanine overhead as part of the office area costs.

Exterior finishes are masonry or concrete, typically tilt-up panels or metal siding. Frames are typically light open metal or glulam structures. The interiors, except for the office area, will usually have little or no interior finish. Fluorescent lighting is found throughout both the office and shop with the office area having better quality fixtures.

The costs include all the power leads to the building and industrial sewer and drainage lines, but do not include the following: Power panel, power wiring or industrial piping to the fixtures or equipment used in the manufacturing process, hoists or cranes.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete, Tilt-up
- Quality – C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 32’
- Stories – 1 Story
- 1 Unit Type in Bldg.
- 5,000 SF Mezzanine / Office
- 10,000 total SF Office Space (20% of GBA allowed)
- Shape – Square / Rectangular

494 Industrial Light Manufacturing

These buildings are designed to shelter manufacturing processes. There is an average amount of office and support space commensurate with the quality included, typically for light industrials, between 4 and 25 percent. This includes suitable locker, break and lunchroom facilities to accommodate the personnel load. Offices may be single story or stacked. Single-story offices may have a softwood flooring storage mezzanine overhead as part of the office area costs.

Exterior finishes are masonry or concrete, typically tilt-up panels or metal siding. Frames are typically light open metal or glulam structures. The interiors, except for the office area, will usually have little or no interior finish. Fluorescent lighting is found throughout both the office and shop with the office area having better quality fixtures.

The costs include all the power leads to the building and industrial sewer and drainage lines, but do not include the following: Power panel, power wiring or industrial piping to the fixtures or equipment used in the manufacturing process, hoists or cranes.



Review Of Occupancy and Building Attributes:

- Frame – Class S Metal Frame and Walls
- Ext Walls – Pre-Engineered Metal Sandwich Plates
- Quality – C15 Fair
- Heat – Space Heater
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 36'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- 5,386 SF Mezzanine / Office
- 1,520 SF Mezzanine / Open
- 656 SF Mezzanine / Storage
- Shell Only, No Slab

454 Shell, Industrial Building

This occupancy, together with occupancy 994 (Interior Space, Industrial Building) allows you to individually price the shell and the office/support space costs for an industrial building. These building shells are designed to shelter stored materials or light manufacturing processes. There is no office and support space included. To include these costs, use occupancy 994 (Interior Space, Industrial Building) in a separate section of the report.

Exterior finishes are masonry or concrete, typically tilt-up panels, or metal siding. Frames are typically light open metal or glulam structures. Adequate lighting is found throughout the storage or shop area commensurate with the quality.

The costs include all the power leads to the building and industrial sewer and drainage lines, but do not include the following: Power panel, power wiring or industrial piping to the fixtures or equipment used in the manufacturing process, hoists or cranes.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls Metal
- Quality – C20 Average
- Heat – Space Heater
- Ceiling Height – Avg. Ceiling Height Per Floor 20’
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Metal Industrial Bldg attached to (344) Office Building

454 Shell, Industrial Building

This occupancy, together with occupancy 994 (Interior Space, Industrial Building) allows you to individually price the shell and the office/support space costs for an industrial building. These building shells are designed to shelter stored materials or light manufacturing processes. There is no office and support space included. To include these costs, use occupancy 994 (Interior Space, Industrial Building) in a separate section of the report.

Exterior finishes are masonry or concrete, typically tilt-up panels, or metal siding. Frames are typically light open metal or glulam structures. Adequate lighting is found throughout the storage or shop area commensurate with the quality.

The costs include all the power leads to the building and industrial sewer and drainage lines, but do not include the following: Power panel, power wiring or industrial piping to the fixtures or equipment used in the manufacturing process, hoists or cranes.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete Block
- Quality – C20 Average
- Heat – Space Heater
- Ceiling Height – Avg. Ceiling Height Per Floor 12'
- Stories – 1 Story
- 1 Unit Type in Bldg.

528 Service Repair Garage

Service garages are buildings designed primarily for vehicular repair and maintenance. They can consist of all classes of construction and include small office areas. The size or amount of office area is commensurate with the overall quality. Exterior walls generally have some large openings for overhead doors and minimal fenestration.

Service equipment and hoists are not included in the costs.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Stucco on Wire
Stud Walls / Ashlar Stone Veneer
- Quality – C25 Above Average
- Heat – Wall Heat Pump
- Ceiling Height – Avg. Ceiling Height Per Floor 10'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Square / Rectangular

528 Service Repair Garage

Service garages are buildings designed primarily for vehicular repair and maintenance. They can consist of all classes of construction and include small office areas. The size or amount of office area is commensurate with the overall quality. Exterior walls generally have some large openings for overhead doors and minimal fenestration.

Service equipment and hoists are not included in the costs.



Review Of Occupancy and Building Attributes:

- Frame – Class S Metal Frame and Walls
- Ext Walls – Single Wall / Metal on Steel Frame
- Quality – C15 Fair
- Heat – Package Unit
Space Heaters, Radiant
- Ceiling Height – Avg. Ceiling Height Per Floor 23’
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Square / Rectangular

470 Equipment (Shop) Building

These light commercial equipment buildings are for the storage and maintenance of equipment. They will have better electrical circuit and built-in shop features not found in utility buildings or storage sheds. Walls are usually either block or some type of metal or wood over the frame. Roof systems are either steel or wood, and the floors are concrete or asphalt.

For structures with extensive shop or office areas, use occupancy 528 (Service Repair Garage).

Service equipment is not included.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete Block
- Quality – C20 Average
- Heat – Space Heater
- Ceiling Height – Avg. Ceiling Height Per Floor 16’
- Stories – 1 Story
- Shape – Square / Rectangular
- Aviation Hanger / Office / Terminal / Eqpt. Shop

470 Equipment (Shop) Building

These light commercial equipment buildings are for the storage and maintenance of equipment. They will have better electrical circuit and built-in shop features not found in utility buildings or storage sheds. Walls are usually either block or some type of metal or wood over the frame. Roof systems are either steel or wood, and the floors are concrete or asphalt.

For structures with extensive shop or office areas, use occupancy 528 (Service Repair Garage).

Service equipment is not included.



Review Of Occupancy and Building Attributes:

- Frame – Class S Metal Framed
- Ext Walls – Single Wall / Metal On Steel Frame
- Quality – C40 Excellent
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 16'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape Square/Rectangular



QC 40 FOR SUPERIOR INTERIOR FINISH. BUILDING INCLUDES CLASSROOMS AND A TRAINING LAB.

Specialty

Building Type	Total Buildings	Total Taxable
497 Computer Center	28	\$300,116,180
331 Hospital	3	\$95,353,286
313 Convalescent Hospital	7	\$93,091,892
595 Hotel, Limited Service	9	\$93,635,275
345 Parking Structure	5	\$32,330,913
577 Parking Level	18	\$50,844,835
	70	\$665,372,381

497 Computer Center

Computer centers are electronic data processing plants, including ancillary offices. Most facilities will have a rather plain exterior appearance with little fenestration. The cost and quality selection will depend primarily on the amount of interior finish. An amount of raised computer floors are included, commensurate with the quality level.

The better qualities have a large amount of good support rooms and many offices.



1. Review Of Occupancy and Building Attributes:

- Frame – Class S Metal Frame and Walls
- Ext Walls – Pre-Engineered, Pre-Fab Metal Panels
- Quality – C40 Excellent
- Heat – Evaporative Cooling
- Ceiling Height – Avg. Ceiling Height Per Floor 22’
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Slightly Irregular Shape

497 Computer Center

Computer centers are electronic data processing plants, including ancillary offices. Most facilities will have a rather plain exterior appearance with little fenestration. The cost and quality selection will depend primarily on the amount of interior finish. An amount of raised computer floors are included, commensurate with the quality level.

The better qualities have a large amount of good support rooms and many offices.



Review Of Occupancy and Building Attributes:

- Frame – Class S Metal Frame and Walls
- Ext Walls – Pre-Engineered, Pre-Fab Metal Panels
- Quality – C40 Excellent
- Heat – Evaporative Cooling
- Ceiling Height – Avg. Ceiling Height Per Floor 22'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Slightly Irregular Shape

331 Hospital

Designed as complete health care facilities, hospitals typically include a number of different health services within one building or groups of buildings. Typical areas found include diagnostic, surgery, patient care, delivery, nursery, emergency, administration, service areas and pharmacies.

The amount of actual area associated with all or some of these specific areas varies with the size of the building and the number of people serviced by the hospital. The types of facilities available in the hospital generally are commensurate with the overall quality of the structure.

Lower quality hospitals have a large ward area while higher quality ones have a large amount of private rooms. These quality variations result in the amount of area per bed ranging between 625 and 1,700 square feet.

Exterior finishes vary with decorative marble, granite, concrete, and metal and glass panels in the better qualities and brick, block, and masonry veneers with very little ornamentation at the lower quality.

Plaster or drywall is found on the interiors with suspended acoustic tile ceilings. Floor finishes are commonly ceramic, vinyl or some other type of resilient floor cover. Signal systems, special oxygen piping and pneumatic conveyors are commonly found. They conform to the overall quality and design of the structure. Most hospitals have complete heating, ventilating and air conditioning systems and emergency power equipment.

The costs include Group I equipment that is installed in or attached to the building as a part of the general contract.

Since hospitals have higher requirements for heating, cooling and ventilation, use component 617 (Complete HVAC) for HVAC costs.

The following are not included in the costs: Canopies and balconies; Group II equipment that may be installed and becomes a part of the real property, but is typically not a part of the general contract (such as autoclaves, permanent surgical lights and other equipment); and Group III equipment that is movable personal property (such as furniture, fixtures, instruments, etc.).



Review Of Occupancy and Building Attributes:

- Frame - Class C Masonry Bearing Walls
- Ext Walls – Curtain Walls / Metal & Glass Pane
Curtain Walls / Ext. Insul. & Finish
- Quality - C25 Above Average
- Heat – 617 complete HVAC
- Ceiling Height – Avg. Ceiling Height Per Floor 12’
- Stories – 4 Stories
- Shape – Very Irregular
- 1 Unit Type in Bldg.
- 3 Commercial Passenger Elevators

320 Dispensary

These are buildings designed for urgent care or emergency first aid and medical treatment. Typically, they do not have facilities for surgery, although the better qualities may have some small surgical capabilities. They do generally have some office space.

Floor coverings are either ceramic tile or some type of resilient floor finish throughout the structure. Lighting and plumbing are adequate for emergency first aid use.

The following are not included in the costs: Medical equipment, surgery facilities and emergency power facilities.

Availability of Elevators by Area for this occupancy: No



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls – Curtain Walls / Steel Studs + Stucco
- Quality - C25 Above Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 13'
- Stories – 1 Story
- Shape – Irregular
- 1 Unit Type in Bldg.
- Ambulance Drive-thru



313 Convalescent Hospital

This occupancy includes rest homes, sanitariums, nursing homes and buildings of hospital type construction that give nursing care. They are designed for bed care and/or hotel and nursing care for ambulatory patients. They have treatment and therapy rooms, service and administration areas, nurses' stations and signaling systems commensurate with the building class and quality. These facilities do not have equipment for surgical care and treatment.

