# LAMPASAS CENTRAL APPRAISAL DISTRICT REAPPRAISAL PLAN FOR TAX YEARS 2021 & 2022

# TABLE OF CONTENTS

<u>ITEM</u>	PAGE
Executive Summary	5
Revaluation Decision (Statutory or Administrative)	8
Performance Analysis	8
Ratio Study Results	
Appraisal Accuracy (level of appraisal)	
Appraisal Uniformity (equity)	
Analysis of Available Resources	9
Staffing for Reappraisal Year	
Adopted Budget for 2021	
Existing Practices	
Information Systems (IS) support	
Existing data and maps	
Planning and Organization	9

Mass Appraisal Systems	10
Forms and procedures revised	
CAMA System revisions as required	
Personal Property Valuation	12
Data Collection Requirements by Tax Year	13
Defining Market Areas	
New Construction	
Remodeling	
Re-inspection of problematic market areas	
Re-inspection of universe of properties on a specific Cycle (4 – 6 years)	
Field or office verification of sales data and property characteristics	
Pilot Study by Tax Year	14
Test new/revised mass appraisal methods	
Ratio Studies by Market Areas	
Test accuracy and reliability in certain market areas	
Valuation by Appraisal Year	14
Market analysis	
Model Development	
Model Calibration	

Calculation of preliminary values	
Test values for accuracy and uniformity	
The Mass Appraisal Report by Tax Year	16
Scope of Work (Written Reappraisal Plan)	
Compliant with STANDARD RULE 6 – 8 of USPAP	
Signed Certification by the Chief Appraiser as required by STANDARD RULE 6 – 9 OF USPAP	
Value Defense	16
Informal Appeals	
Formal Appeals	
Burden of Proof evidence for market value and equity	
EXHIBIT: A	17
Calendar of Key Events 2021	
Calendar of Key Events 2022	

### **EXECUTIVE SUMMARY**

### TAX CODE REQUIREMENT

Passage of S. B. 1652 amended the Tax Code to require a written biennial reappraisal plan. The following details the changes to the Tax Code:

### The Written Plan

Section 6.05, Tax Code, is amended by adding Subsection (i) to read as follows:

(i) To ensure adherence with generally accepted appraisal practices, the Board of Directors of an appraisal district shall develop biennially a written plan for the periodic reappraisal of all property within the boundaries of the district according to the requirements of Section 25.18 and shall hold a public hearing to consider the proposed plan. Not later than the 10<sup>th</sup> day before the date of the hearing, the secretary of the board shall deliver to the presiding officer of the governing body of each taxing unit participating in the district a written notice of the date, time, and place of the hearing. Not later than September 15 of each even numbered year, the board shall complete its hearings, make any amendments, and by resolution finally approve the plan. Copies of the approved plan shall be distributed to the presiding officer of the governing body of each taxing unit participating in the district and to the comptroller within 60 days of the approval date.

### Plan for Periodic Reappraisal

Subsection (a) and (b), Section 25.18, Tax Code, are amended to read as follows:

- (a) Each appraisal office shall implement the plan for periodic reappraisal of property approved by the board of directors under Section 6.05(i).
- (b) The plan shall provide for the following reappraisal activities for all real and personal property in the district at least once every three years:
  - (1) Identifying properties to be appraised through physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, land-based photographs, surveys, maps, and property sketches:
  - (2) Identifying and updating relevant characteristics of each property in the appraisal records:

- (3) Defining market areas in the district:
- (4) Identifying property characteristics that affect property value in each market area, including:
  - (A) The location and market area of the property:
  - (B) Physical attributes of property, such as size, effective age, and condition:
  - (C) Legal and economic attributes; and
  - (D) Easements, covenants, leases, reservation, contract, declarations, special assessments, ordinances, or legal restrictions:
- (5) Developing an appraisal model that reflects the relationship among the property characteristics affecting value in each market area and determines the contribution of individual property characteristics:
- (6) Applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- (7) Reviewing the appraisal results to determine value.

### REVALUATION DECISION (REAPPRAISAL CYCLE)

The Lampasas Central Appraisal District by policy adopted by the Board of Directors reappraises all property in the district every 3 years. The reappraisal is a cyclical appraisal of all properties in the district. Tax year 2021 is appraisal year for the Central 1/3 of the County and tax year 2022 is appraisal year for the Western 1/3 of the County.