Exterior and interior finishes are very similar to hospitals in terms of the materials used. While most have some type of combined heating and cooling system, lower quality units may have heating only.

The following are not included in the costs: Furniture, and equipment such as therapy or kitchen equipment, etc. that are not permanently attached.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Synthetic Masonry Vnr.
Single Wall / Synth. Plaster
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 10'
- Stories – 2 Stories
- Shape – Irregular Shape
- 76 Units In Bldg.

313 Convalescent Hospital

This occupancy includes rest homes, sanitariums, nursing homes and buildings of hospital type construction that give nursing care. They are designed for bed care and/or hotel and nursing care for ambulatory patients. They have treatment and therapy rooms, service and administration areas, nurses' stations and signaling systems commensurate with the building class and quality. These facilities do not have equipment for surgical care and treatment.

Exterior and interior finishes are very similar to hospitals in terms of the materials used. While most have some type of combined heating and cooling system, lower quality units may have heating only.

The following are not included in the costs: Furniture, and equipment such as therapy or kitchen equipment, etc. that are not permanently attached.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Stucco on Wire
Stud Walls / Ashlar Stone Vnr.
- Quality – C30 Good
- Heat – Warm/Cool Air
- Ceiling Height – Avg. Ceiling Height Per Floor 10'
- Stories – 1 Story
- Shape – Irregular Shape
- 42 Units In Bldg.

595 Hotel, Limited Service

These structures are three or more stories high, having multiple sleeping units and limited common area amenities. Studio and bedroom suites can have limited kitchen facilities for extended stays. The quality of the hotel is determined primarily from the interior refinements. The best quality hotels have some high-cost wall cover and floor finish in the open and public areas, with larger sleeping room suites containing high cost wall cover. Limited service hotels include some lounge or recreation support facilities, lobby, laundry, storage and office space commensurate with the size and quality of the facility. For full service facilities with lounges, restaurants, ballrooms, meeting rooms, etc., use occupancy 594 (Hotel, Full Service).

The following are not included in the costs: Canopies and balconies, swimming pools, furniture, fixtures and equipment (such as kitchen appliances, etc.) that are not permanently attached under the general building contract.

Use occupancy 552 (Recreational Enclosure) for pool enclosure buildings.

This occupancy includes both shell and tenant improvement costs. To price each separately (using two separate occupancies in two separate sections), use the following occupancies:

779 Shell, Hotel - Limited Service

997 Interior Space, Hotel - Limited Service



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Ashlar Stone Veneer
Stud Walls / Hardboard Sheet
- Quality – C30 Good
- Heat – Wall Heat Pump
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 11'
- Stories – 4 Stories
- 164 Rooms in Bldg.
- 2 Commercial Passenger Elevators

595 Hotel, Limited Service

These structures are three or more stories high, having multiple sleeping units and limited common area amenities. Studio and bedroom suites can have limited kitchen facilities for extended stays. The quality of the hotel is determined primarily from the interior refinements. The best quality hotels have some high-cost wall cover and floor finish in the open and public areas, with larger sleeping room suites containing high cost wall cover. Limited service hotels include some lounge or recreation support facilities, lobby, laundry, storage and office space commensurate with the size and quality of the facility. For full service facilities with lounges, restaurants, ballrooms, meeting rooms, etc., use occupancy 594 (Hotel, Full Service).

The following are not included in the costs: Canopies and balconies, swimming pools, furniture, fixtures and equipment (such as kitchen appliances, etc.) that are not permanently attached under the general building contract.

Use occupancy 552 (Recreational Enclosure) for pool enclosure buildings.

This occupancy includes both shell and tenant improvement costs. To price each separately (using two separate occupancies in two separate sections), use the following occupancies:

779 Shell, Hotel - Limited Service

997 Interior Space, Hotel - Limited Service



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Ext. Insul. & Finish
Stud Walls / Ashlar Stone Veneer
- Quality – C30 Good
- Heat – Wall Heat Pump
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 12'
- Stories – 4 Stories
- Shape – Slightly Irregular Shape
- 2 Commercial Passenger Elevators

345 Parking Structure

Built above grade, these structures are designed for live load storage of autos. They commonly have either no exterior walls or partial exterior walls and are usually Class A or B buildings, and in some cases Class S.

While the lower quality structures do not have office area, the better qualities have some small office and service areas. There is low-level lighting and adequate plumbing for office restrooms and service areas.

The quality of these structures can be influenced by their design characteristics. Ramp designs vary from separate and exclusive ramps, which separate the travel and the parking/unparking operations, to continuous sloping floor or adjacent ramp, which have both the travel and parking operations integrated within the same space. The determination of the type of ramp used is based on the site's shape and dimensions and the parking demand characteristics. The costs are based on the number of stories where there is always one more parking level (rooftop) than stories.

The following are not included in the costs: Pedestrian bridges, signs and parking or service equipment.



Review Of Occupancy and Building Attributes:

- Frame – Class B Reinforced Concrete
- Ext Walls – Concrete, Tilt-up
- Quality - C20 Average
- Heat – No HVAC
- Ceiling Height – Avg. Ceiling Height Per Floor 10'
- Stories - 2 Stories
- Shape – Slightly Irregular Shape
- Area – 44,841 SF

345 Parking Structure

Built above grade, these structures are designed for live load storage of autos. They commonly have either no exterior walls or partial exterior walls and are usually Class A or B buildings, and in some cases Class S.

While the lower quality structures do not have office area, the better qualities have some small office and service areas. There is low-level lighting and adequate plumbing for office restrooms and service areas.

The quality of these structures can be influenced by their design characteristics. Ramp designs vary from separate and exclusive ramps, which separate the travel and the parking/unparking operations, to continuous sloping floor or adjacent ramp, which have both the travel and parking operations integrated within the same space. The determination of the type of ramp used is based on the site's shape and dimensions and the parking demand characteristics. The costs are based on the number of stories where there is always one more parking level (rooftop) than stories.

The following are not included in the costs: Pedestrian bridges, signs and parking or service equipment.



Review Of Occupancy and Building Attributes:

- Frame – Class B Reinforced Concrete
- Ext Walls – Concrete, Formed
- Quality - C20 Average
- Heat – No HVAC
- Ceiling Height – Avg. Ceiling Height Per Floor 11'
- Stories - 6 Stories
- Shape – Slightly Irregular Shape
- Area – 197,559 SF

577 Parking Levels

These floors are intermediate and ground-level parking facilities found underneath elevated buildings and include all framing, ramps and stairs necessary.



Review Of Occupancy and Building Attributes:

- Frame – Class B Reinforced Concrete
- Ext Walls – Concrete, Formed
- Quality – C20 Average
- Heat – No HVAC
- Ceiling Height – Avg. Ceiling Height Per Floor 12'
- Stories – 1 Story
- 14 Parking Units in Bldg.

Office

Building Type	Total Buildings	Total Taxable
344 Office Building	85	\$109,751,740
341 Medical Office	28	\$70,133,176
392 Industrial Engineering	2	\$18,034,831
	115	\$197,919,747

344 Office Building

These buildings are designed for commercial occupancies and are normally subdivided into smaller units for tenant use. The interior finish may have plaster or drywall and, depending on the quality, utilize glass and special wall covering.

Floor finishes are carpet, terrazzo or vinyl. Ceiling finishes vary with the quality. Luminous ceilings and high intensity fluorescent lighting are found in the better qualities.

In the restrooms, both the number and quality of fixtures generally correspond to the quality of the building. Typically, floor finishes in the restroom areas are ceramic tile. At all quality levels, metal partitions and commercial plumbing fixtures can be found.

Most offices have a combined heating and cooling system while the lower cost structures have heating only.

The following are not included in the costs: Signs and office furnishings or equipment.



Review Of Occupancy and Building Attributes:

- Frame - Class S Metal Frame and Walls
- Ext Walls – 812 Concrete Block
849 Curtain Walls / Metal & Glass Pane
- Quality – C30 Good
- Heat – 611 Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 10'
- Stories – 3 Stories
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.
- 1 Commercial Passenger Elevator

344 Office Building

These buildings are designed for commercial occupancies and are normally subdivided into smaller units for tenant use. The interior finish may have plaster or drywall and, depending on the quality, utilize glass and special wall covering.

Floor finishes are carpet, terrazzo or vinyl. Ceiling finishes vary with the quality. Luminous ceilings and high intensity fluorescent lighting are found in the better qualities.

In the restrooms, both the number and quality of fixtures generally correspond to the quality of the building. Typically, floor finishes in the restroom areas are ceramic tile. At all quality levels, metal partitions and commercial plumbing fixtures can be found.

Most offices have a combined heating and cooling system while the lower cost structures have heating only.

The following are not included in the costs: Signs and office furnishings or equipment.



Review Of Occupancy and Building Attributes:

- Frame - Class C Masonry Bearing Walls
- Ext Walls – Curtain Walls / Glass Giber Reinforced Ashlar Stone Vnr. w/ Black Back-up
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 15’
- Stories – 2 Stories
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.
- 1 Commercial Passenger Elevator

341 Medical Office

These are buildings designed for medical and/or dental services with examination and outpatient treatment. They include a reception/lobby area as well as individual rooms.

Floor finishes are carpet or resilient flooring. Ceilings are acoustic tile and may be on a suspended system. Most utilize high-intensity fluorescent lighting with the better qualities also having x-ray capabilities and built-in cabinetry.

Individual treatment rooms may have plumbing and sinks. Restrooms are adequate to service the amount of personnel working in the building.

The following are not included in the costs: X-ray equipment, autoclaves, office equipment, permanent examination lights and other medical equipment.



Review Of Occupancy and Building Attributes:

- Frame - Class C Masonry Bearing Walls
- Ext Walls – Block with Stucco
Concrete Block / Textured Face
- Quality – C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 14’
- Stories - 3 Stories
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.

341 Medical Office

These are buildings designed for medical and/or dental services with examination and outpatient treatment. They include a reception/lobby area as well as individual rooms.

Floor finishes are carpet or resilient flooring. Ceilings are acoustic tile and may be on a suspended system. Most utilize high-intensity fluorescent lighting with the better qualities also having x-ray capabilities and built-in cabinetry.

Individual treatment rooms may have plumbing and sinks. Restrooms are adequate to service the amount of personnel working in the building.

The following are not included in the costs: X-ray equipment, autoclaves, office equipment, permanent examination lights and other medical equipment.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Ext. Insul. & Finish
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 11'
- Stories – 1 Story
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.