### REAPPRAISAL YEAR ACTIVITIES

- 1. Performance Analysis the equalized values from the previous tax year are analyzed with ratio studies to determine the appraisal accuracy and appraisal uniformity overall and by market area within property reporting categories. Ratio studies are conducted in compliance with the current *Standard on Ratio Studies* of the International Association of Assessing Officers.
- 2. Analysis of Available Resources staffing and budget requirements for tax year 2021 are detailed in the 2022 budget, as adopted by the board of directors and attached to the written biennial plan by reference. Existing appraisal practices, which are continued from year to year, are identified and methods

- utilized to keep these practices current is specified. Information Systems (IS) support is detailed with year specific functions identified and system upgrades scheduled. Existing maps and data requirements are specified and updates scheduled.
- 3. Planning and Organization a calendar of key events with critical completion dates are prepared for each major work area. This calendar identifies all key events for appraisal, clerical, customer service, and information systems. A calendar is prepared for tax years 2021 & 2022. Production standards for field activities are calculated and incorporated in the planning and scheduling process.
- 4. Mass Appraisal System Computer Assisted Mass Appraisal (CAMA) system revisions required are specified and scheduled with Information Systems. All computer forms and IS procedures are reviewed and revised as required.
- 5. Data Collection Requirements field and office procedures are reviewed and revised as required for data collection. Activities scheduled for each tax year included new construction, demolition, remodeling, re-inspection of problematic market areas, re-inspection of the universe of properties on a specific cycle (4 6 year), and field or office verification of sales data and property characteristics.
- 6. Pilot study by tax year new and/or revised mass appraisal models are tested each tax year. Ratio studies, by market area, are conducted on proposed values each tax year. Proposed values on each category are tested for accuracy and reliability in randomly selected market areas.
- 7. Valuation by tax year using market analysis of comparable sales and locally tested cost data, valuation models are specified and calibrated in compliance with supplemental standards from the International Association of Assessing Officers and the Uniform Standards of Professional Appraisal Practice. The calculated values are tested for accuracy and uniformity using ratio studies.
- 8. The Mass Appraisal Report each tax year, the tax code required Mass Appraisal Report is prepared and certified by the Chief Appraiser at the conclusion of the appraisal phase of the ad valorem tax calendar (on or about May 15<sup>th</sup>). The Mass Appraisal Report is completed in compliance with STANDARD RULE 6 8 of the *Uniform Standards of Professional Appraisal Practice*. The signed certification by the Chief Appraiser is compliant with STANDARD RULE 6 9 of *USPAP*.
- 9. Value defense evidence to be used by the appraisal district to meet its burden of proof for market value and equity in both informal and formal appraisal review board hearings is specified and tested.

# **REVALUATION DECISION**

The Lampasas CAD reappraises all property in the district every 3 years according to the Property Tax Code. The reappraisal is a cyclical appraisal of all properties in the district. Each year is an appraisal year for 1/3 of the County. Lampasas CAD has established three regions in the county being referred to as the "Western 1/3, Central 1/3, and Eastern 1/3". Exhibit "A" defines each of the three regions.

Every year new construction is picked up, adjustments are made for changes in property characteristics that affect value, and adjustments are made to previous year values for equalization.

### TAX YEAR 2021

2021

Tax Year <del>2019 is</del> a reappraisal year for the Central 1/3 of the county.

### TAX YEAR 2022

Tax year 2022 is a reappraisal year for the Western 1/3 portion of the county.