392 Industrial Engineering Building

The exterior of an industrial engineering building is similar to that of occupancy 494 (Industrial Light Manufacturing). However, the interior has a larger amount of office area and finished space than the manufacturing occupancy while containing some manufacturing and assembly areas. The best structures approach good office buildings in cost, with many partitions, best lighting, elevators or escalators, and fine detail. If the design appears closer to office use than to industrial, use occupancy 344 (Office Building).

Better quality exteriors have high-cost features and ornamentation. Interiors at most qualities are plaster or drywall with fluorescent lighting and adequate plumbing for the personnel. The quality of the fixtures is commensurate with the quality of the structure.

The following are not included in the costs: Furnishings, power feeds and special utilities for manufacturing machinery.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete, Tilt-up
- Quality – C10 Low
- Heat – Space Heater / Swamp Coolers
Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 21’
- Stories – 2 Stories
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.
- 9,462 SF Clean Room in Bldg.
- 4,800 SF Mezzanine / Storage

392 Industrial Engineering Building

The exterior of an industrial engineering building is similar to that of occupancy 494 (Industrial Light Manufacturing). However, the interior has a larger amount of office area and finished space than the manufacturing occupancy while containing some manufacturing and assembly areas. The best structures approach good office buildings in cost, with many partitions, best lighting, elevators or escalators, and fine detail. If the design appears closer to office use than to industrial, use occupancy 344 (Office Building).

Better quality exteriors have high-cost features and ornamentation. Interiors at most qualities are plaster or drywall with fluorescent lighting and adequate plumbing for the personnel. The quality of the fixtures is commensurate with the quality of the structure.

The following are not included in the costs: Furnishings, power feeds and special utilities for manufacturing machinery.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete, Tilt-up
- Quality – C20 Average
- Heat – HVAC
- Ceiling Height – Avg. Ceiling Height Per Floor 37'
- Stories – 1 Story
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.
- 10,625 SF Mezzanine / Open

Retail

Building Type	Total Buildings	Total Taxable
353 Retail Store	42	\$21,024,172
349 Fast Food Restaurant	24	\$14,883,821
350 Restaurant	14	\$11,350,149
412 Neighborhood Shopping Ctr	16	\$19,236,976
413 Community Shopping Center	5	\$6,596,489
304 Bank	10	\$11,118,336
340 Market	1	\$3,528,740
446 Supermarket	1	\$7,060,192
419 Convenience Market	10	\$5,955,073
	123	\$100,753,948

353 Retail Store

These are one- or two-story buildings designed for retail sales and display. They usually have display and/or decorative fronts. This occupancy includes stores occupied by secondary department stores with limited merchandise lines, specialty shops and commercial buildings designed for a general occupancy.

The stores are usually designed with designated areas for servicing customers, employee operations, merchandise storage, display areas, office and restroom facilities. The higher quality stores have expensive exterior and interior finishes, large display areas, attractive storefronts and special lighting. Lower quality structures have small displays, minimum finish and mechanical items.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Stucco on Wire
Curtain Walls / Metal & Glass Pane
- Quality – C25 Above Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 12'
- Stories – 1 Story

353 Retail Store

These are one- or two-story buildings designed for retail sales and display. They usually have display and/or decorative fronts. This occupancy includes stores occupied by secondary department stores with limited merchandise lines, specialty shops and commercial buildings designed for a general occupancy.

The stores are usually designed with designated areas for servicing customers, employee operations, merchandise storage, display areas, office and restroom facilities. The higher quality stores have expensive exterior and interior finishes, large display areas, attractive storefronts and special lighting. Lower quality structures have small displays, minimum finish and mechanical items.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Block with Stucco
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 14'
- Stories – 1 Story
- Shape – Square / rectangular

349 Fast Food Restaurant

These structures have limited consumption or dining area in relation to the preparation area. Drive-up windows commensurate with the quality are included. The average fast food restaurant normally includes some outer roof overhang, but no large separate canopies and carports. The lower qualities are built to minimum building and health codes. The median area for a fast food restaurant is 3,150 square feet with a range of 1,375 to 4,250 square feet. The seating space is normally less than 45 percent of the total area. These buildings have suitable office space and restroom facilities. For buildings with larger dining/play areas, use occupancy 350 (Restaurant).

Since fast food restaurants have higher requirements for heating, cooling and ventilation, use component 617 (Complete HVAC) for HVAC costs.

The following are not included in the costs: Canopies, kitchen equipment, restaurant fixtures, furniture and signs.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Stucco on Wire
Stud Walls / Metal Siding
- Quality – C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 10’
- Stories - 1 Story
- Shape – Slightly Irregular Shape

349 Fast Food Restaurant

These structures have limited consumption or dining area in relation to the preparation area. Drive-up windows commensurate with the quality are included. The average fast food restaurant normally includes some outer roof overhang, but no large separate canopies and carports. The lower qualities are built to minimum building and health codes. The median area for a fast food restaurant is 3,150 square feet with a range of 1,375 to 4,250 square feet. The seating space is normally less than 45 percent of the total area. These buildings have suitable office space and restroom facilities. For buildings with larger dining/play areas, use occupancy 350 (Restaurant).

Since fast food restaurants have higher requirements for heating, cooling and ventilation, use component 617 (Complete HVAC) for HVAC costs.

The following are not included in the costs: Canopies, kitchen equipment, restaurant fixtures, furniture and signs.



Review Of Occupancy and Building Attributes:

- Frame – Class A Fireproof Structural Steel Frame
- Ext Walls – Curtain Walls / Ext. Insul. & Finish
Stud Walls / Brick Veneer
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 14'
- Stories – 1 Story

350 Restaurant

These buildings are constructed for the preparation and service of food and beverages. They include a combination of the following areas: Consumption, production, serving, receiving and storage, sanitation, non-dining and employee, and restrooms. Good restaurants include the typical chain operation and suburban neighborhood restaurants catering to regional trade. Average quality includes neighborhood restaurants or coffee shops or a lower priced franchise operation. They include suitable office areas and all necessary plumbing and electrical connections for kitchen equipment.

Since restaurants have higher requirements for heating, cooling and ventilation, use component 617 (Complete HVAC) for HVAC costs.

The following are not included in the costs: Kitchen equipment, restaurant fixtures, furnishings and signs.

For cafeterias, use occupancy 530 (Cafeteria).



Review Of Occupancy and Building Attributes:

- Frame – Class S Metal Frame And Walls
- Ext Walls – Single Wall/ Metal, Texture Covered Metal Frame
- Quality – C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 20'
- Stories – 1 Story
- Fire Sprinklers

7000 Gallon Tank

350 Restaurant

These buildings are constructed for the preparation and service of food and beverages. They include a combination of the following areas: Consumption, production, serving, receiving and storage, sanitation, non-dining and employee, and restrooms. Good restaurants include the typical chain operation and suburban neighborhood restaurants catering to regional trade. Average quality includes neighborhood restaurants or coffee shops or a lower priced franchise operation. They include suitable office areas and all necessary plumbing and electrical connections for kitchen equipment.

Since restaurants have higher requirements for heating, cooling and ventilation, use component 617 (Complete HVAC) for HVAC costs.

The following are not included in the costs: Kitchen equipment, restaurant fixtures, furnishings and signs.

For cafeterias, use occupancy 530 (Cafeteria).



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood Or Steel Framed
- Ext Walls – Curtain Walls / Metal And Glass Panel
Stud Walls / Brick Veneer
Stud Walls / Wood Siding
- Quality – C25 Above Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 15'
- Stories – 1 Story

412 Neighborhood Shopping Center

A neighborhood shopping center is typically a row of open stores comprising a single line of storefronts with individual service entrances in the rear. It is generally a small, one-story project that may or may not have a major anchor. Typical anchors in a neighborhood center include major markets, large drug stores (discount stores) and banks.

Shopping center costs are for the strip buildings only and include all necessary plumbing and electrical connections to provide for the operation of the satellites, including service areas. Trade fixtures and equipment pertinent to individual tenants are not included. The costs represent group averages of a typical mix of tenants (excluding major anchor occupancies). The following are normally commensurate with the quality and type of anchors they support: The mix of general occupancies found within a center, the display or decorative storefronts, and the canopy-mansard overhang or ornamentation.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Stucco on Wire
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 22’
- Stories – 1 Story
- Shape – Irregular Shape
- Building Area – 19,649 SF

412 Neighborhood Shopping Center

A neighborhood shopping center is typically a row of open stores comprising a single line of storefronts with individual service entrances in the rear. It is generally a small, one-story project that may or may not have a major anchor. Typical anchors in a neighborhood center include major markets, large drug stores (discount stores) and banks.

Shopping center costs are for the strip buildings only and include all necessary plumbing and electrical connections to provide for the operation of the satellites, including service areas. Trade fixtures and equipment pertinent to individual tenants are not included. The costs represent group averages of a typical mix of tenants (excluding major anchor occupancies). The following are normally commensurate with the quality and type of anchors they support: The mix of general occupancies found within a center, the display or decorative storefronts, and the canopy-mansard overhang or ornamentation.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Wood Siding
Stud Walls / Ashlar Stone Vnr.
- Quality – C35 Very Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 12'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Square / Rectangular
- Building Area – 5,436 SF

413 Community Shopping Center

A community shopping center is typically an intermediate group or cluster of stores (also called a plaza). It is generally a much larger and better-designed project than a neighborhood center. It usually supports at least one major anchor. Typical anchors in a community center include secondary or junior department or retail-discount stores and major restaurant buildings.

Shopping center costs are for the strip or plaza buildings only and include all necessary plumbing and electrical connections to provide for the operation of the satellites, including service areas. Trade fixtures and equipment pertinent to individual tenants are not included. The costs represent group averages of a typical mix of tenants (excluding major anchor occupancies). The following are normally commensurate with the quality and type of anchors they support: The mix of general occupancies found within a center, the display or decorative storefronts, and the canopy-mansard overhang or ornamentation.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Cement Fiber Siding
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 13'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Slightly Irregular Shape
- 162 SF Mezzanine / Office

413 Community Shopping Center

A community shopping center is typically an intermediate group or cluster of stores (also called a plaza). It is generally a much larger and better-designed project than a neighborhood center. It usually supports at least one major anchor. Typical anchors in a community center include secondary or junior department or retail-discount stores and major restaurant buildings.

Shopping center costs are for the strip or plaza buildings only and include all necessary plumbing and electrical connections to provide for the operation of the satellites, including service areas. Trade fixtures and equipment pertinent to individual tenants are not included. The costs represent group averages of a typical mix of tenants (excluding major anchor occupancies). The following are normally commensurate with the quality and type of anchors they support: The mix of general occupancies found within a center, the display or decorative storefronts, and the canopy-mansard overhang or ornamentation.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Stucco on Wire
Stud Walls / Brick Veneer
- Quality – C25 Above Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 14’
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Slightly Irregular Shape

304 Bank

This occupancy also includes savings and loan institutions where the design is similar to a bank. Exteriors have some ornamentation at all quality levels with the better qualities using stone, ornamental concrete, brick and/or solar glass. The interiors have plaster or drywall with special detailing in some areas. There are some office and storage areas. The office area may be open and located in the same general area as the main banking services. Floor finishes usually are terrazzo, carpet, vinyl composition tile or vinyl sheet flooring. These buildings have drive-up windows, night depositories, surveillance systems and vaults.