# PERFORMANCE ANALYSIS

In each appraisal year, the previous appraisal year's equalized values are analyzed with ratio studies to determine appraisal accuracy and appraisal uniformity overall and by market area within state property reporting categories. Ratio studies are conducted in compliance with the current *Standard on Ratio Studies* from the International Association of Assessing Officers. Mean, median, and weighted mean ratios are calculated for properties in each reporting category to measure the level of appraisal (appraisal accuracy). The median ratio is the primary measure of central tendency analyzed in each market area to indicate the level of appraisal by property reporting category. In 2021, the reappraisal year for the Central 1/3 of the County and in 2022, the reappraisal year for the Western 1/3 of the County, this analysis will be used to determine the accuracy of appraisal performance and to indicate the uniformity or equity of existing appraisals. The overall goal is to attain uniformity and equity of appraisals by appraising property at its market value using an assessment ratio of 100%

# **ANALYSIS OF AVAILABLE RESOURCES**

Staffing and budget requirements for tax year 2021 are detailed in the 2021 appraisal district budget, as adopted by the board of directors. This reappraisal plan is adjusted to reflect the available staffing in tax year 2021 and the anticipated staffing for tax year 2022. Staffing will impact the cycle of real property re-inspection and personal property on-site review that can be accomplished in the 2021 – 2022 time period.

Existing appraisal practices, which are continued from year to year, are identified and methods utilized to keep these practices current. In each reappraisal year, real property appraisal depreciation tables and cost new tables are tested against verified sales data to ensure they represent current market data. The cap rate study by commercial real property type is updated from current market data and market rents are reviewed and updated from local data.

Information Systems (IS) support is detailed with year specific functions identified and system upgrades scheduled. Computer generated forms are reviewed for revisions based on year and reappraisal status. Legislative changes are scheduled for completion and testing. Existing maps and data requirements are specified and updates scheduled.

# PLANNING AND ORGANIZATION

A calendar of key events with critical completion dates is prepared for each major work area and identifies all key events for the current reappraisal. Production standards for field activities are calculated and incorporated in the planning and scheduling process. Field work is organized in the progression of map number of the geographic areas. At any given time, the status of the completion of the reappraisal plan can be monitored using this systematic organization calculating the % completion of the map grid.

Attached to this plan is the calendar of key events. The mapping grid is also available for public inspection at Lampasas CAD; located at 109 E. 5<sup>th</sup> Street, Lampasas, TX.

## **ORGANIZATION AND PLANNING**

1.	Work plan Development	August	-	April
2.	Progress Monitoring/Reporting	August	-	July
3.	Public Relations	August	-	Ongoing

### DATA SYSTEMS DESIGN

1.	Data Collection/Forms Procedures	August	-	April
2.	Valuation Forms/Procedures	August	-	April
3.	Research Forms/Procedures	August	-	April

# MASS APPRAISAL SYSTEM

<u>Computer Assisted Mass Appraisal</u> (CAMA) system revisions are specified and scheduled with Information Systems. All computer forms and IS procedures are reviewed and revised as required. The following, details these procedures as it relates the 2021 and 2022 appraisal years:

### **REAL PROPERTY VALUATION**

Revisions to cost models, income models, and market models are specified, updated and tested each tax year.

Cost schedules are tested with market data (sales) to ensure that the appraisal district is in compliance with Texas Property Tax Code, Section 23.011. Replacement cost new tables as well as depreciation tables are tested for accuracy and uniformity using ratio study tools and compared with cost data from recognized industry leaders, such as Marshall & Swift.

### Market and Cost Reconciliation and Valuation

The replacement cost new of property improvements (RCN) less accrued depreciation (AD) plus land value (LV) equals market value (MV). As the cost approach separately estimates both land and building value. Neighborhood analysis of market sales is used to achieve an acceptable sale ration or level of appraisal. Market factors are developed from appraisal statistics provided from market analysis and ratio studies and are used to ensure that estimated values are consistent with the market and to reconcile cost indicators. The district's primary approach to the valuation of properties uses a hybrid cost-sales comparison approach. This type of approach accounts for neighborhood market influences not particularly specified in a purely cost model.

The following equation denotes the hybrid model used:

$$MV = LV + (RCN - AD)$$

Whereas, in accordance with the cost approach, the estimated market value (MV) of the property equals the land value (LV) plus contributory values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values may be needed to bring the level of appraisal to an acceptable standard as indicated by market sales.