Restroom interiors of the higher quality levels are tiled and have high quality commercial fixtures. Lighting is usually recessed fluorescent fixtures.

The following are not included in the costs: Vault doors, banking equipment, safe deposit boxes or exterior canopies and yard improvements.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Ext. Insul. & Finish
Stud Walls / Synthetic Masonry Vnr.
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height 19'
- Stories – 1 Story
- Shape – Irregular Shape
- 1 Unit Type in Bldg.

304 Bank

This occupancy also includes savings and loan institutions where the design is similar to a bank. Exteriors have some ornamentation at all quality levels with the better qualities using stone, ornamental concrete, brick and/or solar glass. The interiors have plaster or drywall with special detailing in some areas. There are some office and storage areas. The office area may be open and located in the same general area as the main banking services. Floor finishes usually are terrazzo, carpet, vinyl composition tile or vinyl sheet flooring. These buildings have drive-up windows, night depositories, surveillance systems and vaults.

Restroom interiors of the higher quality levels are tiled and have high quality commercial fixtures. Lighting is usually recessed fluorescent fixtures.

The following are not included in the costs: Vault doors, banking equipment, safe deposit boxes or exterior canopies and yard improvements.



Review Of Occupancy and Building Attributes:

- Frame - Class D Wood or Steel Framed
- Ext Walls - Stud Walls / Cement Fiber Siding
Stud Walls / Ashlar Stone Vnr.
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height 12’
- Stories – 1 Story
- Shape – Slightly Irregular Shape
- 1 Unit Type in Bldg.

340 Market

These are retail food stores that often handle limited lines of other merchandise. Items generally classed as real property are included in the costs (e.g., built-in refrigerators, cold rooms and ancillary cooling equipment). Items classed as personal property or trade fixtures are not included in the costs.

In this occupancy, 75 to 80 percent of the total store is devoted to space for display with the remainder of the floor space being utilized for storage, pre-packaging areas and coolers.

The following are not included in the costs: Display cases, fronts, freezers and coolers, furnishings and other display trade fixtures.



Review Of Occupancy and Building Attributes:

- Frame - Class C Masonry Bearing Walls
- Ext Walls – Block with Ext. Insul. & Finish
- Quality - C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 19’
- Stories – 1 Story
- Shape – Square / Rectangular
- 1 Unit Type in Bldg.

446 Supermarket

These are large self-serve retail food stores that often handle several lines of other merchandise. Items that are generally classed as real property are included in the costs, i.e., built-in refrigerators, cold rooms and ancillary cooling equipment. Other items found in this occupancy, which are classed as personal property or trade fixtures, are not included in the costs.

In this occupancy, 75 to 80 percent of the total store is devoted to space for display with the remainder of the floor space being utilized for storage, pre-packaging areas and coolers.

The following are not included in the costs: Display cases, freezers and coolers, furnishings and other trade fixtures.



Review Of Occupancy and Building Attributes:

- Frame – Class C Masonry Bearing Walls
- Ext Walls – Concrete Block, Textured Face Block with Stucco
- Quality – C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 20'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Square / Rectangular

419 Convenience Market

These are small food stores, typically 2,000 to 8,000 square feet, with limited interior facilities. They are designed for the quick purchase of standard staple items in small quantities. They have extensive shelving but few facilities. The storage area is relatively small. The better qualities include small specialty or gourmet food shops. These occupancies include suitable plumbing and electrical facilities for refrigeration equipment.

The following are not included in the costs: Display cases, fronts, freezers, coolers and other trade fixtures.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Stucco on Wire
Stud Walls / Ashlar Stone Veneer
- Quality – C30 Good
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 17'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Slightly Irregular Shape

419 Convenience Market

These are small food stores, typically 2,000 to 8,000 square feet, with limited interior facilities. They are designed for the quick purchase of standard staple items in small quantities. They have extensive shelving but few facilities. The storage area is relatively small. The better qualities include small specialty or gourmet food shops. These occupancies include suitable plumbing and electrical facilities for refrigeration equipment.

The following are not included in the costs: Display cases, fronts, freezers, coolers and other trade fixtures.



Review Of Occupancy and Building Attributes:

- Frame – Class D Wood or Steel Framed
- Ext Walls – Stud Walls / Ext. Insul. & Finish
Stud Walls / Ashlar Stone Veneer
- Quality – C20 Average
- Heat – Package Unit
- Ceiling Height – Avg. Ceiling Height Per Floor 12'
- Stories – 1 Story
- 1 Unit Type in Bldg.
- Shape – Square / Rectangular



Steve Clement

Chief Property Appraiser | Washoe County Assessor's Office

Office: 328.2234

sclement@washoecounty.gov

1001 E. Ninth St., Bldg. D, Reno, NV 89512



APPRAISER CERTIFICATION BOARD

May 11, 2023

Agenda Item 6

a) Working with Tables



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER [REDACTED]	TITLE [REDACTED]
TITLE OF COURSE GIS Working with tables	
VENDOR/PROVIDER GeoSpatial Training Services	

1. Course Summary:

Introducing a variety of functions that can be performed for both spatial and stand-alone tables.

2. What are the hours of instruction? 4 hours

3. What is the completion date? 1/10/2023

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|---|--|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input checked="" type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
- Syllabus or Course Material

SIGNATURE

Requester: [REDACTED] Date: 1/24/2023

For Department Use Only

NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services _____ Title _____ Date _____

ArcGIS Pro: Working with Tables

This workshop will introduce a variety of functions that can be performed for both spatial and stand-alone (non-spatial) tables including field structure, Table View functions, Field View functions, and linking tables with joins and related.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Thursday, January 12 (a.m.)
Location: Coral South Conference Room (The Tax Commission)
Hours: 4

Notes: **This workshop will begin at 8:30 a.m.**
This workshop will require a minimum of 10 students.

Instructor biography: Eric is the founder and owner of GeoSpatial Training Services. He has over 25 years of experience implementing and teaching GIS solutions using ESRI, Google Earth/Maps, and Open Source technology. Eric is the author of Programming ArcGIS with Python Cookbook, Building Web and Mobile ArcGIS Server Applications with Javascript, Spatial Analytics with ArcGIS, and ArcGIS Blueprints.



May 11, 2023

Agenda Item 6

b) Creating Map Books Using Map Series



Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

Form with fields for NAME OF REQUESTER, TITLE, TITLE OF COURSE (GIS Creating Map Books Using Map Series), and VENDOR/PROVIDER (GeoSpatial Training Services).

1. Course Summary:
Creating map books using map series.

2. What are the hours of instruction? 4 hours

3. What is the completion date? 1/10/2023

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- Checkboxes for subject classifications: Mass Appraisal Concepts and Applications, IAAO Standards, Residential, Commercial/Industrial Appraisal, Unitary/Centrally Assessed Property Appraisal, Legal Documents (Deeds, Titles, Leases, etc.), Nevada Statutes or Regulation, Appraisal or Assessment Standards, College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects, GIS, Mapping, CAMA, Laws Relating to Real Estate, Water or Mining, Professional Ethics, Other.

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Checked boxes for Detailed Course Outline and Syllabus or Course Material.

SIGNATURE

Requestor Signature (blacked out) and Date 1/24/2023

For Department Use Only

Table with 4 columns: NUMBER OF CREDIT HOURS GRANTED, NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT, MILESTONE APPLIED TO, TOTAL HOURS FOR THIS MILESTONE.

Verified by:

Division of Local Government Services, Title, Date

ArcGIS Pro (GeoSpatial Training Services, LLC) (in-person classes)

Learning ArcGIS Pro 1: Maps & Projects

This course is intended for those new to GIS and ArcGIS Pro, or students migrating from ArcGIS Desktop that wish to learn the basic skills needed to create and print maps. The course provides students with the foundational skills needed for new users. No previous experience with ArcGIS Pro or GIS is required.

In this course, students will learn how to use ArcGIS Pro to create and use projects, create 2D maps, add and symbolize layers, work with selection sets, work with tables, and create production quality map layouts. Students will learn terminology associated with ArcGIS Pro and GIS in general and gain an understanding of ArcGIS Pro projects and how to manage them.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Monday, January 9 – Tuesday, January 10 (a.m.)
Location: Coral South Conference Room (Tax Commission)
Hours: 12 hours

Notes: **This workshop will begin at 8:30 a.m.**
This workshop will require a minimum of 15 students.

ArcGIS Pro: Creating Map Books Using Map Series

Although we live in a digital age, sometimes we will still need to print hard copy maps. For maps that we take into the field, smaller is often easier to handle. However, the smaller the map, the harder it is to see the detail that we may require. This is where map books come in handy. Map books allow us to print maps covering larger areas at our desired scale by breaking the area into individual sheets, which form the pages of a book. In ArcGIS Pro, this functionality is called a Map Series.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Tuesday, January 10 (p.m.)
Location: Coral South Conference Room (The Tax Commission)
Hours: 4

Notes: **This workshop will begin at 1:30 p.m.**
This workshop will require a minimum of 10 students.

APPRAISER CERTIFICATION BOARD

May 11, 2023

Agenda Item 6

c) Editing Data



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER [REDACTED]	TITLE [REDACTED]
TITLE OF COURSE GIS Editing data	
VENDOR/PROVIDER GeoSpatial Training Services	

1. Course Summary:

Alter existing data and add new data fields.

2. What are the hours of instruction? 8 hours

3. What is the completion date? 1/10/2023

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|---|--|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input checked="" type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
- Syllabus or Course Material

SIGNATURE

Requestor Signature *Date*

For Department Use Only

NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services *Title* *Date*

ArcGIS Pro: Editing Data

Students will learn how to use ArcGIS Pro to perform spatial and attribute edits. You'll learn how to add or remove features from existing data, alter or modify feature shapes and locations, update attributes, and add new data fields.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Wednesday, January 11
Location: Coral South Conference Room (The Tax Commission)
Hours: 8

Notes: **This workshop will begin at 8:30 a.m.**
This workshop will require a minimum of 10 students.

ArcGIS Pro: Working with Symbology

This workshop will introduce you to a variety of ways that vector layers can be symbolized in ArcGIS Pro, including unique value, graduated color, graduated symbol, dot density, charts, and others. You'll learn a variety of techniques for effectively visualizing your data.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Thursday, January 12 (a.m.)
Location: Coral South Conference Room (The Tax Commission)
Hours: 4

Notes: **This workshop will begin at 8:30 a.m.**
This workshop will require a minimum of 10 students.

May 11, 2023

Agenda Item 6

d) Working with Symbology

ArcGIS Pro: Editing Data

Students will learn how to use ArcGIS Pro to perform spatial and attribute edits. You'll learn how to add or remove features from existing data, alter or modify feature shapes and locations, update attributes, and add new data fields.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Wednesday, January 11
Location: Coral South Conference Room (The Tax Commission)
Hours: 8

Notes: **This workshop will begin at 8:30 a.m.**
This workshop will require a minimum of 10 students.

ArcGIS Pro: Working with Symbology

This workshop will introduce you to a variety of ways that vector layers can be symbolized in ArcGIS Pro, including unique value, graduated color, graduated symbol, dot density, charts, and others. You'll learn a variety of techniques for effectively visualizing your data.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Thursday, January 12 (a.m.)
Location: Coral South Conference Room (The Tax Commission)
Hours: 4

Notes: **This workshop will begin at 8:30 a.m.**
This workshop will require a minimum of 10 students.

APPRAISER CERTIFICATION BOARD

May 11, 2023

Agenda Item 6

e) Maps & Projects



Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

Form with fields for NAME OF REQUESTER, TITLE, TITLE OF COURSE (GIS Learning ArcGIS Pro 1: Maps & Projects), and VENDOR/PROVIDER (GeoSpatial Training Services).

1. Course Summary:

New users migrating from ArcMap to ArcPro

2. What are the hours of instruction? 12 hours

3. What is the completion date? 1/10/2023

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- Checkboxes for subject classifications: Mass Appraisal Concepts and Applications, IAAO Standards, Residential, Commercial/Industrial Appraisal, Unitary/Centrally Assessed Property Appraisal, Legal Documents (Deeds, Titles, Leases, etc.), Nevada Statutes or Regulation, Appraisal or Assessment Standards, College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects, GIS, Mapping, CAMA, Laws Relating to Real Estate, Water or Mining, Professional Ethics, Other.

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Checked boxes for Detailed Course Outline and Syllabus or Course Material.

SIGNATURE

Requestor Signature and Date (1/24/2023)

For Department Use Only table with columns: NUMBER OF CREDIT HOURS GRANTED, NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT, MILESTONE APPLIED TO, TOTAL HOURS FOR THIS MILESTONE. Includes Verified by: field with Title and Date.

ArcGIS Pro (GeoSpatial Training Services, LLC) (in-person classes)

Learning ArcGIS Pro 1: Maps & Projects

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Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Monday, January 9 – Tuesday, January 10 (a.m.)
Location: Coral South Conference Room (Tax Commission)
Hours: 12 hours

Notes: **This workshop will begin at 8:30 a.m.**
This workshop will require a minimum of 15 students.

ArcGIS Pro: Creating Map Books Using Map Series

Although we live in a digital age, sometimes we will still need to print hard copy maps. For maps that we take into the field, smaller is often easier to handle. However, the smaller the map, the harder it is to see the detail that we may require. This is where map books come in handy. Map books allow us to print maps covering larger areas at our desired scale by breaking the area into individual sheets, which form the pages of a book. In ArcGIS Pro, this functionality is called a Map Series.

Instructor: Eric Pimpler, M.A., GeoSpatial Training Services, LLC
Dates: Tuesday, January 10 (p.m.)
Location: Coral South Conference Room (The Tax Commission)
Hours: 4

Notes: **This workshop will begin at 1:30 p.m.**
This workshop will require a minimum of 10 students.

APPRAISER CERTIFICATION BOARD

May 11, 2023

Agenda Item 6

f) 88th Annual Conference



Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:
COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER
TITLE OF COURSE: IAAC 2022 Annual Conference
VENDOR/PROVIDER: IAAC

- 1. Course Summary: varies courses offered at annual conference related to appraisal
2. What are the hours of instruction? varies
3. What is the completion date? August 28-31, 2022

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- Mass Appraisal Concepts and Applications
IAAO Standards
Residential, Commercial/Industrial Appraisal
Unitary/Centrally Assessed Property Appraisal
Legal Documents (Deeds, Titles, Leases, etc.)
Nevada Statutes or Regulation, Appraisal or Assessment Standards
College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects
GIS, Mapping, CAMA
Laws Relating to Real Estate, Water or Mining
Professional Ethics
Other

If other, please describe why the course is applicable to appraisal and/or property tax.
see class descriptions

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
Syllabus or Course Material

SIGNATURE

Requester Signature: [Redacted] Date: 9/19/22

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Verified by:

Division of Local Government Services, Date



Demystifying The Jefferson County PVA and Gaining Public Trust through Transparency

[Download](#)

[Ashley Tinius](#), Jefferson County, KY
[Colleen Younger](#), Jefferson County, KY
[Evan Westphal](#), Jefferson County, KY

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PLUMX METRICS

Presentation Category
07 MANAGING PUBLIC RELATIONS AND COMMUNICATIONS

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Session Description

Learn how an office that previously never practiced government communication transformed into a true advocate for engaging the public. We will explain how the change helped gain the trust of our community.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-29-2022 10:30 AM

End Date

8-29-2022 11:30 AM

Moderator

Scott Mayausky, Stafford County, VA



How Lake County, Florida, is Using Power BI to Gain Deep Insights into Their Data

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[David Cornell CAE, MAI](#) Cornell Consulting

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[Rob Brown](#) Lake County, FL

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[Lisa Hargiss](#) Vision Development Studios

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Presentation Category

02 COLLECTING AND MAINTAINING PROPERTY DATA

Session Description

See how Lake County Florida is gaining deep insights into their existing data using Power BI. Lake County FL is one of the top ten fastest growing counties in the state of Florida. This session will show how Lake is analyzing sales, tracking exemptions, developing KPIs, and tracking real-time appraisal performance with analytics.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-29-2022 10:30 AM

End Date

8-29-2022 11:30 AM

Moderator

Donna VanderVries, CPA, Esq. Certified Gen Appraiser, MMAQ, PPE, AAS, CAE, PPS, ASA, Muskegon County, MI



Interactive (Sales) Map for the Public

[Download](#)

[Arion Dake](#) *City of Boston, MA*

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PLUMX METRICS

Presentation Category

03 DEVELOPING AND MANAGING CADASTRAL DATA

Session Description

This Interactive Residential Sales web map allows the user to search for all arms-length sales of the residential properties in the City of Boston and retrieve information about the transaction and the property itself.

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Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-29-2022 10:30 AM

End Date

3-29-2022 11:30 AM

Moderator

Wade Sivik, MAAD, City of Bay City, MI



Updating Your Cost Schedule: An Examination of RCN

[Download](#)

[Errol Williams Ph.D.](#) Harris County Appraisal District
[Ramon Smith AAS](#) Harris County Appraisal District

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[PLUMX METRICS](#)

Presentation Category
04 APPRAISING PROPERTY

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Session Description
This presentation will outline the steps in developing a cost study and outline methods to update cost tables.

Audience Expertise
General Interest (Appropriate for all experience level)

Start Date
8-29-2022 10:30 AM

End Date
8-29-2022 11:30 AM

Moderator
Jana Snow, Oklahoma State University



Adjustment Wars (Star Wars Themed) Qualitative vs Quantitative — Expert Witness Testimony

[Jeel Cuthbert](#) *Arapahoe County, CO*

[Follow](#)

Presentation Category

06 MANAGING COMPLAINTS AND APPEALS

Session Description

Explore differences between qualitative/quantitative adjustments and how you can better apply them when writing appraisal reports or testifying as an expert witness.

Audience Expertise

Intermediate (Ideal for the participant with a general knowledge within the areas covered.)

Start Date

8-29-2022 1:00 PM

End Date

8-29-2022 2:30 PM

Moderator

Kara Endicott, CAE, RES, Johnson County, KS

This document is currently
not available here.

PLUMIX METRICS

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Fundamentals of Modern Industrial Valuation - A Survey of the Empirical Industrial Market

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[Michael G. McFarlane](#) *Tyler Technologies*

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PLUMX METRICS

Presentation Category
04 APPRAISING PROPERTY

Session Description

Empirical market factors are forcing change in industrial real estate. Beginning with an historical survey from the Industrial Revolution through the 20th Century, transitioning to identify influences and preferences for all major sub-categories of industrial real estate, and concluding with an exploration into the rise of e-commerce and global distribution networks with case studies from Amazon and FedEx.

Audience Expertise

Intermediate (ideal for the participant with a general knowledge within the area covered.)

Start Date

8-29-2022 1:00 PM

End Date

8-29-2022 2:30 PM

Moderator

Terry Taylor, CAE, ASA, RES, AAS, CFE, Orange County, FL

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The Appraisal Foundation Update

David Bunton *The Appraisal Foundation*

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Presentation Category
C4 APPRAISING PROPERTY

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Session Description

The Appraisal Foundation (Foundation) sets the Congressionally authorized standards and qualifications for real estate appraisers as well as qualifications for personal property appraisers and provides voluntary guidance on recognized valuation methods and techniques for all valuation professionals. This session will provide an update on Foundation activities.

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Start Date
8-29-2022 1:00 PM

End Date
8-29-2022 2:30 PM

Moderator
Rebecca Malmquist, CAE, SAMA, Minneapolis, MN



Modernizing Appraisal: How Aerial Imagery Helped Discover \$50M in Marine and Rental Property Value

This document is currently not available here.

Erin Ford *EagleView*
Hosea Wilson *Dare County, NC*

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PLUMX METRICS

Presentation Category
 02 COLLECTING AND MAINTAINING PROPERTY DATA

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Session Description
 In this session, we will explain the best practices and technology used by a county assessor in a high-traffic tourist area to efficiently and accurately reappraise a county using 100% desktop appraisal, discovering \$50M in undisclosed personal property value.

Audience Expertise
 Intermediate (Ideal for the participant with a general knowledge within the areas covered.)

Start Date
 8-29-2022 3:00 PM

End Date
 8-29-2022 4:00 PM

Moderator
 Marcy Martin, AAS, Maui County, HI



Super-Charging Your Staff and Appraisal Processes with Mobile Technology

Download

[William A. \(Pete\) Rodda CAE, RES](#) Member, IAAO

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[Daniel Anderson](#) Data Cloud, Tableau & Webex, Speaker

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PLUMX METRICS

Presentation Category

02 COLLECTING AND MAINTAINING PROPERTY DATA

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Session Description

There are many minor adjustments you can make to your operations to improve productivity and efficiency, but none compare to the impact of implementing a seamlessly integrated mobile solution. Eliminating paper, data prep time for field work, and duplicate data entry has fundamentally changed the way we do business.