Thus, demand side economic factors and influences may be observed and considered. These market or location adjustments may be abstracted and applied uniformly within neighborhoods to account for location variances between market areas or across a jurisdiction. Whereas, in accordance with the Market Approach, the estimated market value (MV) of the property equals the basic unit of property, under comparison, times the market price range per unit for sales of comparable property. For residential property, the unit of comparison is typically the price per square foot of living area or the price indicated for the improvement contribution. This analysis for the hybrid model is based on both the cost and market approaches as a correlation of indications of property valuation. A significant unknown for these two indications of value is determined to be the rate of change for the improvement contribution to total property value. The measure of change for this property component can best be reflected and based in the annualized accrued depreciation rate. This cost related factor is most appropriately measured by sales of similar property. The market approach, when improvements are abstracted from the sale price, indicated the depreciated value of the improvement component, in effect, measuring changes in accrued depreciation, a cost factor. The level of improvement contribution to the property is measured by abstraction of comparable market sales, which is the property sales price less land value. The primary unknown for the cost approach is to accurately measure accrued depreciation affecting the amount of loss attributed to the improvements as age increased and condition changes. This evaluation of cost results in the depreciated value of the improvement component based on age and condition. The evaluation of this market and cost information is the basis of reconciliation and indication of property valuation under this hybrid model.

Land tables are updated using current market data (sales) and then tested with ratio study tools. Value modifiers are developed for property categories by market area and tested on a pilot basis with ratio study tools.

Income, expense and occupancy data is updated in the income models for each property use category and market area. Property categories are reviewed to ensure their continued applicability. Cap rate studies are completed using current sales data when available, and published sources are also utilized. The resulting models are tested using ratio study tools.

### **NOTICING PROCESS**

25.19-appraisal notice forms are reviewed and edited for updates and changes signed off on by appraisal district management. Updates include the latest copy of Comptrollers *Property Taxpayer Remedies*.

### **HEARING PROCESS**

Protest hearing scheduling for informal and formal Appraisal Review Board hearings is reviewed and updated as required. Standards of documentation are reviewed and amended as required. The appraisal district hearing documentation is reviewed and updated to reflect the current valuation process and legal requirements.

### PERSONAL PROPERTY VALUATION

There are approximately 950 business personal property accounts in LCAD jurisdictional area.

- Personnel Chief Appraiser, two (2) field appraisers, and one (1) Personal Property Appraiser
- Data The personal property appraisers collect the field data and maintain property files making updates and changes gathered from field inspections, newspapers, property renditions, sales tax permit listings and interviews with property owners.

LCAD's primary approach to the valuation of business personal property is the cost approach. The replacement cost new (RCN) is either developed from property owner reported historical cost or from CAD developed valuation models. The trending factors used by the CAD to develop RCN are based on published valuation guides. The percent good depreciation factors used by LCAD are also based on published valuation guides. The index factors and percent good depreciation factors are used to develop present value factors (PVF), by year of acquisition, as follows:

PVF = INDEX FACTOR x PERCENT GOOD FACTOR

The PVF is used as "express" calculation in the cost approach. The PVF is applied to reported historical cost as follows:

### MARKET VALUE ESTIMATE = PVF x HISTORICAL COST

This mass appraisal PVF schedule is used to ensure that estimated values are uniform and consistent within the market and reflect current economic pressures of supply and demand.

### Sources of Data

The Districts property characteristic data was collected through a field data collection effort coordinated by the district over the past from property owner's renditions. District appraisers collect new data via field inspections. Personal property inspections are on the same cycle as real property for 2021; the Central 1/3 and for 2022 the Western 1/3 of the county.

### Office Review

Appraisers review personal property values based on a variety of conditions. Property owner renditions, accounts with field data changes, accounts with prior protest, new accounts and reliable value information made available by the internet. The appraisers review accounts that fail the tolerance parameters.

# DATA COLLECTION REQUIREMENTS

IDENTIFICATION AND UPDATE OF RELEVANT CHARACTERISTICS AFFECTING VALUE

Field and office procedures are reviewed and revised as required for data collection. Activities scheduled for each tax year include new construction, demolition, remodeling, reinspection of problematic market areas, and re-inspection of the universe of properties on a specific cycle (4-6 years per IAAO Standards).