Start Date

8-29-2022 3:00 PM

End Date

8-29-2022 4:00 PM

Moderator

Mark Tebbs, Washington County, UT



The Effect of Solar Systems on Home Values

Terry R. Taylor CAE, RES, AAS [Orange County](#)

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Presentation Category
04 APPRAISING PROPERTY

Session Description

The Orange County Property Appraiser's Office has examined home values for homes with PV systems and compared the sale values of such homes from before and after the PV systems were installed. OCPA studied the effects of solar systems on home values to determine if there is a value impact on residential property after installing solar equipment. Additionally, numerous studies have attempted to bridge the data gaps that exist.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-29-2022 3:00 PM

End Date

8-29-2022 4:00 PM

Moderator

Bill Furst, Sarasota County, FL

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Lessons Learned from Appeal Bias Study

Brad Fowler RES, AAS Mecklenburg County, NC
Ken Joyner RES, AAS, PPS Mecklenburg County, NC

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Presentation Category
05 MANAGING COMPLAINTS AND APPEALS

Session Description
Mecklenburg County contracted with the University Of North Carolina School of Government to evaluate and report on recent appeal data for evidence of bias within the tax appeal process at both the informal and formal review level. Results and actions will be presented to assist tax offices around the County.

Audience Expertise
General Interest (Appropriate for all experience level)

Start Date
8-30-2022 9:30 AM

End Date
8-30-2022 10:30 AM

Moderator
Cedl Jackson, RES, AAS, Palm Beach County, FL

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Town Hall: Assessment Administration, Appraising & Valuation

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Senior Vice President, Global Real Estate Services
- [Alan Colston BSc \(Hons\), MRICS](#) [Follow](#)
Agency Director
- [David Bunton](#) [Follow](#)
Director, Assessment
- [Krzysztof Grzesik REV, FRICS, IRRV \(Hons\)](#) [Follow](#)
Director, Global Real Estate Services
- [Joe Ibach MAI](#) [Follow](#)
Senior Vice President, Global Real Estate Services
- [Amy Rasmussen RES, AAS, FIAAO](#) [Follow](#)
Assistant to the President, IAAO
- [Paul Sanderson JP LLB \(Hons\) FRICS, FIRRV](#) [Follow](#)
Senior Vice President, Global Real Estate Services
- [Craig Steinley MAI, SRA, AI-GRS, AI-RRS](#) [Follow](#)
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Senior Vice President, Global Real Estate Services
- [Johnnie White MBA, CAE, CMP Fellow](#) [Follow](#)
Appraisal Director
- [Debra McGuire MBA, IOM, CAE](#) [Follow](#)
Executive Director

PLUMX METRICS

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Presentation Category
 CE LEADIVE AND MANAGING THE ASSESSMENT OFFICE

Session Description
 In this lively discussion moderated by IAAO Executive Director Debra McGuire, MBA, IOM, CAE, join leaders from national and international organizations representing assessing, appraising, and valuation professionals on the "state of the industry," trends, and future challenges. Learn what's being done to address fairness and equity in the valuation process, how technology is changing the ways assessing and valuation professionals conduct their work, actions being taken to expand diversity and inclusion in the profession, and increased efforts to recruit more qualified assessors, appraisers, and valuers—and much more!

Audience Expertise
 General Interest (Appropriate for all experience levels)

Start Date
 8-30-2022 9:30 AM

End Date
 8-30-2022 10:30 AM

Moderator
 Wade Patterson, IAAO President, Retired (Ovations)



The Property Tax in Focus: Are Assessments and Property Taxes Equitable?

Download

Ron Rakow *Lincoln Institute of Land Policy*
Margie Cusack FIAAO *Revised Cook County Board IAAO*
Joan Youngman JD *Lincoln Institute of Land Policy*
Daniel McMillen PhD *The University of Western Ontario*
Carmela Quintos Ph.D. *New York City NY*
Jennifer Rearich MAS, RES *Michigan County RES*
Ruud M. Kathmann *State Council for Real Estate Assessment*

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Presentation Category

PLENARY

Session Description

A number of recent studies have found lower-value residences assessed at higher proportions of sale price than higher-value properties. This session will review these findings and consider issues in the measurement of vertical equity in assessment and policies for its improvement.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-30-2022 11:00 AM

End Date

8-30-2022 12:30 PM

Moderator

Cecil Jackson, RES, AAS, Palm Beach County, FL



Managing Inbound Communication Through To Resolution

Download

Rod Miller APEx at IICCA/IBPA/Campden
Bob Henriquez CFA, Hillsborough County, NC

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PLUMX METRICS

Presentation Category

05 LEADING AND MANAGING THE ASSESSMENT OFFICE

SHARE



Session Description

We plan our inspections and assign staff to get the work done in a timely manner. How do we manage unexpected work and track it through to completion? Do we really know who is calling, why they are calling and if we have answered their concern? This session will show you how.

Audience Expertise

General Interest (Appropriate for all experience levels)

Start Date

8-30-2022 1:30 PM

End Date

8-30-2022 2:30 PM

Moderator

Jenny Williams, Chatham County, NC



Maximum Efficiency: Mass Appraisal Tools in Fast-Growing Ada County (Boise), Idaho

[Download](#)

[Erin Brady](#) - Ada County, ID
[Kathleen Lynch](#) - Ada County, ID
[Katrina Little](#) - Ada County, ID

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[PLUMX METRICS](#)

Presentation Category
 04 APPRAISING PROPERTY

SHARE



Session Description

As a leader in population growth and market appreciation, how does the Ada County Assessor's Office (CEAA) manage the increasing workloads rapid growth brings? Join us for a review of the powerful tools we've developed to get the job done, maintain standards and staff size, and save taxpayer money!

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-30-2022 1:30 PM

End Date

8-30-2022 2:30 PM

Moderator

Kathlynn Ireland, Idaho State Tax Commission



Opportunity for Change: Innovating a New Model Review Process for Maricopa County

[Download](#)

Jennifer E. Rearich MAS, RES [@jrearich](#) [@maricopa](#)

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[PLUMX METRICS](#)

Presentation Category
D4 APPRAISING PROPERTY

Session Description

An opportunity arose to modernize and innovate a long-standing process to review mass appraisal regression model values in Maricopa County. This session will discuss the development and implementation of a new process for completing Model Review to identify outlier properties for individual appraiser review.

Audience Expertise

Intermediate (Ideal for the participant with a general knowledge within the areas covered.)

Start Date

8-30-2022 3:30 PM

End Date

8-30-2022 4:30 PM

Moderator

Liz Tobias, MAAO, MCPPE, State Licensed Appraiser, Delhi Charter Township, Ingham County, MI

SHARE





Promoting Professionalism Through a Training and Development Roadmap

[Download](#)

[Amanda J. Padgett MS](#) Illinois Property Assessor / Treasurer
[Chesney Marie \(Offutt\) Leafblad CIAO-M](#) Warren Township

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[PLUMX METRICS](#)

Presentation Category

05 LEADING AND MANAGING THE ASSESSMENT OFFICE

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Session Description

The only constant is change. Legislative changes and new technology are two of the catalysts spurring the need to develop local level training. No topic is too small to benefit from leveraging adult learning principles and emerging tools to effectively reach your office's goals and ensure a professional staff.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-30-2022 8:30 PM

End Date

8-30-2022 4:30 PM

Moderator

Gregory Hutchinson, Howell Township, NJ



Value of the Cost Approach Amid Rising Inflation and Supply Chain Delays.

Edward L. Martinez IDEC [View Profile](#)

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[PLUMX METRICS](#)

Presentation Category
04 APPRAISING PROPERTY

Session Description

Assessing structure values during a pandemic along with rising inflation requires multiple sources of intelligence to formulate a solid opinion of value. This class will demonstrate how the Cost Approach is used to support rising costs while mitigating risk of loss.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-30-2022 3:30 PM

End Date

8-30-2022 4:30 PM

Moderator

Tazha Vincent, Vision Government Solutions, Inc.

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When Desirability and Popularity Outpaces Planning

Download

Marcus D. Kinrade RES, AAS Wake County, NC

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PLUMIX METRICS

Presentation Category
PLENARY

Session Description

Wake County North Carolina has exploded with growth and become a new hub for life science and high-tech companies. Blessed with a moderate climate, a low cost of living, and an abundance of skilled young talent, local governments have struggled to meet the demands of a net migration in of 60 new residents every day. Many other mid-size cities are experiencing similar growth trends with the rise of teleworking and the plea for property tax relief is increasing nation-wide. What mix of relief options are available in these jurisdictions and which provide the most effective, targeted relief while not excessively straining local Government revenues?

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-31-2022 9:00 AM

End Date

8-31-2022 10:00 AM

Moderator

Ryan Cavanah, CAE, Tax Management Associates

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Land Valuation Using Geographically Weighted Regression (GWR) and the Allocation Method

This document is currently not available here

[Daniel J. Fasteen Ph.D.](#) *American Technologies*

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PLUMX METRICS

Presentation Category

04 APPRAISING PROPERTY

Session Description

There are several traditional methods for deriving land values in the literature, but few have been as successful as the allocation method when dealing with limited to non-existent land sales. This session discusses a methodology that expands the allocation method using geographically weighted regression to allow for the quantification of spatially varying effects that contribute to the value of land. The results of this analysis provide for greater accuracy and uniformity in deriving an overall value of a property.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-31-2022 10:30 AM

End Date

8-31-2022 11:30 AM

Moderator

Kathryn Edmondson, City of Virginia Beach, VA

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Supercharge Your Assessing Analytics with Power BI

[Download](#)

David Cornell CAE, MAI [View Contact Info](#)

[Follow](#)

PLUMX METRICS

Presentation Category
04 APPRAISING PROPERTY

Session Description

Power BI is a game changer in truly understanding your assessing data! See how Power BI can supercharge your assessing analytics.

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Audience Expertise

Intermediate (Ideal for the participant with a general knowledge within the areas covered.)

Start Date

8-30-2022 3:30 PM

End Date

8-30-2022 4:30 PM

Moderator

Marcy Martin, AAS, Maui County, HI



Mind the Gap! How to Navigate Intergenerational Communication Gaps in the Workplace Presented by the Women's Initiative Network

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PLUMX METRICS

[Chesney Leafblad CIAO-M](#) *Women's Initiative Network*
[Jessica A. McNeil RES](#) *Polk County, IA*

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Presentation Category

07 MANAGING PUBLIC RELATIONS AND COMMUNICATIONS

Session Description

The 3rd and final 2022 Emerging Leaders Summit session, *Mind the Gap! How to Navigate Intergenerational Communication Gaps in the Workplace* is being presented by the Women's Initiative Network at the IAAO Annual Conference in Boston. With a focus on embracing the diversity of a multigenerational work force, facilitators Chesney Leafblad, CIAO-Master, and Jessica McNeil, RES, representing the Women's Initiative Network, will present ways that leaders can shift from mitigating generational issues to developing a high-performing team. All conference attendees are welcome and encouraged to attend.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-31-2022 10:30 AM

End Date

8-31-2022 11:30 AM

Moderator

Jessica McNeil, RES, Polk County, IA



Diversity Equity and Inclusion, Where Do We Begin

Download

[Corey Moore](#) Durham County, NC
[James Roberts AAS, RES](#) Durham County, NC
[Amanda Markle](#) Durham County, NC

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Presentation Category

05 LEADING AND MANAGING THE ASSESSMENT OFFICE

Session Description

Diversity, Equity, and Inclusion initiatives are topics that have taken center stage in recent years. As leaders in our profession, we must grow and change with the changing times. Where do we begin?

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-31-2022 1:00 PM

End Date

8-31-2022 2:30 PM

Moderator

Kirk Boone, PPS, AAS, UNC School of Government



GIS 101 for Assessors

Brent Jones PE, PLS *Esri*

Follow

Presentation Category

03 DEVELOPING AND MANAGING CADASTRAL DATA

Session Description

Learn how to use your GIS more effectively for determining and defending values, mapping parcels, managing field appraisers, and engaging your constituents with open data and web maps.

Audience Expertise

General Interest (Appropriate for all experience levels)

Start Date

8-31-2022 1:00 PM

End Date

8-31-2022 2:30 PM

Moderator

Kevin Keene, Keene Mass Appraisal Consulting

This document is currently not available here.

PLUMX METRICS

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Valuing the Unique Outliers

[Johnnie White MBA, CAE, CMP, ASA](#) American Society of

Appraisers

[Harry J. Shea ASA, IFA, ARM-PP](#) American Society of Appraisers

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PLUMX METRICS

Presentation Category

04 APPRAISING PROPERTY

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Session Description

This session will address some of the methods and techniques available for appraiser who must develop a supported and credible opinion of value for unique properties. This session will also highlight the Appraisal Review Management program managed by ASA that government assessment officials could benefit from in their review of appraisal reports for all properties.

Start Date

8-31-2022 1:00 PM

End Date

8-31-2022 2:30 PM

Moderator

Pat Alessandri, CAE, RES, MAI, SRA, CFE, Hillsborough County, FL



Using Python & GIS to Assist Appraisal Practice

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Michael McNeil *St. Tammany Parish, LA*

Louis Fitzmorris *St. Tammany Parish, LA*

Troy Dugas *St. Tammany Parish, LA*

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PLUMX METRICS

Presentation Category

03 DEVELOPING AND MANAGING CADASTRAL DATA

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Session Description

Do more with less. That was the mandate given by the administration at one small Assessor's Office in southeast Louisiana. But how? Well, it turns out that even just a little bit of programming knowledge can go a long way.

Audience Expertise

Introductory (Assumes the participant has little or no knowledge of the areas covered.)

Start Date

8-31-2022 3:00 PM

End Date

8-31-2022 4:00 PM

Moderator

Chris Guerin, West Baton Rouge, LA



The Property Tax Post Pandemic – Why Its Still a Good Tax

[Download](#)

David Magor *Institute of Revenue, Rating and Valuation*
Alistair Townsend *Institute of Revenue, Rating and Valuation*

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[PLUMX METRICS](#)

Presentation Category

01 WORKING WITH THE LEGAL FRAMEWORK

SHARE



Session Description

This paper investigates the range of exemptions and reliefs available to property tax administrations through the pandemic. The paper will consider the general practical application of exemptions and reliefs and give examples of their use within legal frameworks.

Audience Expertise

General Interest (Appropriate for all experience levels)

Start Date

8-30-2022 3:30 PM

End Date

8-30-2022 4:30 PM

Moderator

Wade Patterson, Garfield County, OK (Retired)



It's Not Personal, It's Just Business: Trends in Personal Property Taxation

This document is currently not available here.

George R. Brown Utah State Tax Commissioner
Brett Jarvis Idaho Appraiser General



Presentation Category
04 APPRAISING PROPERTY

Session Description

This presentation covers the basic nature of personal property, including how it is defined in different jurisdictions, how to identify it based on those definitions, and how those definitions may conflict. We also cover recent issues involving personal property identification and assessment.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-30-2022 9:30 AM

End Date

8-30-2022 10:30 AM

Moderator

William Healey, RES, CMA, Lewiston, ME

SHARE





Confidence in Your Career

[Shila J. Klender](#), *Mecosta County, MI*
[Anthony Mevaard](#), *Assessing Solutions*

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Presentation Category

05 LEADING AND MANAGING THE ASSESSMENT OFFICE

Session Description

No matter where you are at in your career, confidence is a must. What is confidence? What does it take to be confident? What is holding you back? What is the difference between confident and cocky? These questions and more will be answered during this motivational presentation.

Audience Expertise

General Interest (Appropriate for all experience level)

Start Date

8-29-2022 10:30 AM

End Date

8-29-2022 11:30 AM

Moderator

Phillip Wall, MMAD, Kent County, MI

PLUMX METRICS

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May 11, 2023

Agenda Item 6

g) Introduction to Statistics



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER [REDACTED]	TITLE [REDACTED]
TITLE OF COURSE <i>MC ALGO: Intro to Statistics</i>	
VENDOR/PROVIDER <i>Orange Coast College</i>	

1. Course Summary:

A general education course covering descriptive statistics, probability, binomial and normal distributions, variation, linear regression, correlation and hypothesis testing.

2. What are the hours of instruction? 36

3. What is the completion date? Spring 2007

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|---|---|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input checked="" type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
 Syllabus or Course Material

SIGNATURE

[REDACTED SIGNATURE]

Date 2/2/2023

For Department Use Only

NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services _____ Title _____ Date _____

***Mathematics 030—Intermediate Algebra (4)**

Prerequisite: Math 010 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Topics covered will be functions, linear and quadratic equations, curve sketching, exponents, rational expressions, rational exponents, logarithms, variations, systems of equations, determinants, Cramer's Rule, and conic sections. This course may also be offered online. May be taken for grades or on a credit-no credit basis. Four hours.

Mathematics 070—Intermediate Algebra and Trigonometry (5)

Prerequisite: Math 010 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Recommended preparation: Math 020.

Topics covered will be functions, linear and quadratic equations, curve sketching, exponents, rational expressions, rational exponents, logarithms, systems of equations, determinants, Cramer's Rule, conic sections, trigonometric and inverse trigonometric functions, graphs of trigonometric functions, identities and trigonometric equations, solutions for triangles, and complex numbers. This is an intense and fast-paced course designed for students intending to continue into precalculus. May be taken for grades or on a credit-no credit basis. Five hours.

Mathematics 100—Liberal Arts Mathematics (3) (CAN MATH 2)

Prerequisite: Math 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Designed for students whose majors do not require calculus, this applications-oriented course emphasizes management science optimization techniques, introductory descriptive and inferential statistics, weighted voting systems analysis, game theory principles, decision-making strategies, growth trends, and pattern analysis. May be taken for grades or on a credit-no credit basis. Three hours. **Transfer Credit: CSU; UC.**

Mathematics 103—Activity-Based Statistics for Teachers (3)

Prerequisite: Math 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Designed for prospective teachers, this course is an activity-based exploration of statistics aligned with the California State Mathematics Standards for K-12. Topics include data representation and analysis, randomization and sampling, measures of central tendency and variability, hypothesizing and statistical inference. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour laboratory. **Transfer Credit: CSU**

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively. Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Mathematics 104—Mathematics for Elementary Teachers 1 (3) (CAN MATH 4)

Prerequisite: Math 020 and 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Designed for prospective elementary school teachers, the course emphasizes mathematical structure and problem solving techniques associated with the real number system, elementary number theory, ratio and proportion, set theory, elementary logic, and percent. Instructional delivery design techniques and technological applications will be explored. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour non-lecture. **Transfer Credit: CSU; UC.**

Mathematics 106—Mathematics for Elementary Teachers 2 (3)

Prerequisite: Math 104 with grade of 'C' or better.

Designed for prospective teachers, the course emphasizes elementary school applications of geometric shapes, tessellations, measurement, congruence and similarity, coordinate and transformational geometry. Instructional delivery design techniques and technological applications will be explored. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour non-lecture. **Transfer Credit: CSU; UC.**

***Mathematics 120—Trigonometry (3) (CAN MATH 8)**

Prerequisite: Math 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Recommended preparation: Mathematics 020.

Topics covered will be trigonometric (circular) and inverse trigonometric functions, graphs of trigonometric functions, identities and conditional equations, solutions for triangles, vectors, complex numbers and applications. May be taken for grades or on a credit-no credit basis. Three hours. **Transfer Credit: CSU.**

Mathematics 130—College Algebra (4) (CAN MATH 10)

Prerequisite: Math 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Topics include linear, quadratic, rational, logarithmic, and exponential functions and their graphs, systems of equations, matrices, sequences, series, and basic combinations. This course prepares students to enter Math 157 but does not provide sufficient preparation to enter Math 180. This course may also be offered online. May be taken for grades or on a credit-no credit basis. Four hours. **Transfer Credit: CSU; UC.**

Mathematics 154—Finite Mathematics with Applications (4) (CAN MATH 12)

Prerequisite: Math 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Mathematical models, properties of sets, functions, elementary curve fitting, finance, matrix operations, linear programming by the graphic and simplex methods, Markov matrices, elementary probability, and game theory. May be taken for grades or on a credit-no credit basis. Four hours. **Transfer Credit: CSU; UC.**

Mathematics 157—Calculus for Biological, Management and Social Sciences (4) (CAN MATH 34)

Prerequisite: Math 130 or 154 or 170 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Analytic geometry and limits; introduction to differential and integral calculus with applications to include polynomial, rational, exponential and logarithmic functions and their graphs. Multivariate calculus to include partial differentiation and multiple integration. Introduction to the calculus of probability with applications. May be taken for grades or on a credit-no credit basis. Five hours. **Transfer Credit: CSU; UC.**

Mathematics 160—Introduction to Statistics (3) (CAN STAT 2)

Prerequisite: Math 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

A general education course covering descriptive statistics, probability, binomial and normal distributions, variation, linear regression, correlation and hypothesis testing. Applications taken from natural sciences, social sciences, business, and everyday life. Students completing Mathematics 160 may petition for credit for Psychology 160. This course may also be offered online. May be taken for grades or on a credit-no credit basis. Three hours. **Transfer Credit: CSU; UC.**

Mathematics 160H—Honors Introduction to Statistics (3)

Prerequisite: Math 030 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

A general education course. Topics include descriptive statistics, probability, binomial and normal distributions, variation, linear regression, correlation and hypothesis testing. Applications taken from natural sciences, social sciences, business, and everyday life. May be taken for grades or on a credit-no credit basis. Three hours. **Transfer Credit: CSU; UC.**

Mathematics 170—Precalculus Mathematics (4) (CAN MATH 16)

Prerequisite: Math 070 or 120 with grade of 'C' or better or qualifying OCC mathematics placement score. See mathematics assessment requirement.