### **DEFINING MARKET AREAS**

According to The Appraisal of Real Estate 12<sup>th</sup> Edition, a market area is "the defined geographic area in which the subject property competes for the attention of market participants." The appraisers identify the geographical area for the purposes of valuation and analysis. "Defining Market Areas within the District: Our market areas are Lampasas City, Lometa City, Lampasas ISD excluding Lampasas City, Lometa ISD excluding Lometa City, City of Kempner, and subdivision in Kempner excluding the City of Kempner. "See exhibit "A" on page 17 for geographic locations of market areas.

### NEW CONSTRUCTION/DEMOLITION

New construction field and office review procedures are identified and revised as required. Field production standards are established and procedures for monitoring tested. Source of building permits is confirmed and system input procedures are identified. Process of verifying demolition of improvements is specified. This critical annual activity is projected and entered on the key events calendar for each appraisal year.

### REMODELING

Market areas with extensive improvement remodeling are identified, verified and field activities scheduled to update property characteristic data. Updates to valuation procedures are tested with ratio studies before finalized in the valuation modeling. This field activity when entered in the key events calendar must be monitored carefully.

### RE-INSPECTION OF PROBLEMATIC MARKET AREAS

Real property market areas, by property classification, are tested for: low or high protest volumes; low or high sales ratios; or high coefficient of dispersion. Market areas that fail

any or all of these tests are determined to be problematic. Field reviews are scheduled to verify and/or correct property characteristic data. Additional sales data is researched and verified. In the absence of adequate market data, neighborhood delineation is verified and neighborhood clusters are identified.

### RE-INSPECTION OF THE UNIVERSE OF PROPERTIES

The International Association of Assessing Officers, Standard on Mass Appraisal of Real Property specifies that the universe of properties should be re-inspected on a cycle of 4-6 years. The re-inspection includes the re-measurement of at least two sides of each improved property. The appraisers perform this re-inspection in the area they are re-appraising each year.

# FIELD OR OFFICE VERIFICATION OF SALES DATA AND PROPERTY CHARACTERISTICS

Sales information must be verified and property characteristic data contemporaneous with the date of sale capture. The sales ratio tools require that the property that sold must equal the property appraised in order that statistical analysis results will be valid. In the event that these are not roughly equal, the sale is usually excluded from the observation pool in the ratio study as an outlier.

# **PILOT STUDY**

New and/or revised mass appraisal models are tested on randomly selected market areas. These modeling test (sales ratio studies) are conducted each tax year. Actual test results are compared with anticipated results and those models not performing satisfactorily are refined and retested. The procedures used for model specification and model calibration are in compliance with *Uniform Standards of Professional Appraisal Practice*, STANDARD RULE 6.

# VALUATION BY APPRAISAL YEAR

Using market analysis of comparable sales and locally tested cost data, market area specific income and expense data, and information gathered from renditions, valuation models are specified and calibrated in compliance with the supplemental standard from the International Association of Assessing Officer and the *Uniform Standards of Professional Appraisal Practice*. The calculated values are tested for accuracy and uniformity using ratio studies. Performance standards are those as established by the *IAAO Standard on Ratio Studies*. Property values in all market areas are reviewed each reappraisal year. Properties in selected market areas are updated in non-reappraisal years. Appraisal year 2021 is a reappraisal year for the Central 1/3 of the County. Appraisal year 2022 is a reappraisal year for the Western portion of the county.

### RESIDENTIAL REAL PROPERTY

Among the three approaches to value, residential real property is calculated using the replacement cost new approach less depreciation adjusted to sales comparison data.

### SPECIAL INVENTORY RESIDENTIAL PROPERTY

Among the three approaches to value, cost, income, and market, the sales comparison method is used to calculate projected sales prices. The cost approach method is then used for the estimated cost for development, overhead, and profit margin. The difference is the estimated value.

### MUTI-FAMILY RESIDENTIAL PROPERTY

Among the three approaches to value, cost, income, and market, all three are used to estimate value depending upon information available to the appraiser. More weight is used upon the market approach if reliable sale information is available.

### **COMMERCIAL REAL PROPERTY**

Among the three approaches to value, cost, income, and market, the market comparison is used if reliable sales are available to best reflect what buyers and sellers are doing. If sufficient income data is available, weight is put on this approach for similar properties. If the property is new, cost data from Marshall & Swift is reliable.

### VACANT REAL PROPERTY

Among the three approaches to value, cost, income, and market, the market approach is used to value real property.