The course includes structure and properties of number systems; applications, solution and graphs of polynomials, rational, exponential, logarithmic and trigonometric functions; matrices, sequences and series; analytic geometry. Prepares students for Mathematics 180. May be taken for grades or on a credit-no credit basis. Five hours. **Transfer Credit: CSU; UC.**

10/22/2019

Academic Transcript

Subject	Course Level	Grade	Credit Hours	Quality Points
HIST	A177 OC Economic Hist of U.S.	B	3.000	9.00
PE	A252 OC Crew Formerly P E 252AD	A	2.000	8.00
PSCI	A110 OC Intro to Intl Relations	A	3.000	12.00
THEA	A104 OC Theatre Art Improvisatn Formerly THART 104AB	A	3.000	12.00

Term Totals (OCC Undergraduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	14.000	14.000	14.000	14.000	50.00	3.57
Cumulative:	14.000	14.000	14.000	14.000	50.00	3.57

Unofficial Transcript

Term: OCC Spring 2007

Subject	Course Level	Title	Grade	Credit Hours	Quality Points	R
ANTH	A100 OC	Cultural (I)	A	3.000	12.00	
HIST	A170 OC	Hist of U.S. to 1876	C	3.000	6.00	
MATH	A160 OC	Intro to Statistics	C	3.000	6.00	
PE	A252 OC	Crew Formerly P E 252AD	A	2.000	8.00	
PSCI	A180 OC	Intro U.S. Government	C	3.000	6.00	
SPCM	A110 OC	Public Speaking	B	3.000	9.00	

Term Totals (OCC Undergraduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	17.000	17.000	17.000	17.000	47.00	2.76
Cumulative:	31.000	31.000	31.000	31.000	97.00	3.13

Unofficial Transcript

Term: OCC Fall 2007

Subject	Course Level	Title	Grade	Credit Hours	Quality Points	R
GEOL	A100 OC	General Geology	C	3.000	6.00	
GEOL	A100L OC	General Geology Lab	C	1.000	2.00	
MUS	A105 OC	Music From Bach to Rock	F	3.000	0.00	I
PE	A108 OC	Strength & Conditioning Formerly P E 108AD	W	0.000	0.00	
PE	A252 OC	Crew Formerly P E 252AD	A	2.000	8.00	
PSCI	A185 OC	Intro Comparative Gvnmnt	B	3.000	9.00	
SPAN	A180 OC	Elementary Spanish	B	5.000	15.00	

May 11, 2023

Agenda Item 6

h) Principles of Macroeconomics



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF	TITLE
[REDACTED]	[REDACTED]
TITLE OF COURSE <u>Econ 103 - Principles of Macroeconomics</u>	
VENDOR/PROVIDER <u>WNV - western Nevada college</u>	

1. Course Summary:

Economic output, economic growth, unemployment, inflation & deflation & investment.

2. What are the hours of instruction? 36

3. What is the completion date? 2013 Fall

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|---|--|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

There is a Principles of Macroeconomics but is listed as econ 101 but is the same course.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
 Syllabus or Course Material

SIGNATURE

Requestor Signature: [REDACTED] Date: 1/12/23

For Department Use Only

NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services _____ Title _____ Date _____

Course Detail[Return to Browse Course Catalog](#)**ECON 103 - Principles of Macroeconomics****Course Detail**

Career Undergraduate
Units 3.00
Grading Basis Student Option 2
Course Components Lecture Required
Campus Western Nevada College
Academic Group Career & Technical Education
Academic Organization Career & Technical Education

[View Class Sections](#)**Description**

Prerequisites: ECON102 or consent of instructor. Recommend MATH 95 or higher.
Introduces the study of the determination of levels of national income, employment and prices, and basic causes for fluctuation for these levels.

[Return to Browse Course Catalog](#)

APPRAISER CERTIFICATION BOARD

May 11, 2023

Agenda Item 6

i) Precalculus



**Nevada Department of Taxation
Property Tax Appraiser Continuing Education
New Course Application**

Return this form to:
Division of Local Government Services
1550 College Parkway
Carson City, Nevada 89706

Please Print or Type:

COURSE INFORMATION (A person who wishes to receive contact hours for a course of continuing education that has not been previously approved, must apply for such approval.)

NAME OF REQUESTER [REDACTED]	TITLE [REDACTED]
TITLE OF COURSE Math 126 - Pre-calculus	
VENDOR/PROVIDER WNC - Western Nevada College	

1. Course Summary:

Topics include fundamentals of algebra, functions & graphs, polynomial, rational, exponential & logarithmic functions & systems of linear equations.

2. What are the hours of instruction? 36

3. What is the completion date? 2007 Fall

SUBJECT CLASSIFICATION - CHECK ALL THAT APPLY

- | | |
|---|--|
| <input type="checkbox"/> Mass Appraisal Concepts and Applications | <input type="checkbox"/> College or Professional Level Accounting, Finance, Statistics or Other Appraisal Subjects |
| <input type="checkbox"/> IAAO Standards | <input type="checkbox"/> GIS, Mapping, CAMA |
| <input type="checkbox"/> Residential, Commercial/Industrial Appraisal | <input type="checkbox"/> Laws Relating to Real Estate, Water or Mining |
| <input type="checkbox"/> Unitary/Centrally Assessed Property Appraisal | <input type="checkbox"/> Professional Ethics |
| <input type="checkbox"/> Legal Documents (Deeds, Titles, Leases, etc.) | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Nevada Statutes or Regulation, Appraisal or Assessment Standards | |

If other, please describe why the course is applicable to appraisal and/or property tax.

Math equations and the course is higher than the math 96 on the list.

REQUIRED MATERIALS TO BE SUBMITTED WITH APPLICATION INCLUDE:

- Detailed Course Outline
 Syllabus or Course Material

SIGNATURE

Requestor Signature: [REDACTED] Date: 11/2/23

For Department Use Only

NUMBER OF CREDIT HOURS GRANTED	NUMBER OF CREDIT HOURS APPEARING ON TRANSCRIPT	MILESTONE APPLIED TO	TOTAL HOURS FOR THIS MILESTONE

Verified by:

Division of Local Government Services Title Date

Course Detail[Return to Browse Course Catalog](#)

MATH 126 - Precalculus I

Course Detail

Career	Undergraduate
Units	3.00
Grading Basis	Student Option 2
Course Components	Lecture Required
Campus	Western Nevada College
Academic Group	Liberal Arts
Academic Organization	Liberal Arts

[View Class Sections](#)**Description**

Prerequisite: Success in intermediate algebra, algebra II, MATH 96 or similar course is recommended as preparation for this course. Students should meet with a Counselor to determine readiness based on placement or equivalent exam, high school coursework, or other factors.

Provides a third course in algebra. Topics include: polynomial, rational and radical equations; absolute value and quadratic inequalities; relations and functions; linear, quadratic, polynomial exponential and logarithmic functions, their graphs and applications; and systems of equations.

[Return to Browse Course Catalog](#)



Western Nevada College
Western Nevada College
WNC Official Transcript

Name: [REDACTED]
Student ID: [REDACTED]
DOB: 09/01/1988

[REDACTED]
USA

Degrees Awarded

Degree: Certificate of Achievement
Confer Date: 05/16/2009
Plan: Certificate of Achievement - Medical Transcription

Beginning of Undergraduate Record

2006 Fall

Course	Description	Att	Earned	Grade	Points
ENG 95	Basic Writing II	3.00	3.00	P	0.000
MATH 120	Pre calculus Trigonometry	0.00	0.00	W	0.000
SPAN 111	First Year Spanish I	4.00	4.00	C	8.000
Term GPA		2.00	Term Tot	7.00	7.00
				4.000	8.000

2007 Spring

Course	Description	Att	Earned	Grade	Points
CADD 100	Intro to Comp Aid Dft	3.00	3.00	A	12.000
ENG 98	Basic Writing III	3.00	3.00	B	9.000
PHYS 100	Introductory Physics	0.00	0.00	W	0.000
PSC 103	Prin Amer Const Govt	0.00	0.00	W	0.000
Term GPA		3.50	Term Tot	6.00	6.00
				6.000	21.000

2007 Fall

Course	Description	Att	Earned	Grade	Points
AUTO 101	Intro to General Mech	3.00	3.00	A	12.000
ENG 101	Composition I	3.00	3.00	B+	9.900
HIST 101	U.S. History I to 1865	3.00	3.00	C	6.000
MATH 126	Precalculus Mathematics I	3.00	3.00	C	6.000
Term GPA		2.82	Term Tot	12.00	12.00
				12.000	33.900

2008 Fall

Course	Description	Att	Earned	Grade	Points
BIOL 200	Elements of Anat/Physiol	3.00	0.00	F	0.000
Course Repeated - Exclude Units and GPA					
HIT 117	Medical Terminology	1.00	1.00	A	4.000
HIT 118	Language of Medicine	3.00	3.00	B+	9.900
HIT 170	Computers in Health Care	3.00	3.00	C+	6.900
STAT 152	Intro to Statistics	0.00	0.00	W	0.000
Term GPA		2.97	Term Tot	10.00	7.00
				7.000	20.800

2009 Spring

Course	Description	Att	Earned	Grade	Points
BIOL 200	Elements of Anat/Physiol	3.00	3.00	C	6.000
HIT 105	Healthcare Dynamics	2.00	2.00	B+	6.600
HIT 120	Medical Transcription I	2.00	2.00	A	8.000
HIT 121	Medical Transcription II	3.00	3.00	A	12.000
HIT 165	Pathophysiology I	4.00	4.00	A	16.000
HIT 180	Intro to Hlth Info Mgmt	3.00	3.00	C+	6.900
Term GPA		3.26	Term Tot	17.00	17.00
				17.000	55.500

2013 Spring

Course	Description	Att	Earned	Grade	Points
ECON 102	Prin of Microeconomics	3.00	3.00	D+	3.900
ENG 102	Composition II	3.00	3.00	A-	11.100
IS 101	Intro to Information Sys	3.00	3.00	A	12.000
Term GPA		3.00	Term Tot	9.00	9.00
				9.000	27.000

2013 Fall

Course	Description	Att	Earned	Grade	Points
ECON 103	Prin of Macroeconomics	3.00	3.00	B	9.000
IS 201	Computer Applications	3.00	3.00	A	12.000
MGT 103	Intro Small Business Mgt	3.00	3.00	B+	9.900
PSC 103	Prin Amer Const Govt	3.00	3.00	D+	3.900
Term GPA		2.90	Term Tot	12.00	12.00
				12.000	34.800

2014 Spring

Course	Description	Att	Earned	Grade	Points
ACC 135	Bookkeeping I	3.00	3.00	A-	11.100
ACC 201	Financial Accounting	3.00	3.00	D+	3.900
ACC 233	Intro to Quickbooks	0.00	0.00	W	0.000
MGT 201	Prin of Management	3.00	3.00	A-	11.100
Term GPA		2.90	Term Tot	9.00	9.00
				9.000	26.100

Undergraduate Career Totals

Cum GPA: 2.99 Cum Tot 82.00 79.00 76.000 227.100

End of WNC Official Transcript

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