### INDUSTRIAL REAL PROPERTY

Among the three approaches to value, cost, income, and market, the market approach is used to value real property

### UTILITES

The income approach to value most readily yields itself to income generating assets. Data for utility properties is available from annual reports submitted to regulatory agencies, whereby future income may be converted into an estimate of value.

### MINERAL INTEREST

The income approach is most applicable in valuation of these properties. Valuable information is provided by the Texas Railroad Commission as well as trade and other publication.

### SPECIAL VALUATION PROPERTIES

Agricultural use is valued according to Section 23.51, Section 23.52, and Section 23.53 of the Texas Property Tax Code using a five-year net to land to the landlord on a share lease basis which is typical in Lampasas County.

### **BUSINESS TANGIBLE PERSONAL PROPERTY**

Among the three approaches to value, cost, income, and market, the replacement cost new depreciation (cost) method is used. Other documents, such as confidential renditions, and information from property owners are used.

# THE MASS APPRAISAL REPORT

Each tax year, the tax code required Mass Appraisal Report is prepared and certified by the Chief Appraiser at the conclusion of the appraisal phase of the ad valorem tax calendar (on or about May 15<sup>th</sup>). The Mass Appraisal Report is completed in compliance with STANDARD RULE 6-9 of *USPAP*. This written reappraisal plan is attached to the Mass Appraisal Report by reference.

# VALUE DEFENSE

Evidence to be used by the appraisal district to meet its burden of proof for market value and equity in both informal and formal appraisal review board hearings is specified and tested.

Evidence used in meeting burden of proof is sales data, unless confidential, documents from property owners and sellers, recorded data, schedules of models, ratio studies, cost data of models, and relevant information the district deems necessary.

PASSED AND APPROVED in an open meeting this 27th day of August, 2020.

### LAMPASAS CENTRAL APPRAISAL DISTRICT

Chairman

ATTEST:

Secretary

### EXHIBIT - A

Western 1/3:

City of Lometa

Lampasas ISD located approximately 5 miles West of Hwy 281 to the Western boundary of Lampasas ISD from the Southern County line to the Northern Lometa ISD County line.

Central 1/3:

City of Lampasas

Lampasas ISD accounts located approximately 5 miles East and West of Hwy 281 from the Southern County line to the Northern County line.

Eastern 1/3:

City of Kempner

(A portion of the City of Copperas Cove) All subdivisions in the Kempner area located outside Kempner City limits Lampasas ISD located approximately 5 miles east of Hwy 281 from the Southern County line to the Northern County line.

### Work Schedule Re-Appraisal Plan

The attached documents represent our work schedule and timeline. The map of the county is divided into the three re-appraisal areas. Of each of these areas, the map numbers situated in each area are listed on the document labeled re-appraisal map numbers. As the appraiser's work all the properties within the map numbers area, the map is marked of the list and the public can review at any time the area which have been completed. The district at any time can review the percentage of completion and regroup if needed, to complete the properties in the re-appraisal area.

### Reappraisal map #s

### East

N10, N11, N12, N13, N14, N15
O8, O9, O10, O11, O12, O13, O14, O15
P8, P10, P11, P12, P13, P14, P15, P16
Q7, Q8, Q10, Q11, Q12, Q13, Q14, Q15, Q16
R10, R11, R12, R13, R14, R15, R16
S11, S12, S13, S14, S15, S16
T13, T14, T15, T16
U13, U14, U15

### West

A8, A9, A10, A11, A12, A13
B8, B9, B10, B11, B12, B13
C7, C8, C9, C10, C11, C12, C13, C14
D7, D8, D9, D10, D11, D12, D13, D14, D15
E6, E7, E8, E9, E10, E11, E12, E13, E14, E15
F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15
G4, G5, G6, G7, G8, G9, G10, G11, G11, G12, G13, G14, G15
H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15
I3, I4, I5, I6, I7, I8, I9, I10, I11, I12, I13, I14, I15
J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13, J14, J15

### Central

K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14, K15 L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15 M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11, M12, M13, M14, M15 N2, N3, N4, N5, N6, N7, N8, N9 O4, O5, O6, O7 P5, P6, P7